CHAPTER 4 PROJECT ALTERNATIVES

4.1 Scope and Purpose

The California Environmental Quality Act (CEQA) requires the County of San Diego (County), acting as a "lead agency," to consider alternatives to the Proposed Project and analyze the impacts of those alternatives. By comparing these alternatives to the Proposed Project, the advantages of each alternative can be analyzed and evaluated.

Section 15126.6(a) of the CEQA Guidelines requires that an environmental impact report (EIR) "describe a range of reasonable alternatives to the proposed project, or to the location of the project, that would feasibly attain most of the basic objectives but would avoid or substantially lessen any of the significant environmental effects of the project, and evaluate the comparative merits of the alternatives." Thus, the focus of this analysis is on those alternatives which have the ability to reduce the proposed Project's significant impacts; alternatives that merely reduce the Project's less-than-significant impacts receive less attention. Further, Section 15126.6(a) also provides that an EIR need not consider every conceivable alternative to a project. Instead, the EIR must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. However, an EIR need not consider alternatives that are infeasible. There also is no ironclad rule governing the nature or scope of the alternatives to be discussed in an EIR, other than the "rule of reason." The "rule of reason" governing the range of alternatives specifies that an EIR should only discuss those alternatives necessary to foster meaningful public participation and informed decision-making.

Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the purpose of an EIR's alternatives discussion is to focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if the alternatives would impede to some degree the attainment of the project's objectives or be more costly. Further, CEQA requires that an EIR identify the environmentally superior alternative from among the alternatives.

This EIR has evaluated the Proposed Project's potential significant impacts on the environment related to aesthetics, agricultural resources, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas (GHG) emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, paleontological resources, parks and recreation, population and housing, public services, transportation and traffic, tribal cultural resources, and utilities and service systems. The Proposed Project would result in potential impacts in the following three categories: (1) Those impacts determined not to be significant: hazards and hazardous materials, hydrology and water quality, land use and

planning, mineral resources, population and housing, public services, recreation, utilities and service systems, and energy; (2) those impacts reduced to less than significant with implementation of mitigation measures: biological resources, cultural resources, geology and soils, GHG emissions, paleontological resources, and tribal cultural resources; and (3) those impacts that would remain significant and unavoidable, and feasible mitigation would not reduce such impacts to less than significant: aesthetics, agricultural resources, air quality, noise, and transportation and traffic. This information allows the Proposed Project to be compared against the merits of each of its alternatives.

For each of the alternatives identified, the EIR conducted the following assessment:

- Described the alternative.
- Identified the impacts of the alternative and evaluated the significance of those impacts.
- Evaluated each alternative relative to the Proposed Project, specifically addressing project objectives, feasibility, avoidance or reduction of significant impacts, and comparative merits.

This EIR evaluated the following alternatives to the Proposed Project:

- 1. No Project Alternative (Section 4.4). The No Project Alternative assumes that the Proposed Project would not be developed and the existing environmental conditions in the Project Area would remain in their current state. As such, the Project Area would continue to be undeveloped and served by the existing Proctor Valley Road. Note, however, that CEQA also recommends that the No Project Alternative analysis compare the Proposed Project to the development conditions that would be otherwise allowed by the current general plan, zoning code, and other applicable planning documents (CEQA Guidelines Section 15126.6(e)(3)(C)). In this case, the Proposed Project would not deviate materially from the land uses permitted by the existing Otay Ranch General Development Plan/Otay Subregional Plan, Volume II (Otay Ranch GDP/SRP) and County General Plan designations and zoning. Since the difference between the Proposed Project and the No Project alternative is immaterial when the latter assumes development pursuant to existing planning documents, the referenced CEQA Guideline has been met.
- 2. Low Density Alternative (Section 4.5). The Low Density Alternative would have a similar development area as the Proposed Project, except Planning Area 19 would not be developed and instead would be designated as Conserved Open Space. The Low Density Alternative, would develop 257 single-family residential units, with a build-out population of approximately 925 residents. There would be no school site due to the minimal number of students generated by 257 units, and there would be no fire station or

- Sheriff's storefront site because lot sizes would be a minimum of 1 acre. Proctor Valley Road would be two lanes from the City of Chula Vista to the property line in Planning Area 19 for secondary access, similar to the Proposed Project.
- 3. Alternate Site Location Alternative (Section 4.6). The Alternate Site Location Alternative would encompass 273.4 acres owned by the Preserve Owner/Manager (POM), and 188 acres of South Village 14 owned by the applicant. The Alternate Site Location Alternative would have 468 units, of which 358 would be single-family and 110 would be multi-family. The total development area would be approximately 171.1 acres. There would be no school site due to the minimal number of students generated. There would be no fire station or Sheriff's storefront site because lot sizes would be less than 1 acre. Proctor Valley Road would be two lanes from the City of Chula Vista to the property line in Planning Area 19 for secondary access, similar to the Proposed Project.
- 4. Otay Ranch GDP/SRP Four-Lane Proctor Valley Road Alternative (Section 4.7). The Otay Ranch GDP/SRP Four-Lane Proctor Valley Road Alternative (GDP/SRP Proctor Valley Road Alternative) would have the same development area as the Proposed Project; however, this alternative would implement the Otay Ranch GDP/SRP alignment and classification for Proctor Valley Road as a four-lane major circulation element road. Proctor Valley Road would be designated as a four-lane major circulation element road from Chula Vista to State Route (SR) 94 in the alignment approved in the 1993 Otay Ranch GDP/SRP (City of Chula Vista and County of San Diego 1993a). Widening Proctor Valley Road would result in approximately 12.8 acres of additional, permanent impacts due to roadway paving, and an additional 80 acres of temporary impacts due to grading. Widening Proctor Valley Road to four lanes would require an amendment to the Mobility Element of the Jamul/Dulzura Community Plan, which would be a County General Plan Amendment. The GDP/SRP Proctor Valley Road Alternative would reduce the number of residential units in Planning Area 16 by 14 units to accommodate the alignment of the four-lane roadway, for a total of up to 1,105 residential units. Similar to the Proposed Project, these would include a mix of traditional, single-family detached homes; detached courtyard homes; and single-family estate homes. The GDP/SRP Proctor Valley Road Alternative would include a public safety site and a potential elementary school site, similar to the Proposed Project.
- 5. Land Exchange Alternative (Section 4.8). The Land Exchange Alternative would include approximately 511 acres proposed for 1,530 homes, of which 1,124 units would be traditional single-family homes, 283 units would be single family age-restricted units, and 123 units would be multi-family homes. The Land Exchange Area would cover approximately 2,387 acres, of which the applicant owns 1,284 acres and the State of California owns approximately 1,053 acres. In addition, approximately 40 acres would be off site, not under the ownership of the state or the applicant, and would be related to

improvements to Proctor Valley Road. The Land Exchange Alternative proposes to exchange 278 acres owned by the State of California in Village 14 for 278 acres owned by the applicant in Planning Area 16. This alternative would also change MSCP County Subarea Plan and Otay Ranch Resource Management Plan (RMP) Preserve boundaries, and require an MSCP County Subarea Plan Boundary Adjustment pursuant to the MSCP County Subarea Plan Implementing Agreement (USFWS et al. 1998). The required MSCP County Subarea Plan Boundary Adjustment would convert approximately 169.8 acres of development area in Planning Areas 16/19 to Otay Ranch RMP/MSCP Preserve; convert approximately 142.3 acres of development area in Village 14 to Otay Ranch RMP/MSCP Preserve; and convert 43.6 acres of Otay Ranch RMP/MSCP Preserve in Village 14 to development area. The net results of the MSCP County Subarea Plan Boundary Adjustment would be a net increase in Otay Ranch RMP/MSCP Preserve of approximately 268.5 acres. The Land Exchange Alternative would also include an Otay Ranch GDP/SRP amendment to the classification of Proctor Valley Road from a fourlane major road to a two-lane light collector, similar to the Proposed Project. The Land Exchange Alternative would reserve an elementary school site in the Village 14 Village Core, and up to 15,000 square feet of commercial/retail uses would be permitted, compared to 10,000 square feet proposed the Proposed Project.

A statistical summary and comparison of the alternatives to the Proposed Project is provided below for reference:

Alternative	Units	Change in Units	Developed Acres	Change in Developed Acres	Preserve Conveyance Obligation	Change in Conveyance Acreage	Preserve Conveyance + Conserved Open Space	Change (acres)
Proposed Project	1,119	_	784.4	_	776.8	_	849.2	-
No Project Alternative	0	-1,119	0	-784.4	0	-776.8	0	-849.2
Low Density Alternative	257	-862	767	-16.4	781.1	4.3	870.1	20.9
Alternate Site Alternative	468	-651	171.1	-613.3	192.1	-584.7	192.1	-657.1
GDP/SRP Proctor Valley Road Alternative	1,105	-14	796.3	+12.8	771.0	-5.8	843.2	-5.4
Land Exchange Alternative	1,530	+411	598.7	-185.7	654.5	-122.3	654.5	-194.5

In addition, the EIR considered but rejected alternatives. These alternatives are briefly described and compared to the Proposed Project below, followed by the basis for rejecting the alternative.

- 1. Otay Ranch Village 15 (see Section 4.3.1)
- 2. Otay Ranch PEIR Alternatives (see Section 4.9)

4.2 Criteria for Selection and Analysis of Alternatives

The criteria for the selection and analysis of alternatives are provided in CEQA Guidelines Section 15126.6(c). The alternatives must (1) meet most of the project objectives, (2) be feasible, and (3) avoid or substantially lessen the significant impacts resulting from the project.

4.2.1 Project Purpose and Objectives

The underlying purpose of the Proposed Project is to implement a planned community and biological preserve sufficient in size and scale to realize both the applicant's vision and the vision of the existing entitlements for the Project Area (defined below) as set forth in the Otay Ranch GDP/SRP (City of Chula Vista and County of San Diego 1993a):

- 1. Assist in meeting the regional housing needs identified in the County's General Plan Housing Element, including optimizing housing opportunities for a variety of age groups, family sizes, and income ranges, while promoting a safe and healthy living environment.
- 2. Implement the Goals, Objectives, and Policies embedded in the Otay Ranch GDP/SRP, the Otay Ranch Phase 1 and Phase 2 Resource Management Plan (RMP), the Otay Ranch Facility Implementation Plan, the Otay Ranch Village Phasing Plan, and the Otay Ranch Service/Revenue Plan, consistent with County Board of Supervisors Policy I-109, Policy II.
- 3. Implement the vision of the Otay Ranch GDP/SRP to serve as a transitional area between the more urban Otay Ranch villages and Eastern Territories of Chula Vista, south of the Project Area and the more rural areas of Jamul north of the Project Area.
- 4. Implement the vision of the Otay Ranch GDP/SRP by creating a centrally located Village Core with sufficient intensity at the heart of Village 14 that provides a sense of place for residents and establishes the activity and social center of the Village, including an elementary school site and fire station, parks and public assembly areas, with densities generally decreasing away from the Village Core.
- 5. Implement the vision of the Otay Ranch GDP/SRP for Planning Areas 16/19 by creating a buffer adjacent to the existing community of Jamul by establishing a rural estate area composed exclusively of low-density housing, with minimum lot sizes ranging from one

to two acres. This would also include Limited Development Areas, planned for in the Otay Ranch GDP/SRP, within private lots to protect steep slopes and/or natural resources within residential lots.

- 6. Minimize the width of Proctor Valley Road and implement traffic-calming features throughout the community, including a series of roundabouts along Proctor Valley Road to promote community character and encourage slower speeds.
- 7. Combine appropriate land uses with current local and state conservation technologies and strategies to meet local, state, and federal goals for reducing greenhouse gas emissions.
- 8. Establish land use and facility plans that are fiscally responsible and viable, with consideration of existing and anticipated economic conditions. Provide a level of private development adequate to ensure the timely and economically feasible provision of public facilities and services required to serve community needs.
- 9. Implement the Jamul/Dulzura Mobility Element [ME] Roadway Network for Proctor Valley Road as a two-lane Light Collector to minimize impacts consistent with County ME Goal M-2, limits inducements to growth, and maintains community character.

4.2.2 Feasibility

CEQA Guidelines Section 15126.6(f)(1) identifies the factors to be taken into account to determine the feasibility of alternatives. The factors are site suitability; economic viability; availability of infrastructure; general plan consistency; other plans or regulatory limitations; jurisdictional boundaries; and whether the applicant can reasonably acquire, control, or otherwise have access to the alternative site. No one of these factors establishes a fixed limit on the scope of reasonable alternatives. An alternative does not need to be considered if its environmental effects cannot be reasonably ascertained, and if implementation of such an alternative is remote or speculative.

4.2.3 Evaluation of Significant Impacts

According to CEQA Guidelines Section 15126.6(b), the alternatives discussion should focus on those alternatives that, if implemented, could eliminate or reduce any of the significant environmental impacts of a project. The alternatives are evaluated to determine if, as anticipated when selected as alternatives, they eliminate any significant adverse environmental impacts or reduce those impacts to less than significant. Project-related impacts are considered to be those that are identified prior to the incorporation or implementation of any mitigation measures.

The performance of an alternative relative to a project is evaluated to determine the "comparative merits of the alternative" (CEQA Guidelines Section 15126.6(a)). This analysis is based, in part,

on a comparison to a project's impacts. This analysis also includes a discussion of the relative feasibility of each alternative.

4.3 Rationale for the Selection of Alternatives

This alternatives discussion focuses on alternatives to the Proposed Project or its location that are capable of avoiding or substantially reducing any significant effects of the Proposed Project, even if these alternatives would impede to some degree on the attainment of the Proposed Project's objectives, as listed in Chapter 1, Project Description, and restated above.

As part of an alternatives analysis, CEQA requires an EIR to address a No Project (No Build) Alternative. The purpose of describing and analyzing a No Project (No Build) Alternative is to allow decision-makers to compare the impacts of approving a project with the impacts of not approving the project. This EIR addresses the No Project (No Build) Alternative in Section 4.4, Analysis of the No Project (No Build) Alternative.

EIRs should also identify any alternatives that were considered by the lead agency but rejected, and briefly explain the reasons why the lead agency made such a determination. Among the factors that may be used in an EIR to eliminate alternatives from detailed consideration are (i) failure to meet most of the basic project objectives, (ii) infeasibility, and/or (iii) inability to avoid significant environmental impacts.

In accordance with these requirements and based on comments received during the CEQA Notice of Preparation and scoping process for the Proposed Project, five alternatives, including the No Project (No Build) Alternative, to the Proposed Project were considered and analyzed (see Sections 4.4 through 4.8). Additionally, several other project alternatives were previously considered but rejected, as explained in Section 4.3.1 and Section 4.9.

This EIR analysis identified potentially significant impacts to aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, GHG emissions, noise, transportation and traffic, paleontological resources, and tribal cultural resources. Mitigation measures were identified that would reduce impacts to below a level of significance with the exception of aesthetics, agricultural resources, air quality, noise, and transportation and traffic; therefore, these impacts are significant and unavoidable. Accordingly, a range of alternatives has been proposed that would reduce or avoid one or more impacts to the resource areas listed above.

With respect to identifying alternatives for consideration, the No Project Alternative is included and evaluated per CEQA requirements (Section 15126.6(e)(1)). The Low Density Alternative is similar to that analyzed in the Otay Ranch Program EIR (PEIR) (City of Chula Vista and County of San Diego 1993b), and is included to address impacts generally associated with operational impacts that result from the number of residential units. The Alternate Site Alternative is

evaluated in compliance with CEQA guidance to consider alternative project locations as part of the alternatives analysis, and is based on requests received from community groups during meetings held with the Proposed Project applicant. The GDP/SRP Proctor Valley Road Alternative is evaluated because it is the underlying, approved version of the Otay Ranch GDP/SRP for the Project Area, and because it would reduce significant transportation and traffic impacts while being feasible and meeting most of the project objectives. The rationale for considering the Land Exchange Alternative is more extensive, as discussed below.

Significant impacts related to aesthetics, agricultural resources, biological resources, cultural resources, geology and soils, paleontological resources, and tribal cultural resources are predominately the result of the Proposed Project's Development Footprint. Accordingly, two of the alternatives were developed to reduce or modify the Development Footprint to reduce such impacts. These alternatives are the Alternate Site Location Alternative and the Land Exchange Alternative. The Low Density Alternative would reduce the Development Footprint, but only by 16.6 acres in Planning Area 19. Accordingly, footprint-based impacts from the Low Density Alternative are considered to be similar to the Proposed Project, and, thus, the analysis is abbreviated and the impact is not substantially reduced.

Significant impacts related to air quality, GHG emissions, transportation and traffic, and noise are predominately the result of the Proposed Project's total number of residential units and associated vehicle trips and corresponding emissions. Accordingly, two alternatives—the Low Density Alternative and the Alternate Site Alternative—were developed to address these issues. Specifically, these two alternatives would reduce the number of units, and correspondingly reduce average daily traffic (ADT) and related mobile emissions. The GDP/SRP Proctor Valley Road Alternative would also reduce the overall unit count, but only by 14 units; thus, operational air quality, GHG, noise, and traffic impacts from this alternative are considered to be similar to those of the Proposed Project. Accordingly, impacts would not be substantially reduced and the analysis is abbreviated. Table 4-1, Comparison of Proposed Project's Significant Impacts to Alternatives, compares the relative impacts of each of the five alternatives to the Proposed Project.

As explained in more detail in Section 4.8, the Land Exchange Alternative is intended to consolidate development on contiguous property located within Village 14 and eliminate development in Planning Areas 16/19. Since some of the property proposed for development in Village 14 is currently owned by the State of California, a land exchange is required as a condition of this alternative. Land currently owned by the State of California in Village 14 would be exchanged for land currently owned by the applicant in Planning Areas 16/19. In addition, the Land Exchange Alternative would amend the boundaries of the Otay Ranch RMP Preserve and MSCP County Subarea Plan Preserve to increase the size of the Preserve.

The Proposed Project applicant was coordinating a potential land exchange/boundary adjustment with the State of California and U.S. Fish and Wildlife Service (USFWS) prior to the preparation of this EIR. The State of California and USFWS indicated in writing that the proposal had merit and recommended moving forward with analysis of a potential land exchange. Accordingly, the applicant submitted an application to the County for the land exchange/boundary adjustment and prepared a Specific Plan, including a Tentative Map, Preliminary Grading Plan, supporting documents as required by the Otay Ranch GDP/SPR, and full technical studies (Appendices 4.1-1 through 4.1-16 of this EIR). In July 2016, the State of California and USFWS informed the applicant that they were no longer interested in pursuing a land exchange. Accordingly, the land exchange project application was withdrawn in 2016. The Land Exchange Alternative, along with accompanying draft entitlement documents and technical studies (see Appendices 4.1-1 through 4.1-16) are included in this EIR, and have been prepared and reviewed by the County as project-level technical analyses.

As noted throughout this EIR, the Project Area represents a portion of Otay Ranch Village 14 and Planning Areas 16/19 as identified by the Otay Ranch GDP/SRP. In 2003, the State of California acquired land located within Otay Ranch Village 14 and Planning Areas 16, portions of which had already been approved for development in 1993 within the Otay Ranch GDP/SRP and reflected in the land use designations of the County's General Plan Update in 2011 (County of San Diego 2011). Although the state has no current plans to develop the 1,061 acres, the land nonetheless remains potentially developable. The Proposed Project does not provide any assurance that state-owned lands, purchased for open space conservation but that maintain development potential in the County General Plan and Otay Ranch GDP/SRP, will not be developed in the future, even if such development is not currently considered reasonably foreseeable.

The Land Exchange Alternative would remove this potential to be developed by comprehensively amending the Otay Ranch GDP/SRP, Jamul/Dulzura Community Plan, and San Diego County General Plan to reduce the total unit count across Village 14 and Planning Areas 16/19 from 2,123 units to 1,530 units (an additional 96 units would remain on properties outside the Land Exchange Area not owned by the applicant or the state). These amendments would also designate an additional 268.5 acres as Otay Ranch RMP Preserve and include an MSCP County of San Diego Subarea Plan Boundary Adjustment, which would ensure that no additional future development could occur on state-owned land in Village 14 and Planning Areas 16/19 beyond what would be permitted by the Land Exchange Alternative. In the other alternatives discussed herein, the state-owned lands would retain their development potential.

In summary, the five alternatives evaluated in Sections 4.4 through 4.8 were developed to avoid or lessen the significant environmental impacts of the Proposed Project as identified in this Draft EIR and explained above. The alternatives address the significant impacts identified in the project environmental analysis presented in Chapter 2.0, Significant Environmental Effects of

the Proposed Project. The analysis of alternatives focuses on the effects found to be significant through the project's environmental analysis. In addition, the following analysis also provides a qualitative comparison of those environmental effects of the Proposed Project which were determined to be less than significant (Chapter 3.0).

4.3.1 Alternatives Considered But Rejected From Further Analysis

In 1993, the County of San Diego Board of Supervisors certified the Otay Ranch PEIR (City of Chula Vista and County of San Diego 1993b), which, in addition to analyzing and rejecting a range of alternatives, approved Village 14 and Planning Areas 16/19 in the same configuration and for the same level of density/intensity as included in the Proposed Project. This EIR tiers off of that certified Otay Ranch PEIR pursuant to CEQA Section 15152. Accordingly, each of the alternatives analyzed by the Otay Ranch PEIR is relevant to the analysis in this EIR. These PEIR alternatives are discussed briefly in Section 4.9 to acknowledge that the County already considered and rejected several alternatives in previously approving the Project Area for the type and amount of development included in the Proposed Project. Note that the Low Density Alternative analyzed in the Otay Ranch PEIR is a different alternative than the Low Density Alternative analyzed in Section 4.5 of this EIR.

<u>Alternative Project Location</u>

In accordance with CEQA Guidelines Section 15126.6(f)(2), an alternative location for a project should be considered if development of another site is feasible and if such development would avoid or substantially lessen the significant impacts of the proposed Pproject. Factors that may be considered when identifying an alternative site location include the size of the site, its location, the Ggeneral Pplan (or sSubregional Pplan) land use designation, the applicant's ability to acquire the alternative site, and the availability of infrastructure. CEQA Guidelines Section 15126.6(f)(2)(A) states that a key question in looking at an off-site alternative is "whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location."

Village 15 Alternative Site

As noted in Chapter 1 of this EIR, the Otay Ranch GDP/SRP was the basis for the proposed land use types, density, and community character within this particular area of the County. The Proposed Project was designed to implement the vision of the Otay Ranch GDP/SRP. The only other Otay Ranch Village with potentially commensurate amount of development is Otay Ranch Village 15, which is located south of Lower Otay Reservoir (see Figure 4-1, Otay Ranch GDP/SRP Village 15). This alternative project location is considered infeasible since it was purchased by the State of California for conservation purposes. Development of Otay Ranch

Village 15 would also likely result in impacts similar to those identified for the Proposed Project, such as significant and unavoidable impacts to aesthetics and air quality. Selection of Otay Ranch Village 15 may have avoided impacts to biological resources, cultural resources, and geology and soils that are specific to the Project Area, but these impacts were found to be less than significant with mitigation by the Proposed Project. Due to the State of California's ownership of the vast majority of Village 15, and because the Otay Ranch Village 15 site would not substantially reduce significant unavoidable environmental impacts, this alternative was rejected from further consideration.

Otay Ranch PEIR Off-Site Alternatives

Similar to the seven on-site alternatives analyzed by the Otay Ranch PEIR and described in Section 4.9 herein, the Otay Ranch PEIR also considered four alternative project locations. These alternative site locations are summarized below and shown in Figure 4-2, Otay Ranch PEIR Off-Site Alternatives (City of Chula Vista and County of San Diego 1993b).

A. Greater Dulzura Alternative Site

The Greater Dulzura alternative site is bisected by SR-94, and is located immediately east of Otay Ranch. The alternative site is under the jurisdiction of the County of San Diego, and within the Jamul/Dulzura Community Plan area. The site consists of approximately 22,850 acres, and at the time of the Otay Ranch PEIR, was owned by several hundred individuals and businesses. The topography is characterized by numerous small valleys and mountains. Most of the site (13,600 acres) has slopes greater than 25%, and it was assumed in the Otay Ranch PEIR that such lands would generally be withheld from development.

The Greater Dulzura alternative site was determined to have greater potential for substantial growth inducement and pose greater risk of contamination to drinking water reservoirs when compared to the approved Otay Ranch GDP/SRP site. This alternative site would also have resulted in greater air pollution and energy consumption, as well as greater impacts to the local and regional transportation systems due to trips generated. The Greater Dulzura alternative site was also owned by several hundred individuals and businesses, and, therefore, was at a significant disadvantage for land acquisition and timing of development. For these reasons, the Otay Ranch GDP/SRP site was preferred to Greater Dulzura alternative site.

B. West Ramona Alternative Site

The West Ramona alternative site is an elongated area more than 11 miles long, located near the town of Ramona. The site totals 23,400 acres, of which 10,175 acres has slopes less than 25% and was considered potentially developable in the Otay Ranch PEIR. Most of the developable acreage was determined to be located on a plain northwest of Ramona, with a smaller area of

approximately 2,000 acres directly east of Poway along SR-67. Approximately 2,500 acres of the site is within the municipal boundaries of the cities of Poway and San Diego. The other 20,900 acres is under the jurisdiction of the County of San Diego, primarily in the Ramona planning area. Approximately 5,000 acres not proposed for development is within the northern Lakeside and southwestern North Mountain Specific Planning areas. The West Ramona site is crossed by SR-67 and SR-78, and, at the time, had more than 200 landowners. It is adjacent to an existing urban limit line (as defined in the 1993 Otay Ranch PEIR) at Ramona.

The West Ramona alternative site was determined to have a greater potential for substantial growth inducement, as well as a greater impact on nigh time lighting and implementation of the County's Dark Sky Ordinance when compared to the Otay Ranch GDP/SRP site. This alternative would have also required a substantially greater area to be annexed to the local water district, while having a similar risk of contamination to drinking water reservoirs. When compared to the Otay Ranch GDP/SRP site, this alternative would have resulted in greater air pollution and energy consumption due to greater travel distances. Therefore, the Otay Ranch GDP/SRP site was concluded to be preferred to the West Ramona alternative site.

C. East Ramona Alternative Site

The East Ramona alternative site consists of approximately 23,950 acres located immediately east of the urban limits (as defined in the 1993 Otay Ranch PEIR) of the town of Ramona, and west of the small community of Santa Ysabel. Other boundary landmarks include Sutherland Reservoir to the north, and Cleveland National Forest to the east and southeast. Approximately 11,000 acres was identified in the Otay Ranch PEIR as developable (with less than 25% slope). Within the 12,950-acre balance, most areas consist of steep slopes, but there is also a substantial area of more than 2,000 acres that has slopes of less than 25%. SR-76 passes through the site, which is almost completely within the County's Ramona planning area. A small area, less than 1,200 acres, is within the North Mountain Subregion.

The East Ramona alternative site, when compared to the Otay Ranch GDP/SRP site, has a greater potential for substantial growth inducement and a greater impact on local observatories. In addition, this alternative would have required a substantially greater area to be annexed to the local water district and posed a greater risk of contamination to drinking water reservoirs. The East Ramona alternative site would have result in greater air pollution and energy consumption, as well as greater impacts to the local and regional transportation systems due to trips generated. The East Ramona site encompassed more than 600 landowners at the time of the Otay Ranch PEIR, which would have been a significant disadvantage for land acquisition and timing of development. For these reasons, the Otay Ranch GDP/SRP site was determined to be preferred to East Ramona alternative site.

D. Rancho Guejito Alternative Site

The Rancho Guejito alternative site consisted of approximately 23,700 acres located more than 3 miles east of urban limits (as defined in the 1993 Otay Ranch PEIR) of the town of Valley Center, more than 4 miles east of the City of Escondido, and 3 miles north of the northernmost reaches of the City of San Diego. Approximately 10,800 acres was considered potentially developable (with slopes less than 25%). Potentially developable areas were located in several valleys and on several mesas in the southwestern two-thirds of the site. The site is within the jurisdiction of the County of San Diego, but overlapped the boundaries of several County planning areas. Most of the site is within the southern part of the Pala-Pauma Subregion, although more than 4,000 acres is within the Valley Center plan area (eastern end), and more than 2,000 acres is at the far eastern end of the North County Metropolitan Subregion. Rancho Guejito, along with some adjacent land, was held by one owner; however, more than 300 landowners held title to the entire site under consideration at that time, primarily in the area immediately east of Valley Center and west of Otay Ranch. County Route S-6 (Valley Center Road) was adjacent to the site at its extreme northwestern corner.

The Rancho Guejito alternative site was determined to have greater potential for substantial growth inducement and a greater impact on local observatories compared to the Otay Ranch GDP/SRP site. This alternative would have also required substantially greater area to be annexed to a water district and posed a greater risk of contamination to drinking water reservoirs. The Rancho Guejito alternative site would have resulted in greater air pollution and energy consumption, as well as greater impacts to the local and regional transportation systems due to trips generated. The Rancho Guejito site encompassed more than 300 landowners at that time, which would have been a significant disadvantage for land acquisition and timing of development. Therefore, the Otay Ranch GDP/SRP site was determined to be preferred to Rancho Guejito alternative site.

The Otay Ranch PEIR rejected these off-site location alternatives. Accordingly, they are not considered further in this EIR.

4.3.2 Alternatives Under Consideration

The alternatives evaluated in Sections 4.4 through 4.8 of this EIR were developed to avoid or lessen the significant environmental impacts of the Proposed Project as identified in this EIR and explained above. The alternatives address the significant impacts identified in the environmental analysis presented in Chapter 2, Significant Environmental Effects of the Proposed Project. The analysis of alternatives in this section focuses on the effects found to be significant through the environmental analysis, and provides a comparison analysis of those effects to the Proposed Project in Table 4-1. In addition, the following analysis provides a qualitative comparison of

those environmental effects of the Proposed Project that were determined to be less than significant (see Chapter 3, Environmental Effects Found Not to Be Significant).

4.4 Analysis of the No Project (No Build) Alternative

4.4.1 No Project Alternative Description and Setting

CEQA requires evaluation of a No Project Alternative so that decision-makers can compare the impacts of approving a project with the impacts of not approving a project. According to CEQA Guidelines Section 15126.6(e) (14 CCR 15000 et seq.), the No Project Alternative must include the assumption that conditions at the time of the Notice of Preparation (i.e., baseline environmental conditions) would not be changed since the project would not be implemented. In the No Project Alternative discussed herein, the Project Area would remain in its existing condition, and existing allowed uses, such as grazing and dry farming, could reestablish on site. In the No Project Alternative, none of the areas designated as Otay Ranch RMP Preserve would be conveyed to the Otay Ranch POM, the entity responsible for overseeing Preserve management activities within the Otay Ranch RMP Preserve, because there would be no development that would trigger a conveyance obligation.

The No Project Alternative assumes that the Proposed Project would not be developed and the existing conditions at the Project Area would remain. As such, the Project Area would continue to be undeveloped and accessed via the existing Proctor Valley Road, which is currently unimproved.

4.4.2 Comparison of the Effects of the No Project Alternative to the Proposed Project

Aesthetics

As identified in Section 2.1, Aesthetics, the Proposed Project's impacts on aesthetics would be reduced to below a level of significance with the exception of visual character and cumulative impacts. The Proposed Project would substantially change the existing character of the Project Area, and would result in a significant and unavoidable impact. As such, and consistent with the findings of the Otay Ranch PEIR, the Proposed Project would contribute to a significant and unavoidable cumulative impact related to visual character or quality.

No development would occur and no changes to the existing condition of the Project Area would occur in the No Project Alternative. Slopes, rock formations, and landforms would remain in their existing conditions. No development or physical change would occur in the Project Area; therefore, no changes to the existing visual character of the Project Area would occur, and there would be no aesthetic impacts. Therefore, the No Project Alternative would

avoid both the project-specific and cumulatively significant, unavoidable aesthetic impacts of the Proposed Project.

Agricultural Resources

As identified in Section 2.2, Agricultural Resources, the Proposed Project would result in the loss of grazing land and Farmland of Local Importance. Although Mitigation Measure (M-)AG-1 requires preparation of an agricultural plan to help mitigate these impacts, no mitigation measures are available to reduce the impacts to below a level of significance. Impacts to coastal-dependent crops would remain significant and unavoidable.

The No Project Alternative would result in no impacts to agricultural resources. In addition, dry farming and grazing could be reestablished, to allow agricultural uses in the Project Area. Therefore, the No Project Alternative would avoid the Proposed Project's significant and unavoidable impacts to agricultural resources.

Air Quality

As identified in Section 2.3, Air Quality, the Proposed Project would generate construction-related emissions of volatile organic compounds (VOCs) (a precursor to ozone) oxides of nitrogen (NO_x), carbon monoxide (CO), and particulate matter less than 10 microns in diameter (PM₁₀) at levels beyond regulatory thresholds. This is a significant and unavoidable impact. In addition, the Proposed Project, once constructed, would generate operational emissions of VOCs and PM₁₀ at levels beyond regulatory thresholds, thereby resulting in significant, unavoidable impacts. For these reasons, the Proposed Project would make cumulatively considerable contributions to significant and unavoidable cumulative impacts on VOC, NO_x, CO, and PM₁₀ emissions.

The No Project Alternative would generate no direct construction or operational air quality impacts (including VOCs, NO_x, CO, or PM₁₀) since the Project Area would remain in its current state and no construction would occur. Overall, the No Project Alternative would result in no physical impacts to air quality, and, thus, would avoid the significant, unavoidable air quality impacts of the Proposed Project.

Biological Resources

As identified in Section 2.4, Biological Resources, all of the Proposed Project's significant impacts to biological resources would be reduced to below a level of significance after implementation of M-BI-1 through M-BI-20, including conveyance of approximately 777 acres of Otay Ranch RMP Preserve to the Otay Ranch POM.

No new impacts to sensitive vegetation, special-status plant or wildlife species, wetlands/waters, or wildlife movement would occur within the Project Area in the No Project Alternative. However, no land would be conveyed to the Otay Ranch POM for perpetual management and monitoring either. By contrast, the Proposed Project would convey approximately 777 acres to the Otay Ranch POM, thereby adding substantial acreage to the Preserve. Without the 777 acres that the Proposed Project would convey, the Otay Ranch RMP Preserve would not meet its acreage conveyance goals. Also, the No Project Alternative would not result in conservation in perpetuity and management of Otay ranch RMP/MSCP Preserve within the Project Area. However, the No Project Alternative would also not create corresponding biological impacts requiring the mitigation to permanently conserve and manage Preserve land. Thus, this impact would be less than significant. Moreover, since the No Project Alternative would not result in any new impacts to biological resources, it would avoid the significant biological impacts of the Proposed Project.

<u>Cultural Resources</u>

As identified in Section 2.5, Cultural Resources, all of the Proposed Project's significant impacts to cultural resources would be reduced to less than significant with implementation of M-CR-1 through M-CR-3.

No grading or site disturbance would occur within the Project Area in the No Project Alternative. Known and unknown cultural resources would remain in their existing condition, and no disturbance of any subsurface material that could potentially support cultural resources would occur. Therefore, the No Project Alternative would avoid the significant cultural resource impacts of the Proposed Project.

Geology and Soils

As identified in Section 2.6, Geology and Soils, all of the Proposed Project's potentially significant impacts due to rockfall hazards, landslides, and expansive soils would be reduced to less than significant with implementation of M-GE-1.

No development would occur in the No Project Alternative; therefore, impacts identified by the Proposed Project would not occur, since the Project Area would remain in its current state. Compared to the Proposed Project, the No Project Alternative would avoid potentially significant impacts related to exposure to rockfall hazards, landslides, or expansive soils.

Greenhouse Gas Emissions

As identified in Section 2.7, Greenhouse Gas Emissions, the Proposed Project's GHG emissions would be potentially significant; however, impacts would be reduced to less than significant at

both the project impact level and cumulative impact level with implementation of M-GHG-1 through M-GHG-4.

There would be no construction or operational GHG emissions associated with the No Project Alternative, since the Project Area would remain in its current state. Use of construction equipment for grading, architectural coatings, and other producers of construction-related GHG emissions would not occur in the No Project Alternative, and the No Project Alternative would not result in GHG-generating land uses or vehicle trips. Therefore, the No Project Alternative would avoid the potentially significant impacts to GHG emissions of the Proposed Project.

Noise

As identified in Section 2.8, Noise, the Proposed Project's construction and operational noise impacts would be reduced to less than significant with implementation of M-N-1 through M-N-10, with the exception of one significant and unavoidable off-site traffic noise impact to residences located along Proctor Valley Road, north of the Project Area and west of Melody Road. These residences would experience a noise level of 51 A-weighted decibels (dBA), which is below the threshold of 60 dBA for residential land uses, but the Proposed Project would increase noise levels by greater than 10 dBA, which is considered a significant impact.

No construction or development would occur in the No Project Alternative. Use of construction equipment and other noise-generating construction activities would not occur. In addition, the No Project Alternative would not result in operational noise from vehicle trips. Compared to the Proposed Project, noise impacts would be avoided by the No Project Alternative. Impacts would be less than significant.

Traffic and Transportation

As identified in Section 2.9, Transportation and Traffic, the Proposed Project would result in the following significant and unavoidable roadway segment and intersection impacts under Existing Plus Project Buildout Conditions, Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property, as identified below, even with implementation of M-TR-1 through M-TR-17:

Intersections

 SR-94 and Lyons Valley Road (Exiting Plus Project Buildout, Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)

- Northwoods Drive/Agua Vista Drive and Proctor Valley Road (Existing Plus Project Build-Out, Year 2025, Year 2030, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Paseo Ranchero and East H Street (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Mt. Miguel Road and East H Street (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Lane Avenue and East H Street (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road and Project Driveway No. 1, No. 2, No. 3, No. 4, and No. 5 (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)

Roadway Segments

- Proctor Valley Road between Hunte Parkway and Northwoods Drive (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Northwoods Drive and the City of Chula Vista (Exiting Plus Project Buildout, Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between the City of Chula Vista boundary and Project Driveway No. 1 (Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Project Driveway No. 1 and Project Driveway No. 2 (Year 2025, Year 2030, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Project Driveway No. 2 and Project Driveway No. 3 (Year 2030, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Project Driveway No. 3 to Project Driveway No. 4 (Year 2030, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)

The No Project Alternative would have no direct impacts on transportation or traffic since the Project Area would remain in its existing condition, with Proctor Valley Road

unimproved in its current alignment. There would be no vehicle trips generated by the No Project Alternative. Impacts to transportation and traffic would be reduced or avoided compared to the Proposed Project.

Paleontological Resources

As identified in Section 2.10, Paleontological Resources, all of the Proposed Project's impacts to paleontological resources would be reduced to less than significant with implementation of M-PR-1.

No grading or site disturbance would occur within the Project Area in the No Project Alternative. Paleontological resources would remain in their existing condition, and no disturbance of any subsurface material that could potentially support paleontological resources would occur. Therefore, the No Project Alternative would reduce or avoid impacts to paleontological resources compared to the Proposed Project.

Tribal Cultural Resources

As identified in Section 2.11, Tribal Cultural Resources, the Proposed Project's potentially significant impacts on tribal cultural resources as a result of the Preserve Trails Option would be reduced to less than significant with implementation of M-TCR-1.

No grading or site disturbance would occur on or off site in the No Project Alternative. Known and unknown tribal cultural resources would remain in their existing condition. Therefore, the No Project Alternative would have reduced impacts to tribal cultural resources compared to the Proposed Project if the Preserve Trails Option is selected. If the Preserve Trails Option is not selected as part of the Proposed Project, impacts to tribal cultural resources would be similar between the Proposed Project and the No Project Alternative, because no such resources were identified and would be impacted within the Project Area.

Hazards and Hazardous Materials

As identified in Section 3.1.1, Hazards and Hazardous Materials, the Proposed Project would not include uses that would use hazardous substances in excess quantities, and no on-site hazardous contamination is present. The Project Area is not located within the airport influence area of an Airport Land Use Compatibility Plan (ALUCP), within 2 miles of a public airport, or within 1 mile of a private use airport, nor would any of the proposed uses pose a hazard to airport safety. Based on implementation of the Fire Protection Plan (FPP) requirements, compliance with applicable fire codes, and inclusion of a fire station in the Project Area, the Proposed Project would not have significant impacts relating to wildfire hazards. Additionally, the County's emergency response and multi-jurisdictional fire efforts would be able to provide adequate emergency response. Potential impacts due to hazards or hazardous materials would be less than significant.

No development would occur and there would not be an increase in population in the Project Area that could be subjected to hazardous substances or wildfire hazards in the No Project Alternative. Therefore, the No Project Alternative would have reduced impacts to hazards and hazardous materials compared to the Proposed Project.

Hydrology and Water Quality

As identified in Section 3.1.2, Hydrology and Water Quality, all of the Proposed Project's potential impacts on existing hydrology, water quality (during construction and operation), groundwater, and flooding would be less than significant.

The No Project Alternative would not result in any direct impacts related to hydrology or water quality, since no construction would occur and there would be no increase in runoff from the Project Area. No construction or development activities would take place that could generate potential pollutants; therefore, the No Project Alternative would have reduced impacts related to water quality and hydrology compared to the Proposed Project.

Land Use and Planning

As identified in Section 3.1.3, Land Use and Planning, the Proposed Project would not physically divide an established community or conflict with any applicable land use plan, policy, guideline, or regulation. The Proposed Project would be consistent with the underlying County General Plan and Otay Ranch GDP/SRP land uses. Land use and planning impacts would be less than significant.

The No Project Alternative would not implement either the County's General Plan or the Otay Ranch GDP/SRP with the development envisioned for the Project Area. The No Project Alternative would also not generate funding for existing and planned infrastructure and services through payment of development impact fees because no new development would be generated. Leaving the Project Area and other sites in the County that are planned for development in an undeveloped state could have the cumulative effect of more development occurring in neighboring counties, resulting in conflicts with state planning directives (e.g., Senate Bill (SB) 743) and regional planning efforts relying, in part, on new development to fund the regional arterial system and other negative effects associated with a growing jobs/housing imbalance.

Therefore, the No Project Alternative could have greater land use and planning impacts compared to the Proposed Project. Note, however, that even in the No Project Alternative, the Project Area would retain its existing land use and zoning designations, which would allow the land to be developed in the future. Impacts would be less than significant.

Mineral Resources

As identified in Section 3.1.4, Mineral Resources, the Proposed Project would impact Quaternary alluvium, which is not considered a high-quality (Portland cement concrete (PCC) grade) aggregate source, and Mineral Resource Zone (MRZ) 3 areas, which consist of weathered metavolcanic materials and are not considered a quality PCC aggregate source in practice. Thus, the Proposed Project's impacts on mineral resources would be less than significant.

Because the No Project Alternative would not result in any construction or development, the No Project Alternative would not result in any impacts to mineral resources. Impacts to mineral resources would be reduced compared to the Proposed Project.

Population and Housing

As identified in Section 3.1.5, Population and Housing, the Proposed Project would be consistent with the growth planned for the area and analyzed in the previously certified Otay Ranch PEIR and contemplated by San Diego Association of Governments (SANDAG) Regional Growth Forecasts. Impacts related to substantial population growth, displacement of existing housing, and displacement of people would be less than significant.

No impacts related to population growth would occur in the No Project Alternative because no residential or economic growth would occur and no infrastructure would be developed; however, the lack of housing concurrent with needs as shown in SANDAG forecasts (Regional Housing Needs Assessment) would result in a potentially significant impact. As a result, the No Project Alternative could conflict with the County's General Plan and Otay Ranch GDP/SRP housing and population policies that encourage growth of residential land uses consistent with applicable regional planning efforts. Therefore, impacts as a result of the No Project Alternative would be more than the Proposed Project. As mentioned above, however, in the No Project Alternative, the Project Area would retain its existing land use and zoning designations, which would allow the land to be developed in the future. Impacts would be less than significant.

Public Services

As identified in Section 3.1.6, Public Services, the Proposed Project's impacts to fire protection and emergency services, law enforcement, schools, and parks would be less than significant based on a combination of payment of impact fees, dedication of land, and/or construction of facilities. Therefore, impacts to public services would be less than significant.

The No Project Alternative does not propose any residential or commercial development, and thus would not generate any demand for public services or need for additional public service infrastructure. Therefore, the No Project Alternative would result in fewer impacts to public services compared to the Proposed Project.

Recreation

As identified in Section 3.1.7, Recreation, the Proposed Project would include 1,119 dwelling units, which, per the County's Park Land Dedication Ordinance (PLDO), would require 10.04 acres of parkland. The Proposed Project would construct 23.3 acres of parks and recreation facilities within the Project Area, 11.1 acres of which are eligible for credit through the County's PLDO. Therefore, sufficient parks and recreation facilities would be provided to accommodate future residents and visitors of the Proposed Project, and recreation impacts would be less than significant.

No new parks or recreational facilities would be provided by the No Project Alternative, and no new or increased demand for parks and recreational facilities would occur, since no new population would be introduced to, or generated by, this alternative. Therefore, the No Project Alternative would result in reduced impacts to recreation compared to the Proposed Project.

Utilities

As identified in Section 3.1.8, Utilities and Service Systems, the Proposed Project would result in a less-than-significant impact to water supply, wastewater treatment facilities, storm drainage facilities, or solid waste facilities. Further, the Proposed Project would comply with all applicable laws and regulations associated with utilities and service systems, and would result in a less-than-significant cumulative impact to water supply, wastewater treatment facilities, storm drainage facilities, and solid waste facilities.

No residential or commercial development that would generate a need for new utilities and service systems would occur in the No Project Alternative, and no new impacts related to the extension or provision of additional utilities and service systems would occur. Therefore, the No Project Alternative would result in reduced impacts to utilities compared to the Proposed Project.

Energy

As identified in Section 3.1.9, Energy, the Proposed Project would not result in the wasteful or inefficient use of electricity, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing energy consumption, including the County of San Diego's General Plan. As a result, the Proposed Project's energy impacts would be less than significant.

No construction or development would occur in the No Project Alternative; therefore, there would be no increase in the demand for energy. Because the Project Area would remain in its

existing condition, the No Project Alternative would result in less energy demand, and impacts would be less than for the Proposed Project.

4.4.3 Relation to Project Objectives

The No Project Alternative would not be consistent with the vision, goals, or policies set forth in the County's General Plan or Otay Ranch GDP/SRP, nor would the No Project Alternative meet the majority of the Proposed Project's objectives. Specifically, the alternative would not meet the Proposed Project's underlying purpose, which is to create a planned community and biological Preserve sufficient in size and scale to realize both the applicant's vision and County's land use planning goals for the Project Area as set forth in the Otay Ranch GDP/SRP. The No Project Alternative would not convey land to the Otay Ranch RMP POM, and, as a result, would not enhance habitat conservation, manage resources, restore habitat, or enforce open space restrictions. The No Project Alternative would not assist in meeting the regional housing needs identified in the County's General Plan, or implement the goals and visions of the Otay Ranch GDP/SRP. Overall, the No Project Alternative would not be consistent with the majority of the Proposed Project's objectives, or the vision, goals, or policies set forth in the County's General Plan or Otay Ranch GDP/SRP.

4.4.4 Feasibility

The No Project Alternative is feasible.

4.4.5 Evaluation of Significant Impacts

The No Project Alternative would avoid or reduce all significant impacts related to the Proposed Project. Specifically, when compared to the Proposed Project, the No Project Alternative would avoid, reduce, or substantially lessen significant impacts in the following areas:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils

- Greenhouse Gas Emissions
- Noise
- Transportation and Traffic
- Paleontological Resources
- Tribal Cultural Resources

4.5 Analysis of the Low Density Alternative

4.5.1 Low Density Alternative Description and Setting

The Low Density Alternative would have the same development area as the Proposed Project, except Planning Area 19 would not be developed and instead would be designated as Conserved Open Space. Planning Area 16 would have 2-acre minimum lots and yield 112 residential units, similar to the Proposed Project. Village 14 would have 1-acre minimum lots and would yield 145 residential units. A total of 257 residential units would be developed by the Low Density Alternative compared to the 1,119 units by the Proposed Project (see Figure 4-3, Low Density Alternative). The Proposed Project would have a build-out population of approximately 4,028 residents, and the Low Density Alterative would have a build-out population of approximately 925 residents. This represents a 77% decrease in dwelling units and a 77% decrease in population compared to the Proposed Project.

Due to the decrease in dwelling units and population, the amount of park demand would be reduced such that only one 2.3-acre park would be included as part of the Low Density Alternative. There would be no school site proposed due to the minimal number of students generated by only 257 homes. No public safety facility site is proposed by the Low Density Alternative. Thus, there would be no new Sheriff's satellite facility or new fire station. No fire station site is proposed because the future residences in the Low Density Alternative could be served within the 10-minute travel time from existing stations (Jamul Station No. 36 and City of Chula Vista Station No. 8), which is the County's requirement for lot sizes that are a minimum of 1 acre. In addition, fire/emergency call volumes would only be 0.2 calls for service per day. There would also not be any commercially designated land or a Village Core. Proctor Valley Road would be two lanes from the City of Chula Vista to the property line in Planning Area 19 for secondary access, similar to the Proposed Project.

4.5.2 Comparison of the Effects of the Low Density Alternative to the Proposed Project

Aesthetics

As identified in Section 2.1, Aesthetics, all of the Proposed Project's impacts associated with aesthetics would be reduced to below a level of significance, with the exception of visual character and cumulative impacts, which would remain significant and unavoidable.

The Low Density Alternative, would convert the Project Area from rural open space to semirural land uses. The Low Density Alternative would have the same Otay Ranch RMP/MSCP Preserve, and result in approximately 16.6 acres of additional Conserved Open Space in Planning Area 19 compared to the Proposed Project. A similar amount of Otay Ranch RMP Preserve

would be conveyed compared to the Proposed Project due to the similar development footprints. 257 units would be developed compared to the 1,119 proposed by the Proposed Project. There would be no Village Core or commercially designated land uses. Although the existing character of the Project Area would be changed by the Low Density Alternative, there would be less residential development compared to the Proposed Project. Accordingly, the Low Density Alternative would reduce the significant, unavoidable aesthetic impacts of the Proposed Project; however, impacts would remain significant and unavoidable.

Agricultural Resources

As identified in Section 2.2, Agricultural Resources, the Proposed Project would result in the loss of grazing land and Farmland of Local Importance. No mitigation measures are available to reduce impacts to below a level of significance, and impacts would remain significant and unavoidable.

The Low Density Alternative would have the same development footprint as the Proposed Project, with the exception of development in Planning Area 19, which would remain undeveloped in the Low Density Alternative. Therefore, less development would occur in the Low Density Alternative, and impacts on grazing land would be reduced by approximately 16.6 acres compared to the Proposed Project. Even with this reduction, however, the Low Density Alternative would still result in similar significant, unavoidable impacts to agricultural resources.

Air Quality

As identified in Section 2.3, Air Quality, Proposed Project construction emissions and daily operational emissions for VOCs, NO_x, CO, and PM₁₀ would result in significant and unavoidable impacts. Thus, the Proposed Project would contribute to a cumulatively considerable significant and unavoidable impact as well.

The Low Density Alternative would have similar VOC, NOx, CO, and PM₁₀ threshold exceedances to the Proposed Project for construction because similar construction activities would occur under the Low Density Alternative. Development would still occur in the Low Density Alternative, but because this alternative would construct 862 fewer homes than the Proposed Project, operational emissions, including emissions of VOCs and PM₁₀, would be reduced compared to the Proposed Project. For this reason, the Low Density Alternative would have reduced air quality impacts compared to the Proposed Project; however, air quality impacts are expected to remain significant and unavoidable.

Biological Resources

As identified in Section 2.4, Biological Resources, the Proposed Project's impacts on biological resources would be reduced to less than significant after implementation of M-BI-1 through M-

BI-20, including conveyance of approximately 777 acres of Otay Ranch RMP Preserve to the Otay Ranch POM.

Under the Low Density Alternative, similar impacts to biological resources would occur. Although fewer dwelling units would be developed, the disturbance associated with the Low Density Alternative residential uses would remain the same (with the exception of Planning Area 19), because lot sizes would be larger and the development footprint would be substantially the same as the Proposed Project. The Low Density Alternative would result in the same potentially significant but mitigable impacts related to special-status plants and wildlife species, riparian habitat and other sensitive natural communities, federally protected wetlands, and consistency with the MSCP County Subarea Plan and Otay Ranch RMP as the Proposed Project. Impacts to biological resources would be similar compared to the Proposed Project, and similar mitigation measures would be required. The Low Density Alternative would avoid impacts to biological resources within Planning Area 19; however, impacts within most of the Project Area would not be substantially reduced or avoided compared to the Proposed Project. Impacts would be less than significant with mitigation.

<u>Cultural Resources</u>

As identified in Section 2.5, Cultural Resources, all of the Proposed Project's potentially significant impacts associated with known and unknown subsurface cultural resources would be reduced to less than significant with implementation of M-CR-1 through M-CR-3.

Development would still occur and the potential to uncover cultural resources still exists in the Low Density Alternative. Although fewer units would be developed, the footprint of disturbance to construct the residential uses would remain the same (with the exception of Planning Area 19), because lot sizes would be larger under the Low Density Alternative. Therefore, impacts to cultural resources would be similar to the Proposed Project, and similar mitigation measures would be required. Consequently, the Low Density Alternative would not substantially avoid or reduce impacts to cultural resources within the Project Area, except for Planning Area 19, which would remain undisturbed as open space. Impacts would be less than significant with mitigation.

Geology and Soils

As identified in Section 2.6, Geology and Soils, all of the Proposed Project's potentially significant impacts on geology and soils would be reduced to less than significant with implementation of M-GE-1.

Development under the Low Density Alternative would have similar impacts and mitigation measures related to geology and soils. Similar to the Proposed Project, the Low Density Alternative would be consistent with County General Plan and Otay Ranch GDP/SRP

geotechnical policies. However, the Low Density Alternative would reduce the amount of dwelling units and people exposed to geologic hazards compared to the Proposed Project. Therefore, the Low Density Alternative would result in reduced impacts compared to the Proposed Project. The Low Density Alternative would avoid impacts within Planning Area 19, which would remain undeveloped. Impacts would be less than significant with mitigation.

Greenhouse Gas Emissions

As identified in Section 2.7, Greenhouse Gas Emissions, the Proposed Project would mitigate its GHG emissions impacts to less than significant at both the project impact level and cumulative impact level through implementation of M-GHG-1 through M-GHG-4.

Development would occur under the Low Density Alternative, which would result in construction emissions; however, since 862 fewer homes would be constructed under the Low Density Alternative, fewer emissions would occur during construction. Both the Proposed Project and the Low Density Alternative would have emissions associated with daily vehicle trips; however, the Low Density Alternative would generate fewer daily vehicle trips than the Proposed Project due to the 77% reduction in dwelling units. In addition, compared to the Proposed Project, the Low Density Alternative would generate less demand for electricity and natural gas, and water and wastewater conveyance. Further, the Low Density Alternative would not have the potential to conflict with applicable plans or regulations adopted for the purpose of reducing the emissions of GHGs. Overall, the Low Density Alternative would reduce GHG impacts compared to the Proposed Project. Impacts would be less than significant with mitigation.

Noise

As identified in Section 2.8, Noise, all of the Proposed Project's noise impacts would be reduced to less than significant with implementation of M-N-1 through M-N-10, with the exception of one significant and unavoidable impact to residences located along Proctor Valley Road North in the Project Area and west of Melody Road. These residences would experience a noise level of 51 dBA, which is considered below the threshold for residential land uses, but it would be an increase in noise levels of greater than 10 dBA, which would be a significant impact.

Construction would still occur under the Low Density Alternative, but the duration of construction noise would be shorter due to the reduced number of dwelling units. In addition, the Low Density Alternative would reduce impacts related to the permanent increase in ambient noise levels compared to the Proposed Project due to the 76% reduction in vehicle trips that would be generated under the Low Density Alternative. Overall, noise impacts would be reduced compared to the Proposed Project.

Traffic and Transportation

As identified in Section 2.9, Transportation and Traffic, the Proposed Project would result in the following significant and unavoidable roadway segment and intersection impacts under Existing Plus Project Buildout Conditions, Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property, as identified below, even with implementation of M-TR-1 through M-TR-17:

Intersections

- SR-94 and Lyons Valley Road (Exiting Plus Project Buildout, Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Northwoods Drive/Agua Vista Drive and Proctor Valley Road (Existing Plus Project Build-Out, Year 2025, Year 2030, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Paseo Ranchero and East H Street (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Mt. Miguel Road and East H Street (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Lane Avenue and East H Street (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road and Project Driveway No. 1, No. 2, No. 3, No. 4, and No. 5 (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)

Roadway Segments

- Proctor Valley Road between Hunte Parkway and Northwoods Drive (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Northwoods Drive and the City of Chula Vista (Exiting Plus Project Buildout, Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between the City of Chula Vista boundary and Project Driveway No. 1 (Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)

- Proctor Valley Road between Project Driveway No. 1 and Project Driveway No. 2 (Year 2025, Year 2030, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Project Driveway No. 2 and Project Driveway No. 3 (Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Project Driveway No. 3 to Project Driveway No. 4 (Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)

As shown in Table 4-2, Estimated Average Daily Trips for Proposed Project vs. Low Density Alternative, the Proposed Project would generate 12,767 ADT. By comparison, the Low Density Alternative would generate approximately 3,096 ADT. This represents a 76% reduction in ADT compared to the Proposed Project.

Therefore, the Low Density Alternative would result in fewer traffic- and transportation-related impacts compared to the Proposed Project. The construction of fewer homes would result in fewer vehicle trips being added to the surrounding roadway network and, thus, would result in reduced impacts compared to the Proposed Project. Therefore, impacts would be reduced under the Low Density Alternative due to the 76% reduction in ADT.

Paleontological Resources

As identified in Section 2.10, Paleontological Resources, all of the Proposed Project's potentially significant impacts associated with paleontological resources would be reduced to less than significant with implementation of M-PR-1.

Under the Low Density Alternative, development would still occur and the potential to uncover paleontological resources would still exist. Although fewer units would be developed, the footprint of disturbance would remain the same (with the exception of Planning Area 19) because lot sizes would be larger under the Low Density Alternative. Therefore, impacts to paleontological resources would be similar to the Proposed Project, and similar mitigation measures would be required. Consequently, the Low Density Alternative would not avoid or reduce impacts to paleontological resources within the Project Area, except for Planning Area 19, which would remain undisturbed as Conserved Open Space. Impacts would be less than significant with mitigation measure M-PR-1.

Tribal Cultural Resources

As identified in Section 2.10, Tribal Cultural Resources, the Proposed Project's potentially significant impacts on tribal cultural resources as a result of the Preserve Trails Option would be reduced to less than significant with implementation of M-TCR-1.

Although fewer units would be developed, the footprint of disturbance would remain the same as the Proposed Project (with the exception of Planning Area 19), because lot sizes would be larger under the Low Density Alternative. Therefore, impacts to tribal cultural resources would be similar to the Proposed Project, with the exception of Planning Area 19, and similar mitigation measures would be required. The Low Density Alternative would avoid disturbance within Planning Area 19; however, impacts within most of the Project Area would be similar compared to the Proposed Project. Impacts as a result of the Preserve Trails Option would be less than significant with mitigation measure M-TRC-1.

Hazards and Hazardous Materials

As identified in Section 3.1.1, Hazards and Hazardous Materials, the Proposed Project would not involve uses that would use hazardous substances in excess quantities, and no on-site hazardous contamination is present. The Project Area is not located within the airport influence area of an ALUCP or within 2 miles of a public or within 1 mile of a private use airport, nor would any of the proposed uses pose a hazard to airport safety. Based on implementation of the FPP requirements, compliance with applicable fire codes, and inclusion of a fire station in the Project Area, the Proposed Project would not have significant impacts relating to wildfire hazards. Additionally, the County's emergency response and multi-jurisdictional fire efforts would be able to provide adequate emergency response. Potential impacts due to hazards or hazardous materials would be less than significant.

Construction would occur under the Low Density Alternative, but the number of dwelling units and people exposed to potential hazards or hazardous materials would be reduced compared to the Proposed Project. The Low Density Alternative would not include a fire station; however, because lot sizes would be a minimum of 1 acre under the Low Density Alternative, the applicable travel time threshold would be 10 minutes. This travel time could be achieved from existing fire stations. Thus, although travel times would be greater under the Low Density Alternative due to the lot sizes, travel times would be consistent with the County General Plan, similar to the Proposed Project. The Low Density Alternative would result in less-than-significant impacts, similar to the Proposed Project.

Hydrology and Water Quality

As identified in Section 3.1.2, Hydrology and Water Quality, all of the Proposed Project's potential impacts on hydrology, water quality (during construction and operation), groundwater, and flooding would be less than significant. No mitigation would be required. The Proposed Project would also be consistent with the County's General Plan and Otay Ranch GDP/SRP policies related to hydrology and water quality.

Development under the Low Density Alternative would have similar impacts related to hydrology and water quality compared to the Proposed Project. The Low Density Alternative would be required to comply with all regulations associated with protecting water quality during construction and operation, and similar impacts to groundwater and flooding would occur. No disturbance would occur in Planning Area 19. The Low Density Alternative would also be consistent with County General Plan and Otay Ranch GDP/SRP policies related to hydrology and water quality. The Low Density Alternative would avoid disturbance within Planning Area 19. Impacts under the Low Density Alternative would be less than significant, similar to the Proposed Project.

Land Use and Planning

As identified in Section 3.1.3, Land Use and Planning, implementation of the Proposed Project would not physically divide an established community or conflict with any applicable land use plan, policy, guideline, or regulation. Therefore, land use and planning impacts would be less than significant.

The Low Density Alternative would not implement the Otay Ranch GDP/SRP as envisioned for the Project Area. The Low Density Alternative would yield substantially fewer residential units than the amount allowed under the County's General Plan and the Otay Ranch GDP/SRP. The Low Density Alternative would not provide a Village Core, which is inconsistent with Otay Ranch GDP/SRP policies for Village 14. The Low Density Alternative would also generate less funding for existing and planned infrastructure and services through payment of development impact fees. If the Project Area and other sites in the County planned for development are underdeveloped, there could be a cumulative effect of more development occurring in neighboring counties, resulting conflicts with state planning directives (e.g., SB 743) and regional planning efforts relying, in part, on new development to fund the regional arterial system, and other negative effects associated with a growing jobs/housing imbalance. Therefore, the Low Density Alternative would have greater land use and planning impacts compared to the Proposed Project. Impacts to land use and planning would not be reduced or avoided.

Mineral Resources

As identified in Section 3.1.4, Mineral Resources, the Proposed Project would impact Quaternary alluvium, which is not considered a high-quality (PCC grade) aggregate source, and MRZ-3 areas, which consist of weathered meta-volcanic materials and are not considered a quality PCC aggregate source in practice. Impacts to mineral resources under the Proposed Project would be less than significant. No mitigation would be required.

Under the Low Density Alternative, similar impacts to mineral resources would occur. Although fewer dwelling units would be developed, the developed area would remain the same (with the exception of Planning Area 19) compared to the Proposed Project, because lot sizes would be larger under the Low Density Alternative. Therefore, impacts to mineral resources would not be reduced or avoided as a result of the Low Density Alternative. Impacts would be less than significant, similar to the Proposed Project.

Population and Housing

As identified in Section 3.1.5, Population and Housing, implementation of the Proposed Project would be consistent with the growth planned for the area and analyzed in the previously certified Otay Ranch PEIR. Impacts related to substantial population growth, displacement of existing housing, and displacement of people would be less than significant. No mitigation would be required.

Under the Low Density Alternative, Planning Area 16 would have 2-acre minimum lots and yield 112 residential units, and Village 14 would have 1-acre minimum lots and would yield 145 residential units. A total of 257 residential units would be developed under the Low Density Alternative compared to the 1,119 units under the Proposed Project. The Low Density Alterative would have a build-out population of 925 residents, compared to 4,028 residents under the Proposed Project. This represents a 77% decrease in dwelling units and a 77% decrease in population compared to the Proposed Project. Although there would be fewer homes and residents under the Low Density Alternative, the lack of housing concurrent with needs as shown in SANDAG forecasts (Regional Housing Needs Assessment) would result in a potentially significant impact. There would also not be any commercially designated land or a Village Core under the Low Density Alternative. As a result, the Low Density Alternative would conflict with the County's General Plan and Otay Ranch GDP/SRP housing and population policies that encourage growth of residential, commercial, and industrial land uses. Therefore, the Low Density Alternative would result in increased impacts compared to the Proposed Project. Impacts related to population and housing would not be reduced or avoided compared to the Proposed Project.

Public Services

As identified in Section 3.1.6, Public Services, the Proposed Project was determined to avoid significant impacts to fire protection and emergency services, law enforcement, schools, and parks by a combination of payment of impact fees, dedication of land, and/or construction of facilities. Therefore, impacts to public services would be less than significant. No mitigation would be required.

Under the Low Density Alternative, there would be no school site due to the minimal number of students generated. In addition, the Low Density Alternative would not generate a sufficient need for an on-site public safety facility; therefore, none is proposed. Demand for law enforcement would be reduced since there would be fewer residents and, therefore, fewer calls for law enforcement services. No on-site Sheriff's satellite facility would be part of the Low Density Alternative. No fire station site is proposed because the future residences under the Low Density Alternative could be served within the 10-minute travel time from existing stations, which is the County's requirement for lot sizes that are a minimum of 1 acre. However, the fire station site that is included as part of the Proposed Project would provide a public benefit to the community as a whole, not just the Project Area. In addition, the Low Density Alternative would generate less funding for existing and planned infrastructure and services through payment of development impact fees. Therefore, impacts to public services under the Low Density Alternative could be potentially greater than the Proposed Project. Nevertheless, the Low Density Alternative's impacts to public services would be less than significant.

Recreation

As identified in Section 3.1.7, Recreation, the Proposed Project would include 1,119 dwelling units, which, per the County's PLDO, requires 10.04 acres of parkland. The Proposed Project would construct 23.3 acres of parks and recreation facilities within the Project Area, 11.1 acres of which are eligible for credit under the County's PLDO. Sufficient parks and recreation facilities would be provided to accommodate future residents and visitors of the Proposed Project. Therefore, recreation impacts would be less than significant.

Based on the number of dwelling units under the Low Density Alternative (257 units), the County's PLDO requirement (390.73 square feet per unit) would be 2.3 acres. As previously stated, the Low Density Alternative would include 2.3 acres of parkland. Therefore, the Low Density Alternative would meet the County's PLDO requirements, and impacts would be less than significant. The Low Density Alternative would result in reduced physical impacts from park development due to the decreased acreage of new parkland. Impacts related to recreation would be reduced under the Low Density Alternative. Impacts would be less than significant, similar to the Proposed Project.

Utilities

As identified in Section 3.1.8, Utilities and Service Systems, the Proposed Project would result in less-than-significant impacts to water supply, wastewater treatment facilities, storm drainage facilities, and solid waste facilities. Further, the Proposed Project would comply with all applicable laws and regulations associated with utilities and service systems.

Under the Low Density Alternative, similar impacts to storm drainage facilities would occur, because the Low Density Alternative would be required to have storm drainage facilities that would be able to accommodate the proposed peak-flow increases. The Low Density Alternative would have a total average water demand of approximately 184,270 gallons per day, compared to the Proposed Project's total average water demand of 797,970 gallons per day. Since implementation of the Low Density Alternative would result in less development and lower population, there would be less demand on water supply, wastewater, and solid waste compared to the Proposed Project. However, similar facilities within the Project Area would be required to provide these services (with the exception of Planning Area 19); thus, impacts associated with the construction of these facilities would be similar to the Proposed Project. In short, neither the Proposed Project nor the Low Density Alternative would result in significant impacts to utilities and service systems, although the Low Density Alternative would result in reduced demand by comparison.

Energy

As identified in Section 3.1.9, Energy, the Proposed Project would not result in the wasteful or inefficient use of electricity, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing energy consumption, including the County of San Diego's General Plan policies. As a result, impacts would be less than significant.

Similar to the Proposed Project, the Low Density Alternative would not result in the wasteful or inefficient use of electricity, or conflict with an applicable plan, policy, or regulation related to energy. Since less development would occur under the Low Density Alternative, there would be less demand for energy. The Low Density Alternative would have similar, less-than-significant impacts to energy compared to the Proposed Project.

4.5.3 Relation to Project Objectives

The Low Density Alternative would meet some of the identified Proposed Project objectives, but would impede attainment of others. Specifically, the Low Density Alternative would assist in meeting the regional housing needs identified in the County's General Plan, but not to the same extent as the Proposed Project, since it would result in 77% fewer dwelling units (Objective 1). Further, the Low Density Alternative would partially comply with the Otay Ranch GDP/SRP; however, because it would not provide a Village Core, it would not fully implement the goals

and visions of the Otay Ranch GDP/SRP for Village 14, or combine land uses to further reduce GHG emissions (Objectives 4, 7). The Low Density Alternative would achieve Objective 3 by serving as a transitional area between Jamul and Otay Ranch, and Objective 6 by minimizing the width of Proctor Valley Road. It would also implement Objective 5 by creating a buffer adjacent to the community of Jamul.

The Low Density Alternative would not meet the Proposed Project's underlying purpose of creating a planned community and biological Preserve sufficient in size and scale to realize both the applicant's vision and the vision of the existing entitlements for the Project Area as set forth in the Otay Ranch GDP/SRP because it would be inconsistent with the types and intensities of uses established in the Otay Ranch GDP/SRP. The Low Density Alternative would convey land to the Otay Ranch RMP POM, and thereby would enhance habitat conservation, manage resources, restore habitat, and enforce open space restrictions. Thus, the Low Density Alternative would comply with the majority of the Proposed Project's objectives, or the vision, goals, or policies set forth in the County's General Plan or Otay Ranch GDP/SRP.

4.5.4 Feasibility

The Low Density Alternative is feasible; however, it would not provide for the most efficient use of the Project Area, or provide a level of private development adequate to ensure sufficient funding for public facilities and services required to serve the community's needs. The Low Density Alternative would not provide the same benefits as the Proposed Project because it would not include an elementary school site or public safety site, nor would it pay a similar amount in applicable fees for public services and facilities. In addition, the decreased density of the Low Density Alternative would not allow for any commercially designated land or a Village Core that could establish and promote a viable community.

4.5.5 Evaluation of Significant Impacts

Compared to the Proposed Project, the Low Density Alternative would not reduce significant impacts associated with agricultural resources, biological resources, cultural resources, paleontological resources, or tribal cultural resources. The Low Density Alternative would, however, reduce some of the significant impacts related to construction and operational use of the Project Area. Specifically, compared to the Proposed Project, the Low Density Alternative would avoid, reduce, or substantially lessen significant impacts in the following areas:

- Aesthetics
- Air Quality
- Geology and Soils

- Greenhouse Gas Emissions
- Transportation and Traffic
- Noise

4.6 Analysis of the Alternate Site Location

4.6.1 Alternate Site Location Description and Setting

As explained in Section 4.1, the Alternate Site Location Alternative is included to respond to suggestions by a coalition of conservation groups made during meetings held with the Proposed Project applicant. The intent of the Alternate Site Location Alternative is to conserve open space in central and north Proctor Valley and Planning Areas 16/19 while clustering development in the south of Proctor Valley. The total area of the Alternative Site Location is approximately 450.1 acres, and would also include approximately 85.4 acres of off-site improvements to Proctor Valley Road, similar to the Proposed Project. The Alternate Site Location Alternative would allow development in the southerly development footprint of Village 14, as anticipated by the Otay Ranch GDP/SRP, while expanding South Village 14 development into adjacent Otay Ranch RMP Preserve lands owned by the Otay Ranch POM. No specific biological, topographical, or other environmental rationale was provided by the coalition of conservation groups other than to reduce the Development Footprint in Village 14 and Planning Areas 16/19 and provide development closer to the existing suburban interface with the City of Chula Vista.

The Alternate Site Location Alternative would develop approximately 171.1 acres, consisting of the South Village 14 and approximately 34 acres in an adjacent area owned by the Otay Ranch POM, which is presently designated Otay Ranch RMP/MSCP Preserve land, and which would require an MSCP County Subarea Plan Boundary Adjustment and Otay Ranch RMP Amendment to develop, as described below.

More specifically, the Alternate Site Location Alternative would encompass approximately 273.4 acres of Otay Ranch RMP/MSCP Preserve land owned and managed by the POM, and 188 acres of South Village 14 land owned by the Proposed Project applicant. The POM-owned land would have approximately 116 units and the South Village 14 portion would have approximately 352 units. In total, the Alternate Site Location Alternative would have 468 single-family units, of which 358 units would be traditional single-family, and 110 units would be single-family detached condominiums. The single-family detached condominium units would be located near Proctor Valley Road within South Village 14 (see Figure 4-4, Alternative Site Location). Compared to the Proposed Project, the Alternate Site Location Alternative would represent a 58% reduction in the total number of dwelling units.

Due to the decrease in dwelling units and population, the amount of park demand would be reduced such that one 2.9-acre park and a 2.6-acre private swim club would be included as part of the Alternate Site Location Alternative to achieve the PLDO-required 4.2 acres of parkland. There would be no school site proposed due to the minimal number of students generated. A 2.3-acre public safety site for a fire station and a potential future Sherriff's storefront would be sited within

South Village 14, because the future residences under the Alternate Site Location Alternative could not be served within the 5-minute travel time from existing stations, which is the County's requirement for lot sizes that are less than 1 acre. Due to the limited number of dwelling units and population, there would not be any commercially designated land or a Village Core under the Alternate Site Location Alternative. Proctor Valley Road would be two lanes from the City of Chula Vista to the property line in Planning Area 19 to provide for secondary access, similar to the Proposed Project. An additional access road off site from Proctor Valley Road across MSCP City of San Diego "Cornerstone Lands" for secondary fire access would be required.

4.6.2 Comparison of the Effects of the Alternate Site Location Alternative to the Proposed Project

Aesthetics

As identified in Section 2.1, Aesthetics, the Proposed Project's aesthetic impacts would be less than significant with implementation of M-AE-1 and M-AE-2, with the exception of visual character and cumulative impacts. The Proposed Project would substantially change the existing character of the Project Area, and would result in a significant and unavoidable impact. As such, and consistent with the findings of the Otay Ranch PEIR, the Proposed Project would contribute to a significant and unavoidable cumulative impact related to visual character and quality.

Under the Alternate Site Location Alternative, 468 dwelling units would be developed compared to the 1,119 under the Proposed Project. The southern portion of the Project Area would be converted from Otay Ranch RMP/MSCP Preserve to semi-rural land uses. There would be no Village Core or commercially designated land uses. Although the existing character of the southern portion of the Project Area would be changed under the Alternate Site Location Alternative, there would be less development than the Proposed Project. Development would be clustered in one location and would not be spread out over the entire Project Area.

However, the POM-owned Otay Ranch RMP Preserve lands on which the Alternate Site Location Alternative would be partially located are at a higher elevation and closer to existing residential development in eastern Chula Vista compared to the Proposed Project, which proposes more development within lower elevations in Proctor Valley. For this reason, the Alternate Site Location Alternative has the potential to cause significant visual/aesthetic impacts. In addition, Proctor Valley Road would be improved similar to the Proposed Project, resulting in similar impacts due to the roadway. Overall, the Alternate Site Location Alternative would have reduced aesthetic impacts compared to the Proposed Project; however, impacts to aesthetics and visual resources would not be reduced to a level of less than significant or be avoided due to the conversion of undeveloped land into development. Impacts would remain significant and unavoidable, similar to the Proposed Project.

Agricultural Resources

As identified in Section 2.2, Agricultural Resources, the Proposed Project would result in the loss of grazing land and Farmland of Local Importance. M-AG-1 requires preparation of an agricultural plan; however, no mitigation measures are available to reduce impacts to less than significant. Impacts to agricultural resources would remain significant and unavoidable.

The Alternate Site Location Alternative would involve approximately 450.1 acres. Approximately 171 acres would be developed, compared to the Development Footprint of approximately 787 acres under the Proposed Project. Therefore, since the development area of the Alternate Site Location Alternative would be less than that of the Proposed Project, the Alternate Site Location Alternative would have fewer impacts on agricultural resources than the Proposed Project. Nevertheless, the Alternate Site Location Alternative would still not reduce impacts to less than significant.

Air Quality

As identified in Section 2.3, Air Quality, Proposed Project construction emissions and daily operational emissions for VOCs, NO_x, CO, and PM₁₀ would result in significant and unavoidable impacts. Thus the Proposed Project would also contribute to a cumulatively considerable significant and unavoidable impact.

The Alternate Site Location Alternative would have similar VOC, NOx, CO, and PM₁₀ threshold exceedances as the Proposed Project for construction because similar construction activities would occur under the Alternate Site Location Alternative. The Alternate Site Location Alternative would construct 58% fewer homes on a smaller development footprint, resulting in reduced operational emissions (e.g., vehicle-related emissions) compared to the Proposed Project. Both the Proposed Project and the Alternate Site Location Alternative would have emissions associated with daily vehicle trips; however, the Alternate Site Location Alternative would generate fewer daily vehicle trips than the Proposed Project due to decreased dwelling units. Overall, the Alternate Site Location Alternative would have reduced air quality impacts compared to the Proposed Project, but construction-related air quality impacts would remain significant and unavoidable.

Biological Resources

As identified in Section 2.4, Biological Resources, all Proposed Project biology impacts would be reduced to less than significant with implementation of M-BI-1 through M-BI-20, including the conveyance of approximately 777 acres of Otay Ranch RMP Preserve to the Otay Ranch POM.

Under the Alternate Site Location Alternative, development would occur within the 171-acre development area, and the potential to impact biological resources would still exist. However,

the development area of the Alternate Site Location Alternative would be reduced by approximately 600 acres compared to the Proposed Project. The Alternate Site Location Alternative would result in quantitatively fewer potentially significant impacts related to special-status plants and wildlife species, riparian habitat and other sensitive natural communities, federally protected wetlands, and wildlife corridors compared to the Proposed Project due to its reduced development area.

The Alternate Site Location Alternative would develop portions of property that have already been conveyed to the Otay Ranch POM by other property owners to satisfy the Preserve Conveyance Obligation requirements for impacts from their development of Otay Ranch Village 2 in the City of Chula Vista. As a result, the Alternate Site Location Alternative would require identification of replacement Otay Ranch RMP/MSCP Preserve land, subject to the approval of the Otay Ranch POM. This may also require the approval of the property owners for whom the property was originally used to satisfy the Otay Ranch RMP Preserve Conveyance Obligation, and acquisition of replacement Preserve land from third-party property owners.

Because the area currently within POM ownership was identified as Otay Ranch RMP Preserve by the Otay Ranch GDP/SRP and Otay Ranch RMP, it is considered as having higher biological value than areas identified as "developable" by the Otay Ranch GDP/SRP and Otay Ranch RMP. Accordingly, impacts to Otay Ranch RMP Preserve land are considered qualitatively more significant than impacts to non-Otay Ranch RMP Preserve land within Otay Ranch, such as those anticipated under the Proposed Project. Thus, although the development area under the Alternate Site Location Alternative would be reduced compared to the Proposed Project, and, therefore, would result in fewer direct and indirect impacts on a quantitative level, impacts to approximately 34 acres of POM-owned, Otay Ranch RMP Preserve land would be considered more significant from a qualitative perspective.

Further, because the Alternate Site Location Alternative would develop areas previously identified as Otay Ranch RMP Preserve by the Otay Ranch GDP/SRP, Otay Ranch RMP, and MSCP County of San Diego Subarea Plan, the Alternate Site Location Alternative would require an MSCP County Subarea Plan Boundary Adjustment, an Otay Ranch RMP Amendment, and amendments to the County of San Diego General Plan and Otay Ranch GDP/SRP to allow for the development of areas previously required and dedicated for mitigation to biological resources impacts. In addition, the Alternative Site Location Alternative would be required to identify replacement mitigation land to off-set impacts to Otay Ranch RMP Preserve land previously conveyed for development impacts in Otay Ranch. Therefore, the Alternate Site Location Alternative could cause inconsistencies with applicable habitat management and conservation plans, notably the Otay Ranch RMP and the MSCP County of San Diego Subarea Plan. This is a potentially significant impact that would not occur under the Proposed Project.

In addition, compared to the Proposed Project, the Alternate Site Location Alternative would reduce the amount of Otay Ranch RMP Preserve Land conveyed to the Otay Ranch RMP Preserve because the Alternate Site Location Alternative would result in less development and, thus, a reduced Conveyance Obligation of approximately 192.1 acres compared to approximately 776.8 acres for the Proposed Project. It would also develop fewer units to participate in the Otay Ranch RMP Preserve Community Facilities District, which would reduce the amount of money available for Otay Ranch RMP Preserve management and maintenance.

Finally, an access road off site from Proctor Valley Road, across City of San Diego MSCP "Cornerstone Lands, would be required for secondary fire access. Impacts to City of San Diego MSCP "Cornerstone Lands would be significant and would require mitigation, similar to Impact I-BI-15.

The Alternate Site Location Alternative would result in qualitatively greater impacts due to direct and indirect impacts to areas identified as Otay Ranch RMP Preserve, MSCP County of San Diego Subarea Plan Preserve, and City of San Diego MSCP Cornerstone Land Preserve. Further, the Alternate Site Location Alternative would impact steep slope areas, and would be located nearer known observations of Quino checkerspot butterfly.

Cultural Resources

As identified in Section 2.5, Cultural Resources, all potentially significant impacts associated with known and unknown subsurface cultural resources would be reduced to less than significant with implementation of M-CR-1 through M-CR-3.

Under the Alternate Site Location Alternative, development would occur within the 171-acre development area, and the potential to identify and uncover cultural resources exists. The development area of this alternative would be reduced compared to the Proposed Project; however, it is unknown if the potential to impact known or unknown cultural resources is greater because the adjacent area owned by the Otay Ranch POM, which is dedicated Otay Ranch RMP Preserve land, has not been evaluated for cultural resources. Therefore, impacts could be greater under the Alternate Site Location Alternative compared to the Proposed Project. Under the County CEQA Guidelines, all sites are considered significant. Accordingly, the same mitigation measures would apply to the Alternate Site Location Alternative as the Proposed Project, and impacts would be reduced to less than significant with mitigation, similar to the Proposed Project.

Geology and Soils

As identified in Section 2.6, Geology and Soils, all potentially significant impacts associated with rockfall hazards, landslides, and expansive soils would be reduced to less than significant with implementation of M-GE-1.

Although the development area under the Alternate Site Location Alternative would be reduced compared to the Proposed Project, the development would still have potentially significant impacts associated with rockfall hazards, landslides, and expansive soils, and, thus, would require implementation of M-GE-1. Nevertheless, the Alternate Site Location Alternative would reduce the number of dwelling units and people exposed to geologic hazards compared to the Proposed Project. The Alternate Site Location Alternative would also reduce the development area and the potential to experience geological hazards. Therefore, the Alternate Site Location Alternative would result in reduced impacts compared to the Proposed Project.

Greenhouse Gas Emissions

As identified in Section 2.7, Greenhouse Gas Emissions, potentially significant impacts associated with GHG emissions would be reduced to less than significant with implementation of M-GHG-1 through M-GH-4 at both the project impact level and cumulative impact level.

Development would occur under the Alternate Site Location Alternative, which would result in construction emissions; however, since 651 fewer residential units would be constructed under the Alternate Site Location Alternative, the construction period would be shortened, resulting in fewer emissions. Both the Proposed Project and the Alternate Site Location Alternative would result in operational emissions associated with daily vehicle trips; however, the Alternate Site Location Alternative would generate fewer daily vehicle trips than the Proposed Project due to the reduced number of residential units. In addition, compared to the Proposed Project, the Alternate Site Location Alternative would generate less demand for electricity and natural gas, and water and wastewater conveyance, further reducing operational emissions compared to the Proposed Project. Overall, the Alternate Site Location Alternative would have reduced GHG emissions compared to the Proposed Project. Similar mitigation measures would apply to reduce impacts to less than significant, similar to the Proposed Project.

<u>Noise</u>

As identified in Section 2.8, Noise, all impacts would be reduced to less than significant with implementation of M-N-1 through M-N-10, with the exception of one significant and unavoidable impact to residences located along Proctor Valley Road, north of the Project Area and west of Melody Road. Although these residences would experience a noise level of 51 dBA, which is less than the 60 dBA threshold for residential land uses, it would be an increase in noise levels of greater than 10 dBA, which is considered significant.

Construction impacts would occur under the Alternate Site Location Alternative, and a similar mix of construction equipment generating similar noise levels as the Proposed Project would occur. Due to the decreased construction period and the decreased number of dwelling units, the duration of construction noise would be reduced. The Alternate Site Location Alternative would

reduce operational impacts related to the permanent increase in ambient noise levels compared to the Proposed Project because fewer vehicle trips would be generated, thus reducing sound levels along roadways. Overall, noise impacts would be reduced compared to the Proposed Project.

Traffic and Transportation

As identified in Section 2.9, Transportation and Traffic, the Proposed Project would result in the following significant and unavoidable roadway segment and intersection impacts under Existing Plus Project Buildout Conditions, Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property, as identified below, even with implementation of M-TR-1 through M-TR-17:

Intersections

- SR-94 and Lyons Valley Road (Exiting Plus Project Buildout, Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Northwoods Drive/Agua Vista Drive and Proctor Valley Road (Existing Plus Project Build-Out, Year 2025, Year 2030, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Paseo Ranchero and East H Street (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Mt. Miguel Road and East H Street (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Lane Avenue and East H Street (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road and Project Driveway No. 1, No. 2, No. 3, No. 4, and No. 5 (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)

Roadway Segments

- Proctor Valley Road between Hunte Parkway and Northwoods Drive (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Northwoods Drive and the City of Chula Vista (Exiting Plus Project Buildout, Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)

- Proctor Valley Road between the City of Chula Vista boundary and Project Driveway No. 1 (Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Project Driveway No. 1 and Project Driveway No. 2 (Year 2025, Year 2030, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Project Driveway No. 2 and Project Driveway No. 3 (Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Project Driveway No. 3 to Project Driveway No. 4 (Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)

The Proposed Project would generate 12,767 ADT. As shown in Table 4-3, Estimated Average Daily Trips for Proposed Project vs. Alternate Site Location Alternative, the Alternate Site Location Alternative would generate approximately 4,702 ADT. This represents a 63% reduction in ADT compared to the Proposed Project.

The construction of fewer homes would result in fewer vehicle trips being added to the surrounding roadway network. The Alternate Site Location Alternative would result in approximately 8,000 fewer daily trips compared to the Proposed Project. Thus, the Alternate Site Location Alternative would result in reduced transportation and traffic impacts compared to the Proposed Project due to the 63% reduction in trips.

Paleontological Resources

As identified in Section 2.10, Paleontological Resources, all potentially significant impacts associated with paleontological resources would be reduced to less than significant with implementation of M-PR-1.

Under the Alternate Site Location Alternative, development would occur within the approximately 177-acre development area and the potential to identify and uncover paleontological resources exists. The development area of this alternative would be reduced compared to the Proposed Project; however, it is unknown if the potential to impact paleontological resources is greater because the adjacent area owned by the Otay Ranch POM, which is dedicated Otay Ranch RMP Preserve land, has not been evaluated. Therefore, impacts could be greater under the Alternate Site Location Alternative compared to the Proposed Project.

Similar mitigation measures would be required under the Alternate Site Location Alternative to reduce impacts to less than significant, similar to the Proposed Project.

Tribal Cultural Resources

As identified in Section 2.11, Tribal Cultural Resources, the potentially significant impacts to tribal cultural resources due to the Preserve Trails Option under the Proposed Project would be reduced to less than significant with implementation of M-TCR-1.

Under the Alternate Site Location Alternative, development would occur and the potential to uncover tribal cultural resources would still exist. Analysis of the adjacent area owned by the Otay Ranch POM, which is dedicated Otay Ranch RMP Preserve land, would be required, as well as tribal consultation for this property to determine if tribal cultural resources are present on site. Although the development area of the Alternate Site Location Alternative would be reduced compared to the Proposed Project, because the Proposed Project would not impact any tribal cultural resources, with the exception of under the Preserve Trails Option, impacts to tribal cultural resources would not be reduced or avoided under the Alternate Site Location Alternative compared to the Proposed Project.

Hazards and Hazardous Materials

As identified in Section 3.1.1, Hazards and Hazardous Materials, the Proposed Project would not include uses that would use hazardous substances in excess quantities, and no on-site hazardous contamination is present. The Project Area is not located within the airport influence area of an ALUCP or within 2 miles of a public or within 1 mile of a private use airport, nor would any of the proposed uses pose a hazard to airport safety. Based on implementation of the FPP requirements, compliance with applicable fire codes, and inclusion of a fire station in the Project Area, the Proposed Project would not have significant impacts relating to wildfire hazards. Additionally, the County's emergency response and multi-jurisdictional fire efforts would be able to provide adequate emergency response. Potential impacts due to hazards or hazardous materials were determined to be less than significant.

Like the Proposed Project, the Alternate Site Location Alternative would not result in significant impacts related to hazards or hazardous materials. However, because the Alternate Site Location Alternative would have fewer dwelling units than the Proposed Project, it would expose fewer residents to potential hazards and hazardous materials. Although the Alternate Site Location Alternative would require construction of a fire station to achieve County General Plan travel time standards for emergency response due to lot size requirements, the limited number of units would not be sufficient to adequately fund the construction and operation of a fire station. Thus, it would not be fiscally practicable to install one as part of the Alternate Site Location

Alternative. Overall, the Alternate Site Location Alternative would result in similar less-than-significant impacts compared to the Proposed Project.

Hydrology and Water Quality

As identified in Section 3.1.2, Hydrology and Water Quality, all potential impacts associated with alteration of existing hydrology, water quality during construction and operation, groundwater, and flooding would be less than significant. No mitigation would be required. The Proposed Project would also be consistent with the County's General Plan and Otay Ranch GDP/SRP policies related to hydrology and water quality.

Like the Proposed Project, the Alternate Site Location Alternative would not cause significant impacts to hydrology and water quality. The Alternate Site Location Alternative's smaller development area and reduced impervious surface area would result in less runoff compared to the Proposed Project.

Land Use and Planning

As identified in Section 3.1.3, Land Use and Planning, implementation of the Proposed Project would not physically divide an established community or conflict with any applicable land use plan, policy, guideline, or regulation, and impacts would be less than significant.

The Alternate Site Location Alternative would not be consistent with the County's General Plan or Otay Ranch GDP/SRP and the development envisioned for the Project Area within these plans. The Alternate Site Location Alternative would be inconsistent with the County General Plan, Otay Ranch GDP/SRP, and Otay Ranch RMP because it would develop areas required by the Otay Ranch PEIR to be set aside as permanent Otay Ranch RMP Preserve as mitigation for biological resource impacts. Portions of the Alternate Site Location Alternative are already conveyed to the Otay Ranch RMP Preserve as mitigation for impacts to development in Village 2 of Otay Ranch. The Alternate Site Location Alternative would require a General Plan Amendment, Otay Ranch GDP/SRP Amendment, Otay Ranch RMP Amendment, and MSCP County of San Diego Subarea Plan Boundary Adjustment.

Development of fewer units as proposed under the Alternate Site Location Alternative would also generate less funding for existing and planned infrastructure and services through payment of development impact fees. If the Project Area and other sites in the County planned for development are underdeveloped, there could be a cumulative effect of more development occurring in neighboring counties, resulting in conflicts with state planning directives (e.g., SB 743), regional planning efforts relying in part on new development to fund the regional arterial system, and other negative effects associated with a growing jobs/housing imbalance.

Therefore, the Alternate Site Location Alternative would have greater land use and planning impacts compared to the Proposed Project.

Mineral Resources

As identified in Section 3.1.4, Mineral Resources, Development of the Project Area would impact Quaternary alluvium, which is not considered a high-quality (PCC grade) aggregate source, and MRZ-3 areas, which consist of weathered metavolcanic materials and are not considered a quality PCC aggregate source in practice. Impacts to mineral resources under the Proposed Project would be less than significant.

Like the Proposed Project, the Alternate Site Location Alternative would impact Quaternary alluvium and weathered metavolcanic materials, and, like the Proposed Project, this impact would be less than significant. Because of the reduced size of the development area, impacts to mineral resources would be reduced compared to the Proposed Project.

Population and Housing

As identified in Section 3.1.5, Population and Housing, implementation of the Proposed Project would be consistent with the growth planned for the area and analyzed in the previously certified Otay Ranch PEIR. Impacts related to substantial population growth, displacement of existing housing, and displacement of people would be less than significant.

Under the Alternate Site Location Alternative, only 468 dwelling units would be developed compared to a maximum of 1,119 units under the Proposed Project. Of the 468 units, 110 units would be single-family detached condominium units and 358 would be traditional single-family detached homes. The Alternate Site Location Alterative would have a build-out population of approximately 1,685 residents, and the Proposed Project would have a build-out population of 4,028 residents. This represents a 58% decrease in dwelling units and a 58% decrease in population compared to the Proposed Project.

Alternative, the lack of housing concurrent with need, as shown in SANDAG forecasts (Regional Housing Needs Assessment), would result in a potentially significant impact. There would also not be any commercially designated land or a Village Core under the Alternate Site Location Alternative. As a result, the Alternate Site Location Alternative would conflict with the County's General Plan and Otay Ranch GDP/SRP housing and population policies that encourage growth of residential and commercial land uses. Therefore, impacts to population and housing as a result of the Alternate Site Location Alternative would increase compared to the Proposed Project.

Public Services

As identified in Section 3.1.6, Public Services, the Proposed Project would avoid significant impacts to fire protection and emergency services, law enforcement, schools, and parks by a combination of payment of impact fees, dedication of land, and/or construction of facilities. Therefore, impacts to public services would be less than significant.

Like the Proposed Project, the Alternate Site Location Alternative would not cause significant impacts on public services. There would be no school site proposed due to the minimal number of students generated under the Alternate Site Location Alternative. The Alternate Site Location Alternative would generate 186 elementary school students in the Chula Vista Elementary School District (CVESD), 50 middle school students in the Sweetwater Union High School District (SUHSD), and 94 high school students in SUHSD. These students would be served by existing schools in the appropriate school districts. Demand for fire service would also be reduced due to the reduced number of units; however, a fire station and potential Sheriff's storefront site is proposed because the future residences under the Alternate Site Location Alternative could not be served within the 5-minute travel time from existing stations, which is the County's requirement for lot sizes that are less than 1 acre. The Alternate Site Location Alternative would generate less funding for existing and planned infrastructure and services through payment of development impact fees and ongoing property taxes due to the reduced unit count. Overall, the Alternate Site Location Alternative would have reduced demand for public services due to the reduction of 651 dwelling units; nevertheless, the Alternate Site Location Alternative, like the Proposed Project, would still require construction of a public safety site for fire and law enforcement services, and impacts would be similar to those of the Proposed Project.

Recreation

As identified in Section 3.1.7, Recreation, the Proposed Project would include 1,119 dwelling units, which, per the County's PLDO, requires 10.04 acres of parkland. The Proposed Project would construct 23.3 acres of parks and recreation facilities within the Project Area, 11.1 acres of which would be eligible for credit under the County's PLDO. Therefore, sufficient parks and recreation facilities would be provided to accommodate future residents and visitors of the Proposed Project, and impacts would be less than significant.

Based on the number of units under the Alternate Site Location Alternative (468 units) the County's PLDO requirement (390.73 square feet per unit) would be 4.2 acres. The Alternate Site Location Alternative would include a 2.9-acre public park and a 2.6-acre private swim club, which, combined, would provide for the 4.2 acres of PLDO parkland. Therefore, the Alternate Site Location Alternative would meet the County's PLDO requirements, and impacts would be

less than significant. The Alternate Site Location Alternative would result in reduced physical impacts from park development compared to the Proposed Project due to the decreased acreage of new parkland. The Alternate Site Location Alternative's impacts to recreation would be less than significant. No mitigation would be required.

Utilities

As identified in Section 3.1.8, Utilities and Service Systems, the Proposed Project would result in less-than-significant impacts to water supply, wastewater treatment facilities, storm drainage facilities, and solid waste facilities. Further, the Proposed Project would comply with all applicable laws and regulations associated with utilities and service systems, and would result in less-than-significant cumulative impacts to water supply, wastewater treatment facilities, storm drainage facilities, and solid waste facilities.

Like the Proposed Project, the Alternate Site Location Alternative would not result in significant impacts to utilities such as water supply, wastewater treatment facilities, storm drainage facilities, and solid waste facilities. Since implementation of the Alternate Site Location Alternative would result in less development and less population, there would be less demand on water supply, wastewater, and solid waste compared to the Proposed Project; however, neither option would result in significant impacts to utilities and service systems.

<u>Energy</u>

As identified in Section 3.1.9, Energy, the Proposed Project would not result in the wasteful or inefficient use of electricity, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing energy consumption, including the County of San Diego's General Plan policies. As a result, impacts would be less than significant.

Similar to the Proposed Project, the Alternate Site Location Alternative would not result in the wasteful or inefficient use of electricity, or conflict with an applicable plan, policy, or regulation. However, since less development would occur under the Alternate Site Location Alternative, there would be less demand for energy and reduced energy usage. Although the Alternate Site Location Alternative would have reduced demand for energy, impacts would still be less than significant, similar to the Proposed Project.

4.6.3 Relation to Project Objectives

The Alternate Site Location Alternative would meet some Proposed Project objectives, but would leave other key objectives unsatisfied. For example, this alternative would assist in meeting the regional housing needs identified in the County's General Plan (Objective 1), but not to the same degree as the Proposed Project because it would provide 651 fewer dwelling units. In

addition, the Alternate Site Location Alternative would not fully implement the goals and visions of the Otay Ranch GDP/SRP because it would not have a Village Core, nor would it combine land uses to help reduce GHG emissions (Objectives 2, 4, 7). The Alternate Site Location Alternative would achieve Objective 3 by serving as a transitional area between Jamul and Otay Ranch, and it would achieve Objectives 6 and 9, which are intended to minimize the width of Proctor Valley Road to a two-lane Light Collector. It would also satisfy Objective 5 by creating a buffer adjacent to the community of Jamul.

Fundamentally, however, the Alternate Site Location Alternative would not meet the Proposed Project's underlying purpose of implementing a planned community and biological Preserve sufficient in size and scale to realize both the applicant's vision and the County's vision as set forth in the Otay Ranch GDP/SRP, since it would be inconsistent with the uses established in the Otay Ranch GDP/SRP and the Otay Ranch RMP. The decreased density of the Alternate Site Location Alternative would not allow for any commercially designated land or a Village Core that would help establish and promote a viable community. Moreover, the amount of land conveyed to the RMP Preserve would be reduced substantially. In short, the Alternative Site Location Alternative would meet most of the Proposed Project objectives, but would impede other fundamental goals of the Proposed Project and deviate from certain land planning priorities of the County.

4.6.4 Feasibility

The Alternate Site Location Alternative is not feasible, largely because the applicant neither owns nor controls the land in question, and has no reasonable means of acquiring it (see CEQA Guidelines, Section 15126.6(f)(1)). Even if the current owners of the land were willing to sell it to the applicant, which is questionable since the property was already conveyed to the Otay Ranch RMP Preserve and is under the jurisdiction of the Otay Ranch POM, any such transfer would require that replacement land be contributed to the Otay Ranch RMP Preserve. That process would be subject to the approval of the Otay Ranch POM and possibly the property owners who used the Otay Ranch RMP Preserve land to satisfy their RMP Preserve Conveyance obligation. The replacement land might also require acquisition from a third-party property owners. Moreover, this alternative would require a County General Plan Amendment, an Otay Ranch GDP/SRP Amendment, an Otay Ranch RMP Amendment, an MSCP County of San Diego Subarea Plan Boundary Adjustment, and a City of San Diego MSCP Boundary Adjustment for impacts to Cornerstone Lands. It is unlikely that all such amendments could be obtained in a reasonable timeframe, especially since the Alternate Site Location Alternative would effectively require that higher-quality habitat currently in Otay Ranch RMP Preserve be re-designated for development and that lower-quality habitat be moved out of development and into Otay Ranch RMP Preserve.

In addition, the Alternate Site Location Alternative would not provide for efficient use of the Project Area or provide a level of private development adequate to ensure the economically feasible provision of public facilities and services required to serve the community's needs (Objective 8). Specifically, although required due to the size of lots within the Alternate Site Location Alternative, a fire station and potential Sherriff's storefront would be supported by payment of fire mitigation fees and property taxes from only 468 units, which would not financially support it. The total number of daily calls would be approximately 0.3 calls per day, which is less than a typical fire station that can respond to approximately 8 calls per day. Similarly, improving Proctor Valley Road and extending sewer, water, and storm drain facilities for only 468 units would result in greater development costs per unit, which would require higher prices to be economically viable and may result in unmarketable homes. For all the reasons stated above, the Alternate Site Location Alternative is not considered feasible.

4.6.5 Evaluation of Significant Impacts

Compared to the Proposed Project, the Alternate Site Location Alternative would not reduce significant impacts associated with agriculture and forestry resources or biological resources. The Alternate Site Location Alternative would, however, reduce some of the significant impacts related to construction and operational use of the Project Area. Specifically, when compared to the Proposed Project, the Alternate Site Location Alternative would avoid, reduce, or substantially lessen significant impacts in the following areas:

- Aesthetics
- Agricultural Resources
- Air Quality
- Cultural Resources
- Geology and Soils

- Greenhouse Gas Emissions
- Noise
- Transportation and Traffic
- Paleontological Resources
- Tribal Cultural Resources

4.7 Analysis of the GDP/SRP Proctor Valley Road Alternative

4.7.1 Otay Ranch GDP/SRP Four-Lane Proctor Valley Road Alternative (GDP/SRP Proctor Valley Road Alternative) Description and Setting

The GDP/SRP Proctor Valley Road Alternative would be similar to the Proposed Project except that it would widen Proctor Valley Road to four lanes and connect directly to SR-94, as anticipated by the Otay Ranch GDP/SRP. Due to the road widening, the GDP/SRP Proctor Valley Road Alternative would eliminate 14 residential units from Planning Area 16, bringing the total number of units down to 1,105 (see Figure 4-5, GDP/SRP Four-Lane Proctor Valley Road). As a result of widening Proctor Valley Road to four lanes, total roadway impacts would

increase by approximately 12.8 acres, and additional temporary impacts for grading would increase by approximately 80 acres.

4.7.2 Comparison of the Effects of the GDP/SRP Proctor Valley Road Alternative to the Proposed Project

Aesthetics

As identified in Section 2.1, Aesthetics, the Proposed Project's impacts on aesthetics would be reduced to less that significant with implementation of M-AE-1 and M-AE-2, except for visual character and cumulative impacts. Impacts to visual character and cumulative impacts would remain significant and unavoidable.

The GDP/SRP Proctor Valley Road Alternative would not avoid or materially reduce significant unavoidable impacts on visual character. Because it would widen Proctor Valley Road to a four-lane major roadway, the GDP/SRP Proctor Valley Road Alternative would create a larger color and line contrast against the natural terrain. Accordingly, the GDP/SRP Proctor Valley Road Alternative would increase aesthetic impacts compared to the Proposed Project.

Agricultural Resources

As identified in Section 2.2, Agricultural Resources, the Proposed Project would result in the loss of grazing land and Farmland of Local Importance. M-AG-1 requires preparation of an agricultural plan; however, no mitigation measures are available to reduce impacts to coastal-dependent crops to less than significant. Impacts to agricultural resources would remain significant and unavoidable.

The GDP/SRP Proctor Valley Road Alternative would have the same development area as the Proposed Project, with the exception of widening Proctor Valley Road to SR-94 in the existing, approved Otay Ranch GDP/SRP alignment to a four-lane roadway. This widening would increase the development area by approximately 12.8 acres to accommodate the wider roadway section, and the temporary disturbed area by approximately 80 acres due to grading for road widening compared to the Proposed Project. The GDP/SRP Proctor Valley Road Alternative would result in an increase in impacts on grazing land and Farmland of Local Importance compared to the Proposed Project. Impacts to agricultural resources would remain significant and unavoidable under the GDP/SRP Proctor Valley Road Alternative.

Air Quality

As identified in Section 2.3, Air Quality, Proposed Project construction emissions of VOCs, NO_x, CO, and PM₁₀ would result in significant and unavoidable impacts. Daily operational

emissions of VOCs and PM₁₀ would also result in significant and unavoidable impacts under the Proposed Project. Thus, the Proposed Project would contribute to a cumulatively considerable significant and unavoidable impact.

The GDP/SRP Proctor Valley Road Alternative would result in similar impacts related to air quality because similar construction and operational emissions would result. Although 14 fewer residential units would be developed under the GDP/SRP Proctor Valley Road Alternative, construction emissions would be slightly increased due to the widening of Proctor Valley Road to a four-lane roadway and its extension to SR-94. Additionally, the Proposed Project and the GDP/SRP Proctor Valley Road Alternative would have similar operational emissions associated with daily vehicle trips; however, a wider Proctor Valley Road has the potential to induce additional vehicle miles traveled, thereby resulting in increased air quality emissions. Overall, the GDP/SRP Proctor Valley Road Alternative would have increased air quality impacts compared to the Proposed Project. Impacts to air quality would remain significant and unavoidable under the GDP/SRP Proctor Valley Road Alternative.

Biological Resources

As identified in Section 2.4, Biological Resources, all of the Proposed Project's impacts on biological resources would be reduced to less than significant with implementation of M-BI-1 through M-BI-20, including conveyance of approximately 777 acres of Otay Ranch RMP Preserve to the Otay Ranch POM.

The GDP/SRP Proctor Valley Road Alternative would have the same development area as the Proposed Project, except that it would widen Proctor Valley Road in the existing, Otay Ranch GDP/SRP approved alignment to SR-94 to a four-lane roadway, which would increase the development area by approximately 12.8 acres and the temporarily disturbed area by approximately 80 acres compared to the Proposed Project. Therefore, the development area of the GDP/SRP Proctor Valley Road Alternative would be larger than for the Proposed Project. The widening of Proctor Valley Road to a four-lane roadway would result in additional impacts to sensitive plant species, wildlife species, and habitats identified within the Proctor Valley Road improvement area, including impacts to San Diego fairy shrimp, which would be significant. Therefore, the GDP/SRP Proctor Valley Road Alternative would result in increased impacts to sensitive plant species, wildlife species, and habitats. Additionally, because Proctor Valley Road is a Mobility Element roadway, and thus a "common use" under the Otay Ranch RMP, the additional impacts resulting from a four-lane roadway would not be mitigated to the same level as the Proposed Project because no conveyance would be required to the Otay Ranch RMP Preserve for this "common use." Therefore, impacts to biological resources would increase under the GDP/SRP Proctor Valley Road Alternative compared to the Proposed Project.

Cultural Resources

As identified in Section 2.5, Cultural Resources, all of the Proposed Project's potentially significant impacts associated with known and unknown subsurface archeological resources would be reduced to less than significant with implementation of M-CR-1 through M-CR-3.

The GDP/SRP Proctor Valley Road Alternative would have the same development area as the Proposed Project, with the exception of widening Proctor Valley Road to a four-lane roadway in the approved Otay Ranch GDP/SRP alignment to SR-94, which would increase the permanent development area by approximately 12.8 acres and temporary impacts associated with grading by approximately 80 acres compared to the Proposed Project. Therefore, the development area under the GDP/SRP Proctor Valley Road Alternative would be greater than the Proposed Project. Further, construction activities associated with the widening of Proctor Valley Road to a four-lane roadway could result in additional impacts to unknown subsurface cultural resources identified within the Proctor Valley Road improvement area. Therefore, the GDP/SRP Proctor Valley Road Alternative could result in increased impacts on unknown subsurface cultural resources. Potential impacts to cultural resources would increase under the GDP/SRP Proctor Valley Road Alternative.

Geology and Soils

As identified in Section 2.6, Geology and Soils, all of the Proposed Project's potentially significant impacts associated with rockfall hazards, landslides, and expansive soils would be reduced to less than significant with implementation of M-GE-1.

The GDP/SRP Proctor Valley Road Alternative would have the same development footprint as the Proposed Project, except that it would widen Proctor Valley Road to a four-lane roadway in the GDP/SRP approved alignment to SR-94. This would increase the development footprint by approximately 12.8 acres due to the wider road segment, and by approximately 80 acres of temporarily disturbed area for grading compared to the Proposed Project. Although 14 fewer residential units would be constructed, the development area would be slightly greater than the Proposed Project. Further, construction associated with the widening of Proctor Valley Road to a four-lane roadway could result in additional impacts to the geology and soils that exist within the Proctor Valley Road improvement area. Construction impacts to geology and soils under the GDP/SRP Proctor Valley Road Alternative would be increased due to the increased development area. Overall, impacts to geology and soils would be greater than the Proposed Project under the GDP/SRP Proctor Valley Road Alternative.

Greenhouse Gas Emissions

As identified in Section 2.7, Greenhouse Gas Emissions, the Proposed Project would mitigate its GHG emissions impacts at both the project impact level and cumulative impact level to less than significant with implementation of M-GHG-1 through M-GHG-4.

Although 14 fewer residential units would be developed under the GDP/SRP Proctor Valley Road Alternative, construction emissions would increase due to the widening of Proctor Valley Road to a four-lane roadway and its extension to SR-94. Additionally, the GDP/SRP Proctor Valley Road Alternative could increase operational GHG emissions associated with daily vehicle trips because widening Proctor Valley Road to four lanes could induce additional traffic. Overall, the GDP/SRP Proctor Valley Road Alternative would have increased impacts from GHG emissions compared to the Proposed Project.

Noise

As identified in Section 2.8, Noise, all of the Proposed Project's noise impacts would be reduced to less than significant with implementation of M-N-1 through M-N-10, with the exception of one significant and unavoidable impact to residences located along Proctor Valley Road, north of the Project Area and west of Melody Road. Although these residences would experience an exterior noise level of 51 dBA, which is below the County of San Diego's threshold for residential land uses (see Section 2.8), it would be an increase in noise levels of greater than 10 dBA, which is a significant impact.

The GDP/SRP Proctor Valley Road Alternative would result in similar impacts related to construction noise compared to the Proposed Project because similar construction activities would occur and similar mitigation measures would be required. Although 14 fewer residential units would be developed under the GDP/SRP Proctor Valley Road Alternative, increased operational noise would result due to induced traffic resulting from the widening of Proctor Valley Road to a four-lane major road and its extension to SR-94. The GDP/SRP Proctor Valley Road Alternative would have increased operational noise generation associated with daily vehicle trips. Because of the alignment of Proctor Valley Road in the Otay Ranch GDP/SRP, the significant, unavoidable impact west of Melody Road would be avoided; however, other potentially significant impacts may occur. Overall, noise impacts would be greater under the GDP/SRP Proctor Valley Road Alternative compared to the Proposed Project.

Transportation and Traffic

As identified in Section 2.9, Transportation and Traffic, the Proposed Project would result in the following significant and unavoidable roadway segment and intersection impacts under Existing Plus Project Buildout Conditions, Year 2025 Cumulative Conditions, Year 2030 Cumulative

Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property, as identified below, even with implementation of M-TR-1 through M-TR-17:

Intersections

- SR-94 and Lyons Valley Road (Exiting Plus Project Buildout, Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Northwoods Drive/Agua Vista Drive and Proctor Valley Road (Existing Plus Project Build-Out, Year 2025, Year 2030, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Paseo Ranchero and East H Street (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Mt. Miguel Road and East H Street (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Lane Avenue and East H Street (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road and Project Driveway No. 1, No. 2, No. 3, No. 4, and No. 5 (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)

• Roadway Segments

- Proctor Valley Road between Hunte Parkway and Northwoods Drive (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Northwoods Drive and the City of Chula Vista (Exiting Plus Project Buildout, Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between the City of Chula Vista boundary and Project Driveway No. 1 (Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Project Driveway No. 1 and Project Driveway No. 2 (Year 2025, Year 2030, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)

- Proctor Valley Road between Project Driveway No. 2 and Project Driveway No. 3
 (Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus
 Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Project Driveway No. 3 to Project Driveway No. 4 (Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)

The Proposed Project would generate 12,767 ADT. As shown in Table 4-4, Estimated Average Daily Trips for Proposed Project vs. GDP/SRP Proctor Valley Road Alternative, the GDP/SRP Proctor Valley Road Alternative would generate 12,627 ADT based on the number of residential units and other uses, which is 140 fewer ADT than the Proposed Project.

The GDP/SRP Proctor Valley Road Alternative would widen Proctor Valley Road from a two-lane roadway to a four-lane circulation element roadway extending to SR-94. The GDP/SRP Proctor Valley Road Alternative would slightly reduce daily trip generation due to the reduction of residential units by 14 units (resulting in approximately 140 fewer ADT) and result in reduced operational traffic impacts. However, a four-lane Proctor Valley Road would potentially induce additional trips due to the expanded capacity compared to the Proposed Project. This is supported by the existing Otay Ranch GDP/SRP designation for Proctor Valley Road as a four-lane Major Road, which is capable of accommodating more traffic than the proposed two-lane Collector. Increased construction from the extension of the four-lane Proctor Valley Road to SR-94 would result in increased construction impacts from traffic under the GDP/SRP Proctor Valley Road Alternative.

The Proposed Project identified the following significant traffic impacts to Proctor Valley Road:

- Proctor Valley Road between the City of Chula Vista boundary and Project Driveway No. 1
- Proctor Valley Road between Project Driveway No. 1 and Project Driveway No. 2
- Proctor Valley Road between Project Driveway No. 2 and Project Driveway No. 3
- Proctor Valley Road between Project Driveway No. 3 to Project Driveway No. 4

Widening of Proctor Valley Road to a four-lane roadway would avoid these impacts in the Year 2025 Cumulative Conditions, 2030 Cumulative Conditions, and 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property scenarios. The rest of the impacts and mitigation measures would be similar between the GDP/SRP Proctor Valley Road Alternative and the Proposed Project, with the exception that the realignment of Proctor Valley Road to intersect directly with SR-94 would result in a new intersection and potentially new impacts compared to the Proposed Project's impact at the SR-94 and Lyons Valley Road intersection identified in Section 2.9. Overall, the GDP/SRP Proctor Valley Road Alternative would reduce transportation

and traffic impacts compared to the Proposed Project by providing additional roadway capacity on Proctor Valley Road.

Paleontological Resources

As identified in Section 2.10, Paleontological Resources, all of the Proposed Project's potentially significant impacts associated with paleontological resources would be reduced to less than significant with implementation of M-PR-1.

The GDP/SRP Proctor Valley Road Alternative would have the same development area as the Proposed Project, with the exception of widening Proctor Valley Road to a four-lane roadway in the existing, Otay Ranch GDP/SRP approved alignment to SR-94, which would increase the development area by approximately 12.8 acres and the temporarily disturbed area by approximately 80 acres compared to the Proposed Project. Therefore, the development area under the GDP/SRP Proctor Valley Road Alternative would be slightly larger than the Proposed Project. Further, construction activities associated with the widening of Proctor Valley Road to a four-lane roadway could result in additional impacts to paleontological resources identified within the Proctor Valley Road improvement area. Therefore, this alternative could result in increased impacts on paleontological resources. Potential impacts to paleontological resources would be similar under the GDP/SRP Proctor Valley Road Alternative with implementation of the same mitigation measure as the Proposed Project.

Tribal Cultural Resources

As identified in Section 2.11, Tribal Cultural Resources, the Proposed Project's potentially significant impact on tribal cultural resources under the Preserve Trails Option would be reduced to below a level of significance with implementation of M-TCR-1.

The GDP/SRP Proctor Valley Road Alternative would have the same development area as the Proposed Project, with the exception of widening Proctor Valley Road to a four-lane roadway in the existing, approved alignment to SR-94, which would increase the development area by approximately 12.8 acres and the temporarily disturbed area by approximately 80 acres compared to the Proposed Project. Construction activities associated with the widening of Proctor Valley Road to a four-lane roadway could result in additional impacts to unknown subsurface tribal cultural resources identified within the Proctor Valley Road improvement area. Impacts to tribal cultural resources would not be reduced or avoided under the GDP/SRP Proctor Valley Road Alternative compared to the Proposed Project.

Hazards and Hazardous Materials

As identified in Section 3.1.1, Hazards and Hazardous Materials, the Proposed Project would not include uses that would use hazardous substances in excess quantities, and no on-site hazardous contamination is present. The Project Area is not located within the airport influence area of an ALUCP or within 2 miles of a public or within 1 mile of a private use airport, nor would any of the proposed uses pose a hazard to airport safety. Based on implementation of the FPP requirements, compliance with applicable fire codes, and inclusion of a fire station in the Project Area, the Proposed Project would not have significant impacts relating to wildfire hazards. Additionally, the County's emergency response and multi-jurisdictional fire efforts would be able to provide adequate emergency response. Potential impacts due to hazards or hazardous materials was determined to be less than significant. No mitigation would be required.

The GDP/SRP Proctor Valley Road Alternative would have the same land uses and development area as the Proposed Project, with the exception of widening Proctor Valley Road to a four-lane roadway and a reduction of 14 residential units. Construction associated with the widening of Proctor Valley Road to a four-lane roadway could result in additional impacts from hazards and hazardous materials within the Proctor Valley Road improvement area. Potential construction impacts from hazards and hazardous materials under the GDP/SRP Proctor Valley Road Alternative would be slightly increased. The GDP/SRP Proctor Valley Road Alternative would include a fire station similar to the Proposed Project, and would achieve the General Plan travel time standard. Overall, impacts from hazards and hazardous materials would be similar to the Proposed Project under the GDP/SRP Proctor Valley Road Alternative. Under the GDP/SRP Proctor Valley Road Alternative. Under the GDP/SRP Proctor Valley Road Alternative, impacts from hazards and hazardous materials would be less than significant. No mitigation would be required.

Hydrology and Water Quality

As identified in Section 3.1.2, Hydrology and Water Quality, all of the Proposed Project's potential impacts on hydrology, water quality (during construction and operation), groundwater, and flooding would be less than significant. No mitigation would be required.

The GDP/SRP Proctor Valley Road Alternative would have the same development area as the Proposed Project, with the exception of widening Proctor Valley Road to a four-lane roadway in the existing, Otay Ranch GDP/SRP approved alignment to SR-94, which would increase the development area by approximately 12.8 acres and the temporarily disturbed area by approximately 80 acres compared to the Proposed Project. Construction associated with the widening of Proctor Valley Road to a four-lane roadway could result in additional impacts to hydrology and water quality within the Proctor Valley Road improvement area. In addition, operational impacts to hydrology and water quality under the GDP/SRP Proctor Valley Road

Alternative would be slightly increased due to additional impervious areas and changes in drainage from the widened roadway. Therefore, impacts to hydrology and water quality would be increased under the GDP/SRP Proctor Valley Road Alternative. The same water quality treatment best management practices would be available as with the Proposed Project, and overall impacts to water quality and hydrology would remain less than significant, similar to the Proposed Project.

Land Use and Planning

As identified in Section 3.1.3, Land Use and Planning, implementation of the Proposed Project would not physically divide an established community or conflict with any applicable land use plan, policy, guideline, or regulation. Land use and planning impacts would be less than significant. No mitigation would be required.

The GDP/SRP Proctor Valley Road Alternative would have the same land uses and development area as the Proposed Project, with the exception of widening Proctor Valley Road to a four-lane roadway in the existing, approved alignment to SR-94, and a reduction of 14 residential units. Under the GDP/SRP Proctor Valley Road Alternative, the proposed Otay Ranch GDP/SRP Amendment to reduce Proctor Valley Road from a four-lane Major Road to a two-lane Collector would not be required; however, a corresponding County General Plan Mobility Element Amendment to widen Proctor Valley Road from a two-lane Collector to a four-lane Major Road would be required. This would result in increased impacts related to dividing an established community due to a new four-lane roadway compared to the Proposed Project, which generally maintains the existing alignment and connects to the improved portion of Proctor Valley Road to the north of the Project Area. Therefore, the GDP/SRP Proctor Valley Road Alternative would have increased impacts on land use and planning compared to the Proposed Project; however, impacts would remain less than significant.

Mineral Resources

As identified in Section 3.1.4, Mineral Resources, development of the Project Area would impact Quaternary alluvium, which is not considered a high-quality (PCC grade) aggregate source, and MRZ-3 areas, which consist of weathered metavolcanic materials and are not considered a quality PCC aggregate source in practice. Impacts to mineral resources under the Proposed Project would be less than significant. No mitigation would be required.

The GDP/SRP Proctor Valley Road Alternative would have the same development area as the Proposed Project, with the exception of widening Proctor Valley Road to a four-lane roadway, which would increase the development area by approximately 12.8 acres, and the temporarily disturbed area by approximately 80 acres compared to the Proposed Project. Construction

activities associated with the widening of Proctor Valley Road to a four-lane roadway could result in additional impacts to mineral resources that may occur within the Proctor Valley Road improvement area. Because the GDP/SRP Proctor Valley Road Alternative would result in an increase in the development area, impacts to mineral resources would be increased compared to the Proposed Project. Although there would be an increase in impacts, the impacts to mineral resources would be less than significant, similar to the Proposed Project. No mitigation would be required.

Population and Housing

As identified in Section 3.1.5, Population and Housing, implementation of the Proposed Project would be consistent with the growth planned for the area and analyzed in the previously certified Otay Ranch PEIR. Impacts related to substantial population growth, displacement of existing housing, and displacement of people would be less than significant.

The GDP/SRP Proctor Valley Road Alternative would result in a decrease of 14 residential units in Planning Area 16 compared to the Proposed Project; therefore, the GDP/SRP Proctor Valley Road Alternative would have similar impacts on population and housing. Impacts to population and housing would be less than significant under the GDP/SRP Proctor Valley Road Alternative. No mitigation would be required.

Public Services

As identified in Section 3.1.6, Public Services, the Proposed Project was determined to avoid significant impacts to fire protection and emergency services, law enforcement, schools, and parks by a combination of payment of impact fees, dedication of land, and/or construction of facilities. Therefore, impacts to public services would be less than significant for the Proposed Project. No mitigation would be required.

The GDP/SRP Proctor Valley Road Alternative would result in a reduction of 14 residential units compared to the Proposed Project. Although less residential development would occur, the reduction in the number of residents would not be substantial, and a similar level of service from fire, emergency, law enforcement, and schools compared to the Proposed Project would be required. Therefore, the GDP/SRP Proctor Valley Road Alternative would have similar impacts on public services compared to the Proposed Project. Impacts to public services would be less than significant for the GDP/SRP Proctor Valley Road Alternative. No mitigation would be required.

Recreation

As identified in Section 3.1.7, Recreation, the Proposed Project would include 1,119 dwelling units, which, per the County's PLDO, requires 10.04 acres of parkland. The Proposed Project

would construct 23.3 acres of parks and recreation facilities within the Project Area, 11.1 acres of which are eligible for credit under the County's PLDO. Therefore, sufficient parks and recreation facilities would be provided to accommodate future residents and visitors of the Proposed Project. Recreation impacts would be less than significant for the Proposed Project. No mitigation would be required.

The GDP/SRP Proctor Valley Road Alternative would result in a reduction of 14 residential units compared to the Proposed Project. Although less residential development would occur, the same park acreages would be developed. The GDP/SRP Proctor Valley Road Alternative would not result in a substantial decrease in the number of residents compared to the Proposed Project. Therefore, the GDP/SRP Proctor Valley Road Alternative would have similar impacts to recreation. Recreation impacts would be less than significant for the GDP/SRP Proctor Valley Road Alternative, similar to the Proposed Project. No mitigation would be required.

Utilities

As identified in Section 3.1.8, Utilities and Service Systems, the Proposed Project would result in less-than-significant impacts to water supply, wastewater treatment facilities, storm drainage facilities, and solid waste facilities. Further, the Proposed Project would comply with all applicable laws and regulations associated with utilities and service systems. Impacts to utilities would be less than significant for the Proposed Project. No mitigation would be required.

Like the Proposed Project, the GDP/SRP Proctor Valley Road Alternative would not result in any significant impact on water supply, wastewater treatment facilities, storm drainage facilities, or solid waste facilities. The total residential unit count and associated water usage, wastewater rates, and storm drainage would be similar to the Proposed Project. Utilities and service systems impacts would be less than significant for the GDP/SRP Proctor Valley Road Alternative, similar to the Proposed Project. No mitigation would be required.

Energy

As identified in Section 3.1.9, Energy, the Proposed Project would not result in the wasteful or inefficient use of electricity, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing energy consumption, including the County of San Diego's General Plan policies. As a result, energy impacts would be less than significant for the Proposed Project. No mitigation would be required.

Like the Proposed Project, the GDP/SRP Proctor Valley Road Alternative would result in less-than-significant impacts on energy use. Energy impacts would be less than significant for the GDP/SRP Proctor Valley Road Alternative, similar to the Proposed Project. No mitigation would be required.

4.7.3 Relation to Project Objectives

Because the GDP/SRP Proctor Valley Road Alternative would include the same land uses as the Proposed Project, it would comply with the majority of the Proposed Project's objectives. Specifically, it would assist in meeting the regional housing needs identified in the County's General Plan Housing Element (Objective 1); it would implement the goals, objectives, and policies of the Otay Ranch planning documents (Objectives 2, 4); and it would serve as a transitional area between the more urban Otay Ranch villages and the more rural areas of Jamul (Objectives 3, 5). The GDP/SRP Proctor Valley Road Alternative would also include a mixeduse Village Core, which would comply with Objective 7 to combine appropriate land uses to support strategies for reducing GHG emissions and provide a sense of place for residents (Objective 4). The GDP/SRP Proctor Valley Road Alternative would not meet or implement the County of San Diego General Plan Mobility Element policy to reduce the width of Proctor Valley Road (Objective 9). Relatedly, the GDP/SRP Proctor Valley Road Alternative would not fulfill Objective 6 to minimize the width of Proctor Valley Road and provide a series of roundabouts to promote community character, encourage slower speeds, and avoid creating a barrier that bisects the community.

4.7.4 Feasibility

The GDP/SRP Proctor Valley Road Alternative is feasible. However, because the GDP/SRP Proctor Valley Road Alternative would involve the widening of Proctor Valley Road, it would result in greater impacts to aesthetics, biological resources, and cultural resources. Additionally, a wider Proctor Valley Road would likely induce additional traffic, albeit with improved levels of service, resulting in increased operational impacts to air quality, GHG emissions, and noise. A General Plan Mobility Element Amendment would also be required to widen Proctor Valley Road from a two-lane Collector to a four-lane Major Road. The GDP/SRP Proctor Valley Road Alternative would not reduce or avoid significant impacts to any resource areas other than transportation and traffic.

4.7.5 Evaluation of Significant Impacts

The GDP/SRP Proctor Valley Road Alternative would not reduce impacts to aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, geology and soils, GHG emissions, noise, paleontological resources, or tribal cultural resources. When compared to the Proposed Project, the GDP/SRP Proctor Valley Road Alternative would only avoid, reduce, or substantially lessen significant impacts in the following area:

• Transportation and Traffic

4.8 Analysis of the Land Exchange Alternative

4.8.1 Land Exchange Alternative Description and Setting

As explained in Section 4.1, the Land Exchange Alternative is included as an alternative to the Proposed Project because, prior to preparation of this EIR, the Proposed Project applicant was coordinating with the State of California and the Wildlife Agencies on a land exchange that would have resulted in a consolidated development footprint within Village 14 and an expanded Otay Ranch RMP/MSCP Preserve. During this coordination, the Proposed Project applicant formally submitted an application in 2015 to the County of San Diego and prepared a Specific Plan for the Land Exchange project. This submittal included a Tentative Map and Preliminary Grading Plan, technical studies, and supporting documents, as required by the Otay Ranch GDP/SPR. The applicant rescinded the application when the Wildlife Agencies reversed their support for the land exchange in 2016.

The Land Exchange Alternative uses information from previously prepared plans, reports, and documents. The Land Exchange Alternative analysis represents a more refined analysis than the other four alternatives due to the substantial previous work efforts in support of the land exchange, and is a more detailed analysis than required by CEQA for alternatives. For this reason, the following (including Appendices 4.1-1 through 4.1-16) is considered a project-level analysis for CEQA purposes.

The Land Exchange Alternative proposes 1,530 homes within a development footprint that is limited to approximately 600 acres in Village 14. The Land Exchange Alternative would include a Village Core, similar to the Proposed Project, which would include a 3.5-acre mixed-use site with up to 15,000 square feet of commercial/retail uses, an 8.3-acre school site, a 2.3-acre public safety site, and 20.4 acres of parks. With the exception of approximately 65 acres of land owned privately in Planning Area 16, the majority of Planning Areas 16/19 would become Otay Ranch RMP/MSCP Preserve. (see Figure 4-6, Land Exchange Alternative).

The total Land Exchange Area would cover approximately 2,387.7 acres, of which the Proposed Project applicant owns 1,284 acres and the state owns approximately 1,061 acres. Within the Land Exchange Area, approximately 1,003 acres is in Village 14 and 1,345 acres is in Planning Areas 16/19. The remaining 40 acres is associated with off-site improvements not owned by the applicant or the state.

The Land Exchange Alternative proposes to exchange 278 acres owned by the State of California in Village 14 for 278 acres owned by the Proposed Project applicant in Planning Area 16. The Land Exchange Alternative would also require an amendment to the Otay Ranch RMP Preserve

boundaries, and an MSCP County Subarea Plan Boundary Adjustment. Specifically, the following adjustments would be made:

- 169.8 acres in Planning Areas 16/19 would be converted to Otay Ranch RMP/ MSCP Preserve
- 142.3 acres in Village 14 would be converted to Otay Ranch RMP/MSCP Preserve
- 43.6 acres of Otay Ranch RMP/MSCP Preserve in Village 14 would be converted to development

Under the Land Exchange Alternative the size of the Otay Ranch RMP/MSCP Preserve would increase by 268.5 acres.

Accordingly, the Land Exchange Alternative would require a Specific Plan, General Plan Amendments, EIR, rezone, Tentative Map, Otay Ranch RMP Amendment, and MSCP County Subarea Plan Boundary Adjustment.

Under the Land Exchange Alternative, Proctor Valley Road would provide the main access to Village 14. Five roundabouts would identify the entrance into each residential area, and provide traffic calming at key internal intersections. The internal circulation plan also includes a series of collectors and residential streets to provide access to the residential neighborhoods. Proctor Valley Road is planned as a two-lane road and is designated as a scenic corridor.

Similar to the Proposed Project, the Land Exchange Alternative would amend the Otay Ranch GDP/SRP to reclassify Proctor Valley Road from a four-lane major road to a two-lane light collector. The northern connection of Village 14 to Jamul would be in the alignment of the existing, partially improved Proctor Valley Road, and would be paved to provide public access and secondary emergency access to both communities. The Land Exchange Alternative's circulation plan incorporates vehicular and non-vehicular modes of transportation to create an integrated system of roads, bike lanes, trails, pathways, and sidewalks similar to the Proposed Project.

4.8.2 Comparison of the Effects of the Land Exchange Alternative to the Proposed Project

As discussed in Section 4.8.1, the Land Exchange Alternative was previously submitted to the County as the proposed project and utilizes information from previously prepared plans, reports, and documents (see Appendices 4.1-1 through 4.1-16), and represents a more refined analysis than the other four alternatives due to the substantial previous work efforts in support of the land exchange proposal; therefore, this is considered a project-level analysis for CEQA purposes.

Aesthetics

As identified in Section 2.1, Aesthetics, the Proposed Project impacts on aesthetics would be reduced to less that significant with implementation of M-AE-1 and M-AE-2, except for visual character and cumulative impacts. Impacts to visual character and cumulative impacts would remain significant and unavoidable.

Under the Land Exchange Alternative, impacts associated with visual character and quality would remain significant at both the project-specific and cumulative levels due to the conversion of open space to a residential community. A series of visual simulations were prepared to illustrate the aesthetic impacts of the Land Exchange Alternative (see Appendix 4.1-2). As with the Proposed Project, impacts from implementation of the Land Exchange Alternative associated with scenic vistas, light and glare, and compliance with applicable community and regional plans would be less than significant. As shown in Appendix 4.1-2, the Land Exchange Alternative would introduce features that would contrast with the existing visual character and quality of the site and surroundings. Impacts to the existing visual character and visual quality within Otay Ranch would be significant and unavoidable.

The reconfiguration of land uses under the Land Exchange Alternative would reduce the amount of development in Planning Areas 16/19; instead, development would be concentrated in Village 14. As a result, the development footprint of the Land Exchange Alternative would be reduced compared to the Proposed Project, and impacts to the visual character of Planning Areas 16/19 would be largely avoided because no development would occur on the Proposed Project applicant's property or the state's property in these areas. Although additional development (i.e., more dwelling units) would occur in Village 14 compared to the Proposed Project, this change would be similar to the Proposed Project. Thus, while impacts to aesthetics would remain significant and unavoidable under the Land Exchange Alternative, changes to visual character and quality in Planning Areas 16/19 would be reduced compared to the Proposed Project.

Agricultural Resources

As identified in Section 2.2, Agricultural Resources, the Proposed Project would result in the loss of grazing land and Farmland of Local Importance. No mitigation measures are available to reduce impacts to less than significant. Impacts to agricultural resources would remain significant and unavoidable for the Proposed Project.

The Land Exchange Alternative would not reduce the significant and unavoidable impacts to agricultural resources to less than significant. Although the Land Exchange Alternative proposes a smaller development footprint than the Proposed Project, it would still disturb approximately 22.4 acres of land designated as Farmland of Local Importance and 6131 acres of land designated

as grazing land. The Land Exchange Alternative would result in the loss of an agricultural resource for the potential production of coastal-dependent crops, due to its location in a coastal area climate zone and because the Land Exchange Area contains soils designated as Farmland of Local Importance, similar to the Proposed Project. Similar to the Proposed Project, this would also represent a cumulatively considerable contribution to a significant cumulative impact.

The Land Exchange Alternative would reduce impacts to Farmland of Local Importance by approximately 40 acres, and impacts to grazing land by approximately 22.6 acres compared to the Proposed Project. Therefore, although the Land Exchange Alternative would not reduce impacts on grazing land and Farmland of Local Importance to less than significant, it would reduce the magnitude of those impacts compared to the Proposed Project. Nevertheless, impacts to agricultural resources would remain significant and unavoidable.

Air Quality

As identified in Section 2.3, Air Quality, Proposed Project construction emissions and daily operational emissions for VOCs, NO_x , CO, and PM_{10} would result in significant and unavoidable impacts. Thus, the Proposed Project would contribute to a cumulatively considerable significant and unavoidable impact.

A Land Exchange Alternative Air Quality Technical Report was prepared for the Land Exchange Alternative (Appendix 4.1-3). The Land Exchange Alternative would not eliminate exceedances of the VOC, NO_x, CO, or PM₁₀ regulatory threshold, but would reduce PM 2.5 to less than significant (Tables 4-6A and 4-6B). This alternative would result in greater maximum daily construction emissions of NO_x and CO compared to the Proposed Project, but would reduce daily construction emissions of PM₁₀ compared to the Proposed Project. Similarly, the Land Exchange Alternative would increase operational impacts of VOCs and PM₁₀ compared to the Proposed Project due to the increased residential unit count and associated operation of the Land Exchange Alternative project (Table 4-7). For these reasons, the Land Exchange Alternative would cause a cumulatively considerable contribution to cumulative net increases of criteria pollutants.

Impacts related to toxic air contaminants and CO hotspots would be less than significant under the Land Exchange Alternative, similar to the Proposed Project (Tables 4-8A through 4-10).

Under both the Proposed Project and Land Exchange Alterative, potential odors produced during construction would disperse rapidly, and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be similar under the Proposed Project and Land Exchange Alternative. Similar to the Proposed Project, the Land Exchange Alternative would not include any land uses that are known to generate odors, such as wastewater treatment plants, landfills, or other industrial

sources. Therefore, impacts associated with objectionable odors would be similar under the Proposed Project and Land Exchange Alternative.

Overall, the Land Exchange Alternative would result in greater emissions of criteria pollutants, and, therefore, would result in greater impacts than the Proposed Project because of increased construction and operational emissions. Air quality impacts would remain significant and unavoidable under this alternative.

Biological Resources

As identified in Section 2.4, Biological Resources, all of the Proposed Project's impacts would be reduced to less than significant with implementation of M-BI-1 through M-BI-20, which includes approximately 776.8 acres of Otay Ranch RMP Preserve being conveyed to the Otay Ranch RMP POM.

A Land Exchange Alternative Biological Resources Technical Report was prepared for the Land Exchange Alternative (Appendix 4.1-4). The Land Exchange Alternative would reduce biological impacts by consolidating development into a reduced development footprint, thereby reducing the Preserve edge by approximately 13 linear miles, or 31%. The Land Exchange Alternative would also result in conveyance of additional land to the Otay Ranch RMP Preserve with the Land Exchange Area, and therefore, would establish additional Otay Ranch RMP and MSCP County of San Diego Subarea Plan Preserve land.

In addition, the Land Exchange Alternative would do the following:

- Improve the overall Otay Ranch RMP/MSCP Preserve design by protecting multiple habitat types, variable topography, and sensitive resources, and adding 268.5 acres to the Otay Ranch RMP/MSCP Preserve.
- Enlarge a "core" biological area due to adjacency and connectivity of adjacent Preserve lands and open space.
- Improve wildlife movement through the enhancement of the regional corridor linking the Jamul Mountains and San Miguel Mountain by eliminating development in Planning Areas 16/19, thus allowing species to travel throughout the Preserve without the potential for development obstructions or edge effects.
- Protect habitat and species through the preservation of 654.4 acres of coastal sage scrub, a net increase of MSCP and non-MSCP covered plant species, a net increase of suitable habitat used for MSCP and non-MSCP covered wildlife species, and the preservation of coastal California gnatcatcher locations.

- Impact approximately 624.9 acres within Village 14 and off-site areas, compared to the Proposed Project, which would permanently and temporarily impact approximately 740.9 acres within Village 14, Planning Areas 16/19, and off-site areas.
- Reduce permanent and temporary impacts to sensitive vegetation communities and sensitive plant and wildlife species by approximately 150 acres compared to the Proposed Project.

The Land Exchange Alternative is discussed in more detail in Appendix 4.1-4, Land Exchange Alternative Biological Resources Technical Report.

Nevertheless, this alternative would still result in potentially significant impacts on biological resources requiring mitigation. Appendix 4.1-4 provides a thorough description of those impacts. Specifically, the Land Exchange Alternative and off-site impact areas would result in potentially significant direct and/or indirect effects to special-status plant species, special-status wildlife species, avian species protected under the Migratory Bird Treaty Act, special-status vegetation communities, and jurisdictional resources. In addition, the Land Exchange Alternative would result in potentially significant direct impacts to foraging or breeding habitat and wildlife movement (see Table 4-11, Land Exchange Alternative Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities, and Jurisdictional Areas). These impacts would be less than significant with implementation of mitigation measures and conveyance of land to the Otay Ranch RMP Preserve, similar to the Proposed Project.

Therefore, the Land Exchange Alternative would reduce impacts to biological resources compared to the Proposed Project. Impacts to biological resources under the Land Exchange Alternative would be less than significant with implementation of mitigation measures.

Cultural Resources

Section, Cultural Resources, determined that the Proposed Project would have potentially significant impacts on known and unknown subsurface cultural resources. The Proposed Project's impacts to cultural resources would be reduced to less than significant with implementation of M-CR-1 through M-CR-3.

Appendix 4.1-5, Cultural Resources Technical Report for the Land Exchange Alternative, provides information on the project-specific impacts of the Land Exchange Alternative.

Of the 109 resources found within the study area, 43 resources are located within the Area of Development Impact (ADI) for the Land Exchange Alternative, compared to 57 resources under the Proposed Project. These 43 resources consist of 30 sites, three historic structures, and 10 isolates. Those portions of the ADI located within the state-owned lands were not accessible, and, therefore, the archaeologist could not directly assess the significance of all or portions of the following resources: sites CA-SDI-8086A/CA-SDI-8086B/CA-SDI-8086C, CA-SDI-12397, and CA-SDI-21917.

None of the 39 directly evaluated archaeological sites (or evaluated portions of sites) within the Land Exchange Area meets the criteria to be considered eligible for listing in the California Register of Historical Resources (CRHR) or the local register, and none of the sites are recommended as significant under the Otay Ranch RMP and/or CEQA. However, under County guidelines, all archaeological sites are considered important.

The resources, or portions thereof, that were not directly evaluated, were determined eligible for listing in the CRHR and the local register, and significant under CEQA. These three resources (or portions thereof) are within the Land Exchange Alternative development footprint and would be impacted by implementation of this alternative. These resources (CA-SDI-8086A/CA-SDI-8086B/ CA-SDI-8086C, CA-SDI-12397, and CA-SDI-21917) are archaeological sites that are not associated with events (Criterion 1) or persons (Criterion 2) important to local, state, or national history; and none of them embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values (Criterion 3). They are determined eligible under Criterion 4 (potential to contain information important to history or prehistory).

No forms of preservation in place, as described under CEQA Guidelines Section 15126.4(b)(3)(B), are feasible for the portion of CA-SDI-12397 located within the ADI because the ADI consists of improvements to Proctor Valley Road, a major circulation element road. The Land Exchange Alternative and the Proposed Project would have similar impacts to CA-SDI-12397. Both the Land Exchange Alternative and Proposed Project would have similar effects to CA-SDI-12373 if the Preserve Trails Options were selected. Mitigation of this impact would consist of a surface collection at Locus A to collect visible artifacts (i.e, data recovery), thereby limiting the potential for looting to occur, and reducing the impact to less than significant.

Under the Land Exchange Alternative, the potential to uncover unknown cultural resources exists, and mitigation measures would be required (Appendix 4.1-5). However, the Land Exchange Alternative development footprint would be decreased, thus, the potential to uncover unknown archaeological resources would be reduced compared to the Proposed Project.

The Land Exchange Alternative would impact 43 cultural resources. Although these cultural resources are not recommended as eligible for listing in the CRHR or the local register, they are considered significant under the County's CEQA guidelines. By comparison, the Proposed Project would impact 57 cultural resources. Mitigation for impacts to sites of County importance would be reduced to less than significant through recordation, photo documentation, monitoring, and curation or repatriation of cultural materials.

Similar to the Proposed Project, implementation of M-CR-1 through M-CR-3, as described in Section 2.5.6 of this EIR, would reduce impacts to cultural resources to less than significant.

Overall, the Land Exchange Alternative would result in impacts to fewer cultural resources than the Proposed Project.

Geology and Soils

Section 2.6, Geology and Soils, indicates that the Proposed Project's would result in potentially significant impacts regarding rockfall hazards, landslides, and expansive soils. These impacts would be reduced to less than significant with implementation of M-GE-1.

A Land Exchange Alternative Geotechnical Report was prepared for the Land Exchange Alternative (Appendix 4.1-6). The Land Exchange Alternative would restrict development to Village 14 and, with the exception of approximately 65 acres of land privately owned in Planning Area 16, would preserve the majority of Planning Areas 16/19 as Otay Ranch RMP Preserve. Because the Land Exchange Alternative development footprint would be decreased compared to the Proposed Project, overall impacts to geology and soils would also be decreased.

The Land Exchange Alternative would not result in a significant impact due to fault rupture because it is not located within 50 feet of an Alquist-Priolo Fault or County Special Study Zone Fault (Appendix 4.1-6, Preliminary Geotechnical Investigation for the LEA), similar to the Proposed Project. And similar to the Proposed Project, the Land Exchange Alternative would not result in a significant impact due to ground shaking because it would be designed and constructed in conformance with the International Building Code, California Building Code, and County Building Code, including required seismic design considerations, such as specialized reinforcement measures (e.g., tie-downs and strapping), which are used to minimize structural damage in the event of ground shaking.

The Land Exchange Alternative would have similar impacts to geology and soils and similar geologic hazards (liquefaction, rock fall, landslides, and expansive soils) compared to the Proposed Project because the Land Exchange Alternative has similar underlying geologic conditions. However, because the development footprint would be decreased compared to the Proposed Project by approximately 185 acres, overall impacts to geology and soils would be lessened. Therefore, impacts to geology and soils would be reduced under the Land Exchange Alternative compared to the Proposed Project. The Land Exchange Alternative's impacts to geology and soils would be less than significant with implementation of M-GE-1, similar to the Proposed Project.

Greenhouse Gas Emissions

Section 2.7, Greenhouse Gas Emissions, indicates that the Proposed Project would have potentially significant impacts associated with GHG emissions. These impacts would be

mitigated to less than significant at both the project impact level and cumulative impact level through implementation of M-GHG-1 through M-GHG-4.

The Land Exchange Alternative Greenhouse Gas Emissions Technical Report is included as Appendix 4.1-7 of this EIR. Total construction-related Land Exchange Alternative emissions were estimated to be 16,728 metric tons (MT) of carbon dioxide equivalent (CO₂e), or 558 MT CO₂e per year when amortized over 30 years (see Table 4-12). The Land Exchange Alternative would generate operational GHG emissions from area sources (hearths and landscape maintenance), energy sources (electricity and natural gas consumption), mobile sources (vehicle trips), water supply and wastewater treatment, and solid waste. Estimated annual Land Exchange Alternative operational GHG emissions at build-out in 2028 would be approximately 20,882 MT CO₂e per year, compared to 19,825 MT CO₂e per year for the Proposed Project. These emissions would be reduced by planting at least 6,000 new trees, which would result in the one-time sequestration of approximately 4,248 MT CO₂e (or 142 MT CO₂e per year when amortized over 30 years). Therefore, Land Exchange Alternative operational GHG emissions (20,882 MT CO₂e per year) minus the sequestered carbon (142 MT CO₂e per year) would result in annual Land Exchange Alternative emissions of 20,740 MT CO₂e per year (see Table 4-13).

The Land Exchange Alternative would include design elements and design features to support the policy objectives of SANDAG's San Diego Forward: The Regional Plan and SB 375, similar to the Proposed Project. The Land Exchange Alternative's Transportation Demand Management Program would reduce VMT through two primary strategies: land use and design measures that would create an environment that promotes alternative mode choice (e.g., land use diversity and pedestrian/bicycle networks), and commute/travel services for residents that would reduce outgoing single-occupant vehicle trips (e.g., ride-share, commute trip reduction marketing). Implementation of the Land Exchange Alternative's Transportation Demand Management Program and associated measures would achieve a 4.6% reduction in VMT.

Regarding consistency with the County of San Diego General Plan, the Land Exchange Alternative would include similar design features as the Proposed Project to reduce indoor and outdoor water consumption, to offer bike and pedestrian networks, and to employ sustainable technology and energy-efficient design through Zero Net Energy homes with rooftop solar and electric-vehicle chargers in the garages of half of the residential units. The Land Exchange Alternative, with mitigation, would also be consistent with the statewide GHG reduction target codified in SB 32 by achieving net-zero emissions. Therefore, the Land Exchange Alternative would not conflict with an applicable plan adopted for the purpose of reducing GHG emissions, and plan consistency impacts would be the same as the Proposed Project.

Compared to the Proposed Project, the Land Exchange Alternative would reduce constructionrelated GHG emissions, but increase operational emissions, resulting in an overall increase in GHG emissions. The Land Exchange Alternative would result in 7,988 MT CO₂e during construction compared to 11,463 MT CO₂e for the Proposed Project, which represents a 30% reduction. This alternative would also reduce impacts associated with vegetation removal; the Land Exchange Alternative would result in 8,740 MT CO₂e compared to 10,382 MT CO₂e for the Proposed Project. Operational emissions, however, would increase for this alternative. The Land Exchange Alternative would result in operational emissions of 20,882 MT CO₂e per year compared to 19,825 MT CO₂e per year for the Proposed Project. All emissions would be offset through implementation of mitigation measures, similar to the Proposed Project. Overall, the Land Exchange Alternative would result in an increase in GHG emissions compared to the Proposed Project. With mitigation, the impacts would be similar to the Proposed Project. GHG emissions impacts would be less than significant with implementation of M-GHG-1 through M-GHG-4 for the Land Exchange Alternative, similar to the Proposed Project.

Noise

Section 2.8, Noise, indicates that the Proposed Project's noise impacts would be reduced to less than significant with implementation of M-N-1 through M-N-10, with the exception of one significant and unavoidable impact to residences located along Proctor Valley Road, north of the Project Area and west of Melody Road. Although these residences would experience a noise level of 51 dBA, which is below the applicable noise threshold for residential land uses, the noise would be an increase of greater than 10 dBA, which is considered a significant impact.

A Land Exchange Alternative Noise Impact Report was prepared for the Land Exchange Alternative (Appendix 4.1-8). Under the Land Exchange Alternative, on-site noise levels at the second-floor level of proposed residences directly adjacent to Proctor Valley Road could potentially exceed 60 dBA community noise equivalent level (CNEL) (see Table 4-15). Thus, without mitigation, the interior noise level could exceed the County's 45 dBA CNEL interior noise criterion. Prior to issuance of building permits, interior noise studies will be required for the residences directly adjacent to Proctor Valley Road to ensure that the interior CNEL would not exceed 45 dBA. The impacts to the residences described above would be reduced compared to the Proposed Project because the Future Year 2030 Cumulative Condition Plus Hypothetical Development of State Preserve Property would reduce the overall number of cumulative units (i.e., the total number of units in Village 14 and Planning Areas 16/19 of the Otay Ranch GDP/SRP), and, therefore, reduce ADT under the Land Exchange Alternative. These impacts would be less than significant with implementation of mitigation, similar to the Proposed Project.

The Land Exchange Alternative would increase traffic compared to the Proposed Project. This increase in traffic would have the potential to result in increased off-site noise impacts. Noise impacts from the Land Exchange Alternative at existing, off-site noise-sensitive land uses would be less than significant, with the exception of Proctor Valley Road, west of Melody Road

(Receiver M8/R14). Because Proctor Valley Road currently experiences very low traffic volumes, a significant increase in traffic noise along this roadway segment would occur compared to existing traffic noise levels. Traffic noise at Receiver M8/R14 would be 54 dBA under the Land Exchange Alternative, which would result in a greater noise level increase compared to the Proposed Project because the noise level increase attributable to the Land Exchange Alternative would be 15 dBA (compared to 12 dBA for the Proposed Project). Similar to the Proposed Project, although 54 dBA is below the noise threshold for residential land uses, it would be an increase of greater than 10 dBA, and, thus, considered a significant impact. Overall, the Land Exchange Alternative's off-site noise impacts due to increased traffic noise would be similar to the Proposed Project (Table 4-16).

The Land Exchange Alternative's operational noise sources would include air conditioning units at each of the single-family and multi-family homes. Noise from heating, ventilation, and air conditioning (HVAC) equipment would be a potentially significant impact, and mitigation would be provided to reduce potential impacts, similar to the Proposed Project. No operational components of the Land Exchange Alternative would include significant groundborne noise or vibration sources, and no significant vibrations sources currently exist, or are planned, in the Land Exchange Area. Thus, no significant groundborne noise or vibration impacts would occur with operation of the Land Exchange Alternative, similar to the Proposed Project.

Under the Land Exchange Alternative, construction noise associated with improvements of Proctor Valley Road and on-site construction noise at adjacent, occupied residences would be potentially significant impacts, similar to the Proposed Project. Likewise, noise from blasting activities associated with the excavation and mass-grading phase would be potentially significant. Based on the anticipated construction equipment and distance from the equipment to homes, construction activities would result in vibration anticipated to be below the level of human perception at existing off-site noise/vibration-sensitive land uses. Thus, construction vibration would not disturb the off-site residences, and the potential vibration impacts to these residential structures would be less than significant with mitigation, similar to the Proposed Project.

Because development of the Land Exchange Alternative would be a multi-year endeavor, portions of the Land Exchange Alternative would be completed and occupied during the construction of subsequent portions (phases). Vibration from construction activities, if they occur within 300 feet of on-site residences, has the potential to result in vibration levels exceeding County standards. This would be potentially significant, and mitigation would be provided to reduce potential impacts, similar to the Proposed Project.

Overall, the Land Exchange Alternative would result in reduced noise impacts compared to the Proposed Project due to the reduction in Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property traffic as a result of the elimination of development in

Planning Areas 16/19. The Land Exchange Alternative's noise impacts would be reduced to less than significant with implementation of mitigation measures, with the exception of one significant and unavoidable impact to residences located along Proctor Valley Road, north of the Land Exchange Area and west of Melody Road, similar to the Proposed Project.

Traffic and Transportation

As identified in Section 2.9, Transportation and Traffic, the Proposed Project would result in the following significant and unavoidable roadway segment and intersection impacts under Existing Plus Project Buildout Conditions, Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property, as identified below, even with implementation of M-TR-1 through M-TR-17:

Intersections

- SR-94 and Lyons Valley Road (Exiting Plus Project Buildout, Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Northwoods Drive/Agua Vista Drive and Proctor Valley Road (Existing Plus Project Build-Out, Year 2025, Year 2030, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Paseo Ranchero and East H Street (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Mt. Miguel Road and East H Street (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Lane Avenue and East H Street (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road and Project Driveway No. 1, No. 2, No. 3, No. 4, and No. 5 (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)

Roadway Segments

- Proctor Valley Road between Hunte Parkway and Northwoods Drive (Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Northwoods Drive and the City of Chula Vista (Exiting Plus Project Buildout, Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)

- Proctor Valley Road between the City of Chula Vista boundary and Project Driveway No. 1 (Year 2025 Cumulative Conditions, Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Project Driveway No. 1 and Project Driveway No. 2 (Year 2025, Year 2030, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Project Driveway No. 2 and Project Driveway No. 3 (Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)
- Proctor Valley Road between Project Driveway No. 3 to Project Driveway No. 4 (Year 2030 Cumulative Conditions, and Year 2030 Cumulative Conditions Plus Hypothetical Development of State Preserve Property)

A Transportation Impact Study was prepared for the Land Exchange Alternative and is included as Appendix 4.1-9 of this EIR. As shown in Table 4-5, Estimated Average Daily Trips for Proposed Project vs. Land Exchange Alternative, the Land Exchange Alternative would generate 15,814 ADT and the Proposed Project would generate 12,767 ADT. Thus, the Land Exchange Alternative would increase ADT by approximately 3,000 ADT due to the increase in residential units from 1,119 to 1,530. However, because the Land Exchange Alternative would amend the Otay Ranch GDP/SRP and the County General Plan (through the Otay Subregional Plan) to reduce the total number of units in the Land Exchange Area from 2,132 to 1,530, the Land Exchange Alternative would reduce cumulative traffic from the Land Exchange Area by approximately 5,830 ADT compared to planned conditions (Table 4-17).

Roadway Segments

Under the Land Exchange Alternative, Proctor Valley Road between Northwoods Drive and the City of Chula Vista boundary would be impacted by the increase in ADT under the Existing Plus Project, 2025, and 2030 Conditions. This segment of Proctor Valley Road would be required to be widened from a two-lane roadway to a Class I Collector to fully mitigate direct impacts to this roadway segment. However, this roadway segment is located within the City of Chula Vista, and the County does not have the jurisdiction to permit or implement any improvements. Consequently, widening Proctor Valley Road between Northwoods Drive and the City of Chula Vista boundary from a two-lane roadway to a Class I Collector is considered infeasible. Therefore, impacts from the Land Exchange Alternative would remain significant and unavoidable, similar to the Proposed Project.

Under the Land Exchange Alternative, cumulative impacts along three segments of Proctor Valley Road at the Land Exchange Alternative frontage would be significant under Year 2025 Conditions, similar to the Proposed Project (Appendix 4.1-9):

- Proctor Valley Road between the City of Chula Vista boundary and Project Driveway No. 1
- Proctor Valley Road between Project Driveway No. 1 and Project Driveway No. 2
- Proctor Valley Road between Project Driveway No. 2 and Project Driveway No. 3

Based on the daily roadway segment volume-to-capacity analysis, the three identified segments are projected to continue to operate at substandard level of service E under Year 2025 conditions, even after the segments are constructed to their ultimate classification as a 2.2A facility (Appendix 4.1-9). Based on the results of the volume-to-capacity analysis, impacts along three segments of Proctor Valley Road at the Land Exchange Alternative frontage would be similar to the Proposed Project. No additional segment impacts would occur in the Year 2025 or 2030 cumulative conditions under the Land Exchange Alternative. Overall, segment impacts would be reduced by the Land Exchange Alternative compared to the Proposed Project due to the elimination of development in Planning Areas 16/19.

Intersections

Under the Land Exchange Alternative, potentially significant direct impacts would occur at the intersections of SR-94 and Lyons Valley Road (Existing Plus Project) and Northwoods Drive/Agua Vista Drive and Proctor Valley Road (Existing Plus Project, Year 2025, and Year 2030). Because these intersections are not under the jurisdiction of the County of San Diego, mitigation at these intersections is considered infeasible. As a result, the Land Exchange Alternative, like the Proposed Project, would have significant and unavoidable impacts on these intersections. Note, however, that the Land Exchange Alternative would avoid impacts to the SR-94 and Lyons Valley Road intersection in the Year 2025 and Year 2030 scenarios; thus, impacts to intersections would be reduced compared to the Proposed Project.

Overall, compared to the Proposed Project, the Land Exchange Alternative would result in reduced impacts to traffic and transportation. Nevertheless, certain traffic impacts under the Land Exchange Alternative's would remain significant and unavoidable, as described above and in Appendix 4.1-9.

Paleontological Resources

Section 2.10, Paleontological Resources, determined that the Proposed Project would have potentially significant impacts on paleontological resources. The Proposed Project's impacts to paleontological resources would be reduced to less than significant with implementation of M-PR-1.

Under the Land Exchange Alternative, the potential to uncover paleontological resources exists and mitigation measures would be required. However, the Land Exchange Alternative development footprint would be decreased compared to the Proposed Project; thus, the potential to uncover paleontological resources would be reduced.

Impacts to paleontological resources would be reduced under the Land Exchange Alternative in comparison to the Proposed Project due to the reduced development footprint. Similar to the Proposed Project, implementation of M-PR-1, as described in Section 2.10.5 of this EIR, would reduce impacts to paleontological resources to less than significant.

Tribal Cultural Resources

Section 2.11, Tribal Cultural Resources, indicates that the Proposed Project would have potentially significant impacts on tribal cultural resources, but that such impacts would be reduced to less than significant with implementation of M-TCR-1.

No known tribal cultural resources were identified in the Sacred Lands File by the Native American Heritage Commission. As described in Appendix 4.1-5, no known tribal cultural resources are known to exist in the Land Exchange Area.

However, under the Land Exchange Alternative, although development would only occur in Village 14, the potential to uncover tribal cultural resources for the Preserve Trails Option still exists and similar mitigation measures would be required, similar to the Proposed Project (Appendix 4.1-5).

The Land Exchange Alternative would be subject to the same mitigation measures as the Proposed Project to ensure that impacts to tribal cultural resources remain less than significant. Specifically, M-TCR-1 would be implemented if the Preserve Trails Option is selected, as described in Section 2.11.5 of this EIR. Consultation has not been finalized, and there is still the potential to encounter tribal cultural resources during excavation and construction activities.

Hazards and Hazardous Materials

As identified in Section 3.1.1, Hazards and Hazardous Materials, the Proposed Project would not include uses that would employ hazardous substances in excess quantities, and no on-site hazardous contamination is present. The Project Area is not located within the airport influence area of an ALUCP or within 2 miles of a public or within 1 mile of a private use airport, nor would any of the proposed uses pose a hazard to airport safety. Based on implementation of the FPP requirements, compliance with applicable fire codes, and inclusion of a fire station in the Project Area, the Proposed Project would not have significant impacts relating to wildfire hazards. Additionally, the County's emergency response and multi-jurisdictional fire efforts

would be able to provide adequate emergency response. The Proposed Project's impacts due to hazards or hazardous materials would be less than significant. No mitigation would be required.

Under the Land Exchange Alternative, the development footprint would decrease but the number of residential units would increase compared to the Proposed Project. The Land Exchange Alternative would include 1,530 homes within a development footprint that is limited to Village 14. With the exception of approximately 65 acres of land that is privately owned in Planning Area 16, the majority of Planning Areas 16/19 would be converted to Otay Ranch RMP Preserve and would not be developed. The Land Exchange Alternative would increase the amount of dwelling units and the number of people exposed to potential hazards or hazardous materials compared to the Proposed Project.

Because there are no known sources of contamination that present an environmental concern in the Land Exchange Area, impacts related to contamination would be less than significant for the Land Exchange Alternative, similar to the Proposed Project. Because the Land Exchange Alternative development footprint is smaller than that of the Proposed Project, impacts from unknown existing on-site contamination would be reduced compared to the Proposed Project. Similar to the Proposed Project, the Land Exchange Area is not located within the airport influence area of an ALUCP, within 2 miles of a public airport, or within 1 mile of a private use airport. The Land Exchange Alternative would not involve construction of any structure equal to or greater than 150 feet in height, constituting a safety hazard to aircraft or operations from an airport or heliport. Therefore, the Land Exchange Alternative, like the Proposed Project, would not result in any impacts to airport hazards.

The post-development condition of the Land Exchange Area would alter the ability of fire to spread as it has historically in Proctor Valley, similar to the Proposed Project. The Land Exchange Alternative would rely on an FPP (Appendix 4.1-1C) to reduce fire risk. As part of the FPP, fire behavior modeling and a site fire risk analysis was conducted. The FPP establishes standards for fuel modification, building design and construction, and other pertinent development infrastructure criteria aimed at reducing wildland fire risk in the Land Exchange Area, similar to the Proposed Project.

With the measures included in the FPP, the inclusion of a fire station, and the provision of defensible space incorporated into the Land Exchange Alternative, the overall intensity of a wildland fire is expected to be low. Because the development footprint is smaller under the Land Exchange Alternative, the total wildland/urban interface would be reduced compared to the Proposed Project. Although both the Land Exchange Alternative and Proposed Project would be constructed according to the requirements of a FPP and would be considered to have a less-than-significant impact related to wildland fire, more compact development tends to be more resistant to wildland fires compared to more spread out, larger-lot development, as seen in recent fire

events in San Diego County and Southern California. Further, consolidating development within Village 14 would result in faster travel times under the Land Exchange Alternative compared to the Proposed Project. Lastly, the increase in dwelling units would provide for additional fire mitigation fees and ongoing property taxes to be collected to ensure the ongoing operation of fire services. For these reasons, wildland fire hazards impacts would be reduced under the Land Exchange Alternative compared to the Proposed Project.

The Land Exchange Alternative would not interfere with an area emergency plan because it would not prohibit subsequent plans from being established, similar to the Proposed Project. Like the Proposed Project, the Land Exchange Area is located outside of a dam inundation zone, and, therefore, would not interfere with a dam evacuation plan, nor would the Land Exchange Alternative result in potential impacts related to inundation.

Site access, including roads, gates, and driveways, would comply with the requirements of the County's Consolidated Fire Code (Section 96.1.503). The FPP for the Land Exchange Alternative (Appendix 4.1-1C) further addresses specifications on road requirements and emergency access. In addition, the Land Exchange Alternative does not propose a structure or tower 100 feet or greater in height, and would not cause hazards to emergency response aircraft.

Consolidating development within Village 14 and eliminating larger lots in Planning Areas 16/19 would result in shorter emergency evacuation routes under the Land Exchange Alternative compared to the Proposed Project; however, the additional units would also potentially increase emergency evacuation times. Given that the Land Exchange Alternative's location is within an area that is affected by Santa Ana winds, which are capable of driving a large wildland fire, the most likely scenario would be a fire coming from the east/northeast, which would have the effect of forcing emergency evacuations southwest on Proctor Valley Road (i.e., away from an oncoming fire). Under either the Proposed Project or the Land Exchange Alternative, it is expected that evacuations would be accommodated by the circulation network; however, by consolidating development farther southwest under the Land Exchange Alternative, predicted evacuation distances would be shortened because most traffic would be directed southwest on Proctor Valley Road toward Chula Vista. Accordingly, impacts to emergency response plans would be reduced under the Land Exchange Alternative compared to the Proposed Project.

Under the Land Exchange Alternative, impacts related to hazardous substance handling, existing on-site contamination, airport hazards, wildfire hazards, and emergency response plans would be less than significant. Although the Land Exchange Alternative would result in an increase in residential units and decrease in the development footprint, the Land Exchange Alternative would be unlikely to substantially decrease impacts from hazards and hazardous materials compared to the Proposed Project. Overall, the Land Exchange Alternative would reduce impacts

related to hazards and hazardous materials compared to the Proposed Project. The Land Exchange Alternative's impacts would be less than significant. No mitigation would be required.

Hydrology and Water Quality

As identified in Section 3.1.2, Hydrology and Water Quality, all of the Proposed Project's potential impacts associated with alteration of existing hydrology, water quality during construction and operation, groundwater, and flooding would be less than significant. No mitigation would be required.

A Storm Water Quality Management Plan, Hydromodification Plan, and Drainage Report were prepared for the Land Exchange Alternative (Appendices 4.1-10, 4.1-11, and 4.1-12, respectively). Similar to the Proposed Project, the Land Exchange Alternative would not result in significant impacts to hydrology or water quality. Under the Land Exchange Alternative, the number of residential units would increase from 1,119 to 1,530, but the development footprint would be smaller, which would reduce runoff. Specifically, the Proposed Project would increase the post-development 100-year peak flow by approximately 700 cubic feet per second, from 12,036 to 12,736 cubic feet per second, and the Land Exchange Alternative would increase the post-development 100-year peak flow by approximately 336 cubic feet per second, to 12,372 cubic feet per second.

With implementation of appropriate site design, low-impact-development features, and structural treatment control best management practices, and with compliance with the Construction General Permit and the General Order for Dewatering, construction of the Land Exchange Alternative would result in reduced impacts from the alteration of existing drainage or hydrology, resulting in peak flow decreases. Runoff from on-site developed areas would be conveyed toward water quality and hydromodification management plan treatment facilities prior to discharging into Proctor Valley, from where it would flow to the Otay Reservoir. The Otay Reservoir has sufficient capacity to contain both wet- and dry-weather flows from the Land Exchange Alternative, similar to the Proposed Project.

Under the Land Exchange Alternative, compliance with the California Building Code, the San Diego Area Regional Standard Drawings, and Standard Specifications for Public Works Construction, and with preparation of a site-specific stormwater pollution prevention plan (SWPPP), potential water quality impacts from construction would be reduced. The Land Exchange Alternative would not contribute pollution in excess of that allowed by applicable state or local water quality objectives, or contribute to the degradation of beneficial uses, similar to the Proposed Project. Thus, impacts would be less than significant.

Like the Proposed Project, the Land Exchange Alternative does not propose the use of groundwater for any purpose, nor will it affect off-site groundwater usage. The groundwater table is expected to occur deeper than 100 feet below the ground surface, and would not constrain development of either the Proposed Project or the Land Exchange Alternative. The necessary Regional Water Quality Control Board permits would be obtained, and appropriate control measures would be implemented should dewatering be necessary, ensuring that impacts to groundwater would remain less than significant.

The Land Exchange Area is located outside of designated 100- and 500-year floodplain areas and other special flood hazard areas, similar to the Proposed Project.

The Land Exchange Alternative would result in reduced impacts to hydrology and water quality due to the reduced runoff volumes as a result of a reduced development footprint compared to the Proposed Project. Other impacts to hydrology and water quality would be similar to the Proposed Project. Therefore, overall impacts to hydrology and water quality would be reduced under the Land Exchange Alternative. The Land Exchange Alternative's impacts to hydrology and water quality would be less than significant. No mitigation would be required.

Land Use and Planning

As identified in Section 3.1.3, Land Use and Planning, implementation of the Proposed Project would not physically divide an established community or conflict with any applicable land use plan, policy, guideline, or regulation. Land use and planning impacts would be less than significant. No mitigation would be required.

Overall, the Land Exchange Alternative was designed to implement the goals and policies of the County of San Diego General Plan and the Otay Ranch GDP/SRP. Although the Land Exchange Alternative would require amendments to the County General Plan, Otay Ranch GDP/SRP, and Otay Ranch RMP, as well as a boundary adjustment to the MSCP County of San Diego Subarea Plan, the Land Exchange Alternative would ensure that no significant additional development would occur within the Land Exchange Area. Thus, the cumulative impacts and inducements to growth would be reduced compared to the Proposed Project.

There is no existing, established community surrounding the Land Exchange Area that would be physically divided by construction or operation of the Land Exchange Alternative. By providing a range of housing options and densities, the Land Exchange Alternative would serve as an extension of the mix of residential, park, and public service land uses present in the neighboring communities of Eastlake, Rolling Hills Ranch, and Otay Ranch in Chula Vista. Additional Otay Ranch RMP Preserve open space in the northern extent of the Land Exchange Area would serve as a transitional area between the Village Core in Village 14 and rural Jamul to the east. The

Land Exchange Alternative would not include a major roadway, physical barrier, infrastructure improvement, building, or structure that would physically divide an established community, similar to the Proposed Project. Further, the Land Exchange Alternative would avoid potential future conflicts because it would remove the potential for a future project to be implemented in and around the Land Exchange Area. Therefore, impacts associated with physical division of an established community would be similar to the Proposed Project.

The Land Exchange Alternative would include General Plan Amendments, including Land Use and Mobility Element Amendments associated with the proposed Specific Plan (Appendix 4.1-1A), rezone/reclassifications, and proposed amendments to the Otay Ranch GDP/SRP. The General Plan, Zoning Map, and Otay Ranch GDP/SRP are evaluated together because the analysis generally reflects the same plan change and modification of the development footprint, and the Otay Ranch GDP/SRP is a component of the County General Plan.

Similar to the Proposed Project, the Land Exchange Alternative would also include General Plan Amendments to update the adopted Otay Ranch GDP/SRP to reflect prior amendments made by the City of Chula Vista. The General Plan Amendments would implement the Land Exchange Alternative in a manner consistent with the County General Plan and Otay Ranch GDP/SRP, as explained in greater detail in the Land Exchange Alternative General Plan Amendment Report (Appendix 4.1-1J).

The MSCP County of San Diego Subarea Plan identifies a "hardline" Preserve/development boundary for Village 14 and Planning Areas 16/19. The Land Exchange Alternative would require an adjustment to that boundary to reflect the proposed Land Exchange Alternative Specific Plan development footprint and Preserve design. Figures 24–27 of Appendix 4.1-1J, Land Exchange Alternative General Plan Amendment Report, show the existing and proposed MSCP boundary relative to the Land Exchange Alternative. The proposed MSCP County Subarea Plan Boundary Adjustment would allow development within 43.6 acres of previously designated MSCP Preserve. In addition, under the boundary adjustment, 268.5 acres currently designated for development would be designated as MSCP Preserve. A detailed analysis of the Land Exchange Alternative's MSCP Preserve configuration is provided within the Land Exchange Alternative Biological Resources Technical Report, Appendix 4.1-4 to this EIR. With the proposed MSCP County Subarea Plan Boundary Adjustment, the Land Exchange Alternative would be consistent with the MSCP County Subarea Plan.

The Land Exchange Alternative proposes to adjust the Otay Ranch RMP Preserve Boundary to reflect the proposed Land Exchange Alternative Specific Plan Development Area. The Land Exchange Alternative would permanently impact approximately 602 acres (excluding temporary impacts to slopes, which would be revegetated, and infrastructure uses permitted within the Otay Ranch RMP Preserve). Of this amount, common uses would include 13.1 acres of public parks,

the 8.3-acre elementary school site, 26.6 acres of major circulation, and the 2.3-acre public safety site. Thus, the overall number of developable acres subject to the Otay Ranch RMP Preserve conveyance ratio of 1.188 acres of Preserve land for every 1 acre of development is 550.1 acres. Therefore, the 550.1 acres of "developable land" within the Land Exchange Area is subject to a conveyance obligation of 654.5 acres. Conveyance of the required amount of Otay Ranch RMP Preserve Lands would be achieved through compliance with the Otay Ranch RMP conveyance process. The Land Exchange Alternative would be consistent with the Otay Ranch RMP conveyance requirement. After implementing the proposed land exchange and boundary adjustment, the Land Exchange Alternative would be designating approximately 743 acres to the Otay Ranch RMP Preserve. The Land Exchange Alternative would be consistent with the requirements of the Otay Ranch RMP.

Because the Land Exchange Alternative proposes less development than is otherwise contemplated by the County General Plan and Otay Ranch GDP/SRP, it is not consistent with those plans. For this reason, the Land Exchange Alternative would amend these plans to reflect the amount of development and Preserve being proposed, including additional Preserve in Planning Areas 16/19. These amendments would eliminate the inconsistencies between the Land Exchange Alternative and the applicable planning documents, rendering the impact less than significant.

The Land Use Exchange Alternative would result in similar planning and land use impacts compared to the Proposed Project. With the proposed County General Plan Amendment, Otay Ranch GDP/SRP Amendment, Otay Ranch RMP Amendment, and MSCP County Subarea Plan Boundary Adjustment, planning and land use impacts would be less than significant. No mitigation would be required.

Mineral Resources

Section 3.1.4, Mineral Resources, indicates that the Proposed Project would impact Quaternary alluvium, which is not considered a high-quality (PCC grade) aggregate source, and MRZ-3 areas in Planning Area 16, which consist of weathered metavolcanic materials and are not considered a quality PCC aggregate source in practice. Impacts to mineral resources under the Proposed Project would be less than significant. No mitigation would be required.

A Mineral Resources Report was prepared for the Land Exchange Alternative (Appendix 4.1-13). The Land Exchange Alternative would restrict development to Village 14 and, with the exception of approximately 65 acres of land privately owned in Planning Area 16, would preserve the majority of Planning Areas 16/19. The Land Exchange Area is not within a Resource Conservation Area delineated in the County General Plan or other land use plan (County of San Diego 2011). The Land Exchange Area is underlain by Quaternary alluvium, a soil deposit type with a high likelihood for mineral deposits. However, by restricting

development to Village 14, the Land Exchange Area avoids the MRZ-3 classified area in Planning Area 16, which the County of San Diego Mineral Resources Zone identifies as an area where significant mineral deposits are present or where there is a high likelihood for their presence. Overall, because the development footprint would be reduced, impacts related to the potentially significant loss of availability of a known mineral resource of value to the region and residents of the state as a result of the Land Exchange Alternative would be reduced compared to the Proposed Project. Impacts to mineral resources under the Land Exchange Alterative would be less than significant. No mitigation would be required.

Population and Housing

As identified in Section 3.1.5, Population and Housing, implementation of the Proposed Project would be consistent with the growth planned for the area and analyzed in the previously certified Otay Ranch PEIR. Impacts related to substantial population growth, displacement of existing housing, and displacement of people would be less than significant. No mitigation would be required.

The Land Exchange Alternative would result in an increase in residential units and intensity of development compared to the Proposed Project. The number of residential units would increase from 1,119 to 1,530 units. As a result, this Land Exchange Alternative would increase the population within the Project Area. However, implementation of the Land Exchange Alternative would be consistent with the growth planned for the area and analyzed in the previously certified Otay Ranch PEIR, and would not facilitate growth beyond what is planned for in applicable regional planning documents and projections. Facilities would be sized to accommodate the Land Exchange Alternative land uses, but would not be "oversized" for future projects or to provide additional capacity. Because the Land Exchange Alternative would reduce the number of homes originally planned for by the Otay Ranch GDP/SRP, the Land Exchange Alternative would not induce additional population growth or the extension of infrastructure beyond what was previously planned for by the County for the Land Exchange Area. Additionally, since Planning Areas 16/19 would be set aside for conservation purposes, facilities and services would be sized to only serve the development footprint within Village 14.

The Land Exchange Area is currently undeveloped and occupies predominately the same area as the Proposed Project, with the exception of Planning Areas 16/19. Similar to the Proposed Project, implementation of the Land Exchange Alternative would convert vacant land to homes, infrastructure, and associated amenities, and would not displace any existing housing or people, similar to the Proposed Project.

Overall, the Land Exchange Alternative would have similar impacts on population and housing compared to the Proposed Project because it would convert vacant land to homes, infrastructure, and associated amenities. In addition, the Land Exchange Alternative would not displace any

existing housing or people, and it would not exceed the anticipated growth in the Otay Ranch GDP/SRP or County General Plan for the Land Exchange Area.

Public Services

As identified in Section 3.1.6, Public Services, the Proposed Project was determined to avoid significant impacts to fire protection and emergency services, law enforcement, schools, and parks by a combination of payment of impact fees, dedication of land, and/or construction of facilities. Therefore, impacts to public services would be less than significant. No mitigation would be required.

The Land Exchange Alternative would result in an increase in residential units from 1,119 to 1,530 units compared to the Proposed Project. Due to the increase in units, a greater number of residents would reside in the Land Exchange Area, which would result in a greater demand for fire, emergency, law enforcement, school services, and libraries compared to the Proposed Project. The Land Exchange Alternative would increase the demand for these services, but impacts to these services would be similar to the Proposed Project because similar improvements would be required to provide the same level of service, and those impacts have been analyzed herein and throughout the reports in Appendix 4.1.

Under CEQA, the threshold for determining impacts to public services is whether a project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services. Thus, although the demand for public services would be greater compared to the Proposed Project, the impacts would remain less than significant under the Land Exchange Alternative because similar facilities would be required. No mitigation would be required.

Fire Protection Services

The Land Exchange Alternative falls under the County General Plan Safety Element 5-minute travel-time standard, whereas the Proposed Project falls under both the 5-minute and 10-minute travel-time standards. The Land Exchange Alternative would include a public safety site centrally located within the Village Core, similar to the Proposed Project, which would provide for acceptable response coverage across the Land Exchange Area within the 5-minute response standard. Response travel times would be reduced compared to the Proposed Project due to the consolidated development footprint and smaller lots sizes under the Land Exchange Alternative. In addition, the Land Exchange Alternative would provide more funding toward staffing and equipping a fire station of a size that

would be needed to serve the Land Exchange Alternative's projected call volume, due to the increased number of residential units compared to the Proposed Project.

Although implementation of the Land Exchange Alternative would increase the demand for fire and emergency services resulting from the conversion of vacant land to urban uses, construction of the proposed fire station on site would reduce the demand on existing fire and emergency facilities. In addition, the proposed on-site fire station would allow the Land Exchange Alternative to meet the 5-minute travel-time standard established by the County, and the consolidated development in Village 14 would result in reduced response times compared to the Proposed Project. The Land Exchange Alternative would adhere to all recommendations provided within the FPP for the Land Exchange Alternative (Appendix 4.1-1C). The Land Exchange Alternative would increase demand on fire and emergency services due the increase in residential units compared to the Proposed Project; however, travel times would be reduced due to the concentration of development within Village 14. Overall, impacts to fire protection would be similar under the Land Exchange Alternative compared to the Proposed Project. The Land Exchange Alternative's impacts to fire services would be less than significant. No mitigation would be required.

Law Enforcement

The Proposed Project would result in the need for 5.4 additional sworn law enforcement personnel and approximately 500 square feet for a substation within the public safety site. The Land Exchange Alternative would result in increased demand for law enforcement services compared to the Proposed Project because it would include additional residences and potentially affect response time thresholds. The Land Exchange Alternative would result in the need for six additional sworn law enforcement personnel. Similar to the Proposed Project, the Land Exchange Alternative would include a County Sheriff's storefront that would be in the Village Core on a 2.3-acre public safety site. In combination with construction of the Sheriff's station, the San Diego County Sheriff's Department would be able to adequately meet average response times as required by the Otay Ranch GDP/SRP. The Land Exchange Alternative's demand for law enforcement would be greater than the Proposed Project due to the increased number of units; however, the impacts would be less than significant with development of the on-site Sheriff's facility and increased staffing, similar to the Proposed Project. No mitigation would be required.

Public Schools

Under the Land Exchange Alternative, development would be focused in Village 14. It is expected that all students would attend either CVESD or SUHSD facilities. The Land Exchange Alternative would generate approximately 504 elementary school students, 143 middle school students, and 270 high school students. Thus, the Land Exchange Alternative would generate approximately 95 more elementary school students who would attend facilities in CVESD, and

23 more middle school and 42 more high school students who would attend facilities in SUHSD facilities. Similar to the Proposed Project, the Land Exchange Alternative would reserve an elementary school site in the middle of the Village Core. Construction of the on-site elementary school would be at the discretion of CVESD based on enrollment at other CVESD schools in the vicinity of the Land Exchange Area. Prior to construction of the on-site elementary school, students would attend other CVESD schools with capacity, similar to the Proposed Project. CVESD elementary schools that may be over capacity would require relocatable classrooms to temporarily house additional students generated by the Land Exchange Alternative until a new facility opens, similar to the Proposed Project.

Additional middle school and high school capacity is available at SUHSD schools to accommodate an increased student population under the Land Exchange Alternative. The Land Exchange Alternative's impacts to public schools would be similar to the Proposed Project because it would be served by the same schools and provide for an on-site elementary school, like the Proposed Project. Payment of additional school fees or implementation of a School Mitigation Agreement would ensure that impacts to public schools under the Land Exchange Alternative would be less than significant. No mitigation would be required.

Libraries

Based on the Otay Ranch Facility Implementation Plan requirement for 350 square feet (gross) of adequately equipped and staffed regional/area library facilities per 1,000 population (City of Chula Vista and County of San Diego 1993c), the Proposed Project would have a total library demand of 1,926 square feet. The Land Exchange Alternative would increase the total number of units. The library demand under the Land Exchange Alternative would be greater by approximately 700 square feet compared to the Proposed Project; however, the associated reduction in units in Planning Areas 16/19 would reduce cumulative demand for library facilities within Otay Ranch. Similar to the Proposed Project, this demand is anticipated to be accommodated by the future approximately 36,758-square-foot library that has been approved within the Civic Core of the Eastern Urban Center Sectional Planning Area Plan area. The planned library in the Civic Core of the Eastern Urban Center would provide sufficient library space for residents in accordance with existing Otay Ranch GDP/SRP standards, and would provide additional library facilities in the Eastern Urban Center Sectional Planning Area Plan area as envisioned in the Chula Vista Public Library Strategic Facilities Plan (Chula Vista Public Library 2011). The addition of 36,758 gross square feet of library space would accommodate the increased population resulting from development of the Land Exchange Alternative, and would maintain acceptable service ratios, similar to the Proposed Project.

Recreation

As identified in Section 3.1.7, Recreation, the Proposed Project would include 1,119 dwelling units, which, per the County's PLDO, requires 10.04 acres of parkland. The Proposed Project would construct 23.3 acres of parks and recreation facilities within the Project Area, 11.1 acres of which is eligible for credit under the County's PLDO. Therefore, sufficient parks and recreation facilities would be provided to accommodate future residents and visitors of the Proposed Project, and impacts would be less than significant. No mitigation would be required.

The Land Exchange Alternative would include 1,530 dwelling units, which, per the County's PLDO, requires 13.7 acres of parkland. The Land Exchange Alternative would involve construction of approximately 20.3 acres of public and private parks and recreation facilities within the Land Exchange Area (see Appendix 4.1-1A, Land Exchange Alternative Specific Plan), 14.1 acres of which are eligible for credit under the County's PLDO. Therefore, sufficient parks and recreation facilities would be provided to accommodate future residents and visitors of the Land Exchange Alternative, and no off-site facilities would be required. The Land Exchange Alternative would involve construction of 23 acres of parks and recreation facilities compared to 24.7 acres under the Proposed Project. Physical impacts from construction of recreational facilities would be reduced under the Land Exchange Alternative. The Land Exchange Alternative would provide the required parkland per the County's PLDO. Overall, the impacts would be similar to the Proposed Project. The Land Exchange Alternative's recreation impacts would be less than significant. No mitigation would be required.

Utilities

As identified in Section 3.1.8, Utilities and Service Systems, the Proposed Project would result in a less-than-significant impact to water supply, wastewater treatment facilities, storm drainage facilities, and solid waste facilities. Further, the Proposed Project would comply with all applicable laws and regulations associated with utilities and service systems. No mitigation would be required.

The Land Exchange Alternative would result in an increase in the number of residential units and intensity of development compared to the Proposed Project. The number of residential units would increase from 1,119 to 1,520 units. Due to the increase in dwelling units, a greater number of residents would reside in the development footprint and would use potable water supply, wastewater treatment facilities, and solid waste facilities at a greater level compared to the Proposed Project. As previously described under Hydrology and Water Quality, the Land Exchange Alternative would result in 50% less peak flow; thus, storm drainage facilities impacts would be reduced compared to the Proposed Project. Overall, the Land Exchange Alternative would result in greater demand to utilities and service systems due to increased service population compared to the Proposed Project; however, impacts would remain less than significant.

Water

The total estimated potable water demand for the Proposed Project is approximately 0.797 million gallons per day (mgd). Under the Land Exchange Alternative, the estimated total potable water demand is approximately 0.891 mgd, or about 0.094 mgd greater than the Proposed Project. Accordingly, the Land Exchange Alternative would result in greater demand for water supply than the Proposed Project. Nevertheless, with the expansion of existing Otay Water District (OWD) 980 Zone and 1296 Zone water systems, there is adequate water supply to meet the demands of the Land Exchange Alternative (see Appendix 4.1-15).

The Land Exchange Alternative would not require construction of any additional off-site water supply infrastructure beyond those analyzed and identified under the Proposed Project in this EIR, and would eliminate improvements to the 1460 Zone (see Appendix 4.1-15). The Land Exchange Alternative would include water supply infrastructure that would be adequate to provide water service to the development proposed under the Land Exchange Alternative. The Land Exchange Alternative would include installation of new transmission lines, a pump station, and a reservoir for potable water service.

Appendix 4.1-15 discusses the improvements necessary to provide water to Village 14. The sizing and timing of on-site and off-site water facilities for the Land Exchange Area would be identified in a Subarea Master Plan to be reviewed and approved by OWD. The Subarea Master Plan would be prepared for the Land Exchange Alternative by the project applicant and submitted to OWD for approval prior to approval of final engineering plans. The Subarea Master Plan would provide more detailed information on the Land Exchange Alternative, such as detailed design, phasing, pump station and reservoir capacity requirements, and extensive computer modeling to justify recommended water pipe sizes.

OWD approved a Water Supply Assessment and Verification Report for the Proposed Project (Appendix 3.1.8-4). The Proposed Project's Water Supply Assessment and Verification Report concluded that OWD would have sufficient water supply capacity in normal, single, and multiple-dry conditions, based on the 2015 Urban Water Management Plan.

OWD has not considered a similar Water Supply Assessment and Verification for the Land Exchange Alternative. Nonetheless, while the Land Exchange Alternative would result in additional demand for water supply compared to the Proposed Project, OWD has already analyzed the potential impacts of this additional demand in its Program EIR (OWD 2016) accompanying its 2015 Water Facilities Master Plan Update. The 2016 Program EIR and Master Plan are incorporated by reference and available for public review upon request to the County. The Program EIR assumed cumulative development of Otay Ranch Village 14 and Planning Areas 16/19 at unit counts consistent with the existing Otay Ranch GDP/SRP, which would accommodate the 1,530 units included in the Land

Exchange Alternative. The Land Exchange Alternative would include a General Plan Amendment and Otay Ranch GDP/SRP Amendment to reduce the number of units in Village 14 and Planning Areas 16/19 from 2,132 to 1,626, a reduction of approximately 506 homes compared to the approved Otay Ranch GDP/SRP for Village 14 and Planning Areas 16/19. In short, the Land Exchange Alternative is anticipated to be consistent with planning documents, and may result in less water usage than the cumulative projects assumed for the Project Area in the Program EIR for OWD's Water Facilities Master Plan Update.

Nonetheless, to ensure that the water supply impact of the Land Exchange Alternative would remain less than significant, the following mitigation measures would apply.

- M-UT-1 Prior to the issuance of building permits that allow construction of the Land Exchange Alternative, the project applicant of any subdivision map, or its designee, shall pay all applicable Otay Water District fees.
- M-UT-2 Prior to recordation of a final map for the Land Exchange Alternative, a "written verification" and supporting documents from the water supplier indicating the availability of a "sufficient water supply" as required by Section 66473.7 of the Subdivision Map Act (Senate Bill 221) shall be provided to the satisfaction of County of San Diego departments.

Although demand for water supply would increase under the Land Exchange Alternative, implementation of the above mitigation measures would ensure sufficient water supply exists to serve this alternative. In addition, fewer new water facilities would be required compared to the Proposed Project due to the reduced development footprint of the Land Exchange Alternative (including facilities to serve Planning Areas 16/19); thus, physical impacts related to water supply would be reduced compared to the Proposed Project.

Wastewater Treatment

The projected total average sewage flow of the Proposed Project is 275,536 gallons per day (or 0.275 mgd), and the projected peak flow of the Proposed Project is 580,000 gallons per day or 0.58 mgd. The Land Exchange Alternative would increase the projected total average sewage flow of the Proposed Project to 378,786 gallons per day (or 0.38 mgd), and the projected peak flow to 0.76 mgd. Accordingly, the Land Exchange Alternative would result in greater demand for wastewater service than the Proposed Project. As discussed below, however, there is sufficient sewerage capacity to accommodate the Proposed Project or the Land Exchange Alternative.

The Land Exchange Alternative Sewer Service Plan is provided as a separate facility plan, in accordance with the Otay Ranch GDP/SRP, and is included as Appendix 4.1-15. As determined in Appendix 4.1-15, sewer service to the Land Exchange Area would be provided by the San

Diego County Sanitation District in conjunction with a flow transportation agreement with the City of Chula Vista for service via the Salt Creek Interceptor, similar to the Proposed Project.

Similar to the Proposed Project, final design criteria and specifications for sewage facilities under the Land Exchange Alternative would comply with applicable County requirements and policies, and would be subject to review and approval by the Director of Public Works and appropriate regulatory agencies. In addition, the Land Exchange Alternative would be in compliance with all National Pollutant Discharge Elimination System discharge criteria and permitting requirements, similar to the Proposed Project. Therefore, development of the Land Exchange Alternative would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, similar to the Proposed Project.

Similar to the Proposed Project, flows from the Land Exchange Alternative are not expected to impact the capacity of the Salt Creek Interceptor because the capacity of the downstream portions of the Salt Creek Interceptor was increased during final design, and the development projections from upstream areas have decreased. In particular, the Salt Creek Interceptor was sized with capacity for Otay Ranch Villages 13, 14, and 15, and Planning Areas 16/19. Since preparation of the Salt Creek Basin Study, Village 15 has been purchased for conservation purposes and is no longer anticipated to be developed. Planning Area 17 along the eastern edge of Otay Ranch was always required to be developed with wells and septic systems due to a variety of distance, topography, siting and extension issues (see Appendix 4.1-15).

The San Diego County Sanitation District has sufficient capacity rights in the Metropolitan Sewerage System to serve the Land Exchange Alternative. A flow transportation agreement between the County of San Diego and the City of Chula Vista, plus the payment of impact fees for the use of the Salt Creek Interceptor, has been agreed to between the County of San Diego and City of Chula Vista to further ensure sufficient capacity and adequate service for the Land Exchange Alternative. Furthermore, construction of proposed facilities and the payment of sewage connection fees (outlined within the Public Facilities Finance Plan, Appendix 4.1-1E) in accordance with County ordinances would ensure compliance of the Land Exchange Alternative.

To convey flows from the Land Exchange Area to the Salt Creek Interceptor, similar improvements to those required for the Proposed Project would be required, such as an off-site permanent sewage lift station, force mains, and additional off-site improvements. These facilities, discussed in Appendix 4.1-15, would convey flows to the upstream end of the Salt Creek Interceptor within Rolling Hills Ranch (City of Chula Vista).

Overall, demand for wastewater treatment would increase under the Land Exchange Alternative; however, sufficient treatment capacity is available. Further, because of the consolidated development footprint of the Land Exchange Alternative, fewer wastewater facilities would be

required, including sewer mains and private sewer pumps in Planning Area 16, which are not required under the Land Exchange Alternative but are part of the Proposed Project. Overall, impacts to wastewater under the Land Exchange Alternative would be less than significant, similar to the Proposed Project.

Storm Drainage

As discussed in the discussion for hydrology impacts, the Proposed Project would increase the post-development 100-year peak flow by approximately 700 cubic feet per second, from 12,036 to 12,736 cubic feet per second. The Land Exchange Alternative would increase the post-development 100-year peak flow by approximately 336 cubic feet per second, to 12,372 cubic feet per second, or about 50% less than the Proposed Project.

The Land Exchange Alternative would include storm drain facilities that would be adequate to accommodate peak-flow increases in stormwater resulting from the increase in impervious surfaces and alterations to natural drainage courses as a result of the Land Exchange Alternative. Construction of the post-development storm drain systems throughout the Land Exchange Area to the proposed water quality basins and downstream culverts would result in storm drain infrastructure that is in compliance with County standards. This proposed drainage control infrastructure would also minimize the opportunity for downstream pollution. The basins and culverts would be designed of an adequate size to handle the necessary volumes, consistent with standards. Subject to installation of the storm drain system, the Land Exchange Alternative would consist of an adequate system for storm drain collection. Impacts would be less than significant, similar to the Proposed Project.

Solid Waste

The Proposed Project's estimated disposal is approximately 3.2 tons per day of solid waste. The Land Exchange Alternative would generate solid waste from residential, commercial, and public uses. The Land Exchange Alternative would increase the amount of solid waste generated in the area to approximately 4.5 tons per day, but based on the Otay Landfill's maximum permitted disposal rate of 5,830 tons per day (CalRecycle 2016), the Land Exchange Alternative's estimated solid waste generation would not cause the landfill to exceed its permitted capacity or require construction of a new landfill. However, this would represent an increase in solid waste compared to the Proposed Project. Impacts would remain less than significant, similar to the Proposed Project.

Energy

As identified in Section 3.1.9, Energy, the Proposed Project would not result in the wasteful or inefficient use of electricity, or conflict with an applicable plan, policy, or regulation adopted for

the purpose of reducing energy consumption, including the County of San Diego's General Plan policies; impacts would be less than significant.

An Energy Conservation Plan was prepared for the Land Exchange Alternative (Appendix 4.1-1D). Similar to the Proposed Project, the Land Exchange Alternative would not result in the wasteful or inefficient use of electricity, or conflict with an applicable plan, policy, or regulation. Since more residential units would be constructed under this alternative, there would be increased demand for energy compared to the Proposed Project. However, under CEQA, the threshold of impacts to energy are based on the inefficient or wasteful use of nonrenewable resources during construction and long-term operation, and compliance with adopted plans and policies. Because the Land Exchange Alternative would use the same construction techniques and result in similar long-term operational uses as the Proposed Project, impacts related to inefficient or wasteful use of nonrenewable resources during construction and long-term operation would be less than significant, similar to the Proposed Project. Further, the Land Exchange Alternative would be required to comply with applicable plans and policies. The Land Exchange Alternative General Plan Amendment Report (Appendix 4.1-1J) analyzed the Land Exchange Alternative's compliance with the applicable General Plan and Otay Ranch GDP/SRP policies, and determined that the Land Exchange Alternative would be consistent with energyrelated policies, similar to the Proposed Project. Although the Land Exchange Alternative would result in increased energy demand due to increased population, energy impacts would remain less than significant. No mitigation would be required.

4.8.3 Relation to Project Objectives

The Land Exchange Alternative would meet all of the Proposed Project objectives. Specifically, the Land Exchange Alternative would satisfy the Proposed Project's underlying purpose to create a planned community and biological Preserve sufficient in size and scale to realize both the applicant's vision and the vision of the existing entitlements for the Land Exchange Area, as set forth in the Otay Ranch GDP/SRP. The Land Exchange Alternative would be consistent with the vision, goals, and policies set forth in the County's General Plan and Otay Ranch GDP/SRP. The Land Exchange Alternative would convey land to the Otay Ranch RMP POM, and would enhance habitat conservation, manage resources, restore habitat, and enforce open space restrictions. The Land Exchange Alternative would also assist in meeting the regional housing needs identified in the County's General Plan (Objective 1), and implement the goals and visions of the Otay Ranch GDP/SRP (Objective 2).

Further, the Land Exchange Alternative would include a centrally located Village Core with a school site, fire station, and park (Objective 4), and would implement the same land use strategies and technologies as the Proposed Project to reduce GHG (Objective 7). The Land Exchange Alternative would minimize the width of Proctor Valley Road, consistent with the

County Mobility Element roadway network, and implement a series of roundabouts (Objective 9). Although the Land Exchange Alternative would not establish a buffer in Planning Areas 16/19 through implementing larger lots, it would improve the buffer to the existing community of Jamul by converting Planning Areas 16/19 into Otay Ranch RMP Preserve, thereby creating a wider setback from existing development while simultaneously widening a wildlife corridor in north Proctor Valley (Objectives 3, 5). Lastly, the Land Exchange Alternative includes a Public Facilities Financing Plan (Appendix 4.1-1E), which would ensure that the Land Exchange Alternative provides facilities to serve the community commensurate with demand in a fiscally responsible manner (Objective 8).

4.8.4 Feasibility

The feasibility of the Land Exchange Alternative is dependent on the State of California and its willingness to go forward with the proposed land exchange. As explained previously, due to the state ownership, a land exchange would be required as a condition precedent of the Land Exchange Alternative. Prior to the preparation of this EIR, the applicant was coordinating with the State of California Fish and Wildlife and USFWS on a land exchange, and had preliminary indications that this type of land exchange was possible. However, as of February 2018, the state has not agreed to the exchange; therefore, implementation of the Land Exchange Alternative cannot occur unless and until such an exchange is executed. The Land Exchange Alternative is physically feasible and, as described above and summarized below, would reduce several impacts compared to the Proposed Project while simultaneously and comprehensively planning the entirety of Village 14 and Planning Areas 16/19 of the Otay Ranch GDP/SRP.

4.8.5 Evaluation of Significant Impacts

The Land Exchange Alternative would not reduce the impacts of the Proposed Project associated with air quality or GHG emissions. When compared to the Proposed Project, the Land Exchange Alternative would reduce impacts in the following areas:

- Aesthetics
- Agricultural Resources
- Biological Resources
- Cultural Resources

- Geology and Soils
- Noise
- Transportation and Traffic
- Paleontological Resources

4.9 Otay Ranch PEIR Alternatives

As described in Section 4.3.1, the Otay Ranch PEIR certified by the County Board of Supervisors previously analyzed a range of alternatives, and ultimately approved Village 14 and

Planning Areas 16/19 in the same configuration and for the same level of density/intensity as with the Proposed Project (City of Chula Vista and County of San Diego 1993b). The County Board of Supervisors considered the alternatives discussed below for the Project Area in conjunction with its original approval of the Otay Ranch GDP/SRP and the Otay Ranch PEIR. The Otay Ranch PEIR alternatives described below are for the entire Proctor Valley Parcel of Otay Ranch, not just the portions of Village 14 and Planning Areas 16/19 that comprise the Proposed Project.¹

Phase I – Progress Plan Alternative (Otay Ranch PEIR)

Under the Phase I – Progress Plan Alternative analyzed in the Otay Ranch PEIR, a maximum of 3,434 residential dwelling units was anticipated on 980 acres, providing for a net density of 3.5 dwelling units per acre in the Proctor Valley Parcel. Of the 3,434 dwelling units, 660 were identified as multi-family units and 2,774 were identified as single-family units. Development under the Phase I Progress Plan Alternative ranged in density from low to medium, with low-medium densities in the central portion of the Project Area. No village center, schools, or parks were included in Proctor Valley for this alternative, although it was anticipated that a village center would occur off site on an adjacent property (see Figure 4-7a, Phase I – Progress Plan Alternative). A golf course was planned in the central portion of Proctor Valley, east of Proctor Valley Road. A conference center in the Jamul Mountains was anticipated to be linked with the golf course. Approximately 66 acres of medium-density residential development was proposed for central Proctor Valley, adjacent to the open space and wildlife corridor area. Residential areas were located exclusively to the east of Proctor Valley Road, from the central valley northward.

Phase II—Progress Plan Alternative (Otay Ranch PEIR)

Under the Phase II-Progress Plan Alternative analyzed in the Otay Ranch PEIR, a maximum of 4,398 dwelling units on 2,454 acres would be developed in Proctor Valley. Approximately 55% of the residential dwelling units were single-family detached homes, with the remaining 45% being multi-family units. Land uses in Proctor Valley under the Phase II-Progress Plan Alternative were generally confined to three geographically distinct areas arranged around the Jamul Mountains. These three areas included the resort center village, Central Proctor Valley Village, and North Proctor Valley. The Central Proctor Valley Village was located in a gently rolling valley, bounded by San Miguel Mountain on the west and the Jamul Mountains to the east. Residential densities varied from low to low-medium to medium, with one village center.

For comparative context, the Otay Ranch GDP/SRP for the entire Proctor Valley Parcel approved 4,189 dwelling units on 2,748.8 developable acres. The Otay Ranch PEIR did not specifically identify land uses and density by village in the alternatives analysis; rather, the analysis was performed across each of the three larger parcels (Otay Valley Parcel, Proctor Valley Parcel, and San Ysidro Mountains Parcel).

Approximately 1,712 homes were located in this 827-acre village. A golf course or equestrian complex was identified within this area. The 1,104-acre Planning Areas 16/19 area allowed for 398 residences. Lots were a minimum of 2 acres, with most areas featuring lots of 3-acre average. No villages were identified in this area (see Figure 4-7b, Otay Ranch PEIR Phase II Progress Plan Alternative).

Fourth Alternative (Otay Ranch PEIR)

Development under the Fourth Alternative analyzed in the Otay Ranch PEIR would have resulted in a maximum of 4,969 residential units on 1,777 acres of land. Approximately 50.7% of the housing was single-family detached units, with the remaining 49.3% being attached multifamily units. Most of the residential acreage was devoted to the low-density category, resulting in an average net density of 2.63 d dwelling units per acre. Clusters of higher-density residential development occurred in a village center, near the center of Proctor Valley and the northwestern property boundary. Larger residential lots (0.25 to 0.5 dwelling units per acre) were identified in the vicinity of Jamul (see Figure 4-7c, Otay Ranch PEIR Fourth Alternative).

Project Team Alternative (Otay Ranch PEIR)

Under the Project Team Alternative analyzed in the Otay Ranch PEIR, approximately 791 acres of land supported the development of a maximum of 1,444 residential dwelling units. Of the total 1,444 residential units, 45 were multi-family units and 1,399 were single-family units. This alternative proposed development of a village center along with an elementary school and commercial center.

Medium-density land uses were limited to the village core and represented approximately 8 acres. Medium- and low-medium-density residential areas surrounded the village center. Low-density residential uses occurred on the foothills of the Jamul Mountains.

The transition away from the village residential area included lower-density semi-rural detached single-family housing and sites on lots ranging in size from approximately one-third of an acre to 1 acre. The last transition incorporated the lowest densities, including rural properties ranging in size from 4 to 20 acres located on the fringes of Proctor Valley. Special Plan Areas were identified under the Project Team Alternative: Proctor Valley Resort, Proctor Valley Conference Center, and Village Center. The resort was planned for two locations along the northern shore of Lower Otay Reservoir, south of Otay Lakes Road. The resort contained a medium- to low-density golf course community, a tourist-oriented commercial center, and rural residential area. The conference center was situated in the Jamul Mountains below the ridgeline. The village center featured mixed residential, civic, and commercial uses (see Figure 4-7d, Otay Ranch PEIR Project Team Alternative).

Composite General Plans Alternative (Otay Ranch PEIR)

Development under the Composite General Plans Alternative analyzed in the Otay Ranch PEIR used the land use designations within the City of Chula Vista Eastern Territories Plan, the County of San Diego Otay and Jamul/Dulzura Subregional Plans, and the City of San Diego Otay Mesa Community Plan in effect at the time of the Otay Ranch PEIR (1993). Overall, build-out of this alternative would have involved a maximum of 1,998 dwelling units on 7,738 acres, resulting in an average net density of 0.8 dwelling units per acre. Approximately 80.6% of the homes were single-family, with the balance being multi-family residences. It was assumed that amendments to the County of San Diego and City of Chula Vista General Plans were not required for this alternative (see Figure 4-7e, Otay Ranch PEIR Composite General Plan Alternative).

Low Density Alternative (Otay Ranch PEIR)

The Low Density Alternative analyzed in the Otay Ranch PEIR would have resulted in 794 acres of residential development and allowed for a maximum of 596 dwelling units at an overall density of 0.8 dwelling units per acre. The Low Density Alternative spread low-density residential areas out evenly and provided low-density, rural, and semi-rural transitions from central Proctor Valley into the Jamul community area (see Figure 4-1f, Otay Ranch PEIR Low Density Alternative). A total of 602 single-family detached housing units were spread out in districts along Proctor Valley Road and were separated by areas of open space and greenbelts. Low-density residential areas followed the same rural residential pattern found along Proctor Valley Road in the central valley, and provided a transition of the lowest density into the Jamul community limits. Residential areas were not arranged in villages because the densities were too low to make this arrangement feasible. The Low Density Alternative proposed a small commercial area of approximately 6 acres situated adjacent to Proctor Valley Road in the valley center. A neighborhood park was also proposed adjacent to the commercial area. The Proctor Valley resort and conference center were identified as special plan areas for future planning studies. Two conference center locations were identified, a smaller one in a narrow drainage of the Jamul Mountains and a second on the property of the Ranch House. No school acreage was planned for Proctor Valley (see Figure 4-7f).

Environmental Alternative (Otay Ranch PEIR)

The Environmental Alternative was developed to minimize environmental impacts to steep slopes and sensitive biological and archaeological resources. The Environmental Alternative would have resulted in 573 acres of residential development and allowed for a maximum of 205 dwelling units. Approximately 73.4% of the homes were single-family detached units, and the remainder were anticipated to be multi-family attached units (see Figure 4-7g, Otay Ranch PEIR Environmental Alternative).

Otay Ranch PEIR Alternatives Analysis Conclusion

The Otay Ranch PEIR evaluated these seven alternatives on pages 4.2.2-1 through 4.9.15-1. By approving the Otay Ranch GDP/SRP, including the land uses, density, and configuration of Village 14 and Planning Areas 16/19, the County previously approved the Project Area for the type and amount of development proposed by the Proposed Project, while rejecting the other alternatives analyzed in the Otay Ranch PEIR. Because these alternatives have previously been considered, this EIR need not analyze them further.

4.10 Environmentally Superior Alternative

In accordance with CEQA, if the environmentally superior alternative is the No Project Alternative, the EIR must also identify an environmentally superior alternative among the other alternatives (Section 15126(e)(2)). Table 4-1 provides a summary comparison of the significant impacts attributable to each of the alternatives relative to the Proposed Project.

Based on the analysis presented in this chapter and summarized in Table 4-1, the Land Exchange Alternative is considered the environmentally superior alternative. As detailed above, the Land Exchange Alternative would implement all of the identified project objectives for the Proposed Project, would eliminate all development on both the Proposed Project applicant's property and the state's property in Planning Areas 16/19, and would consolidate all development within the boundaries of Village 14. The net result of the Land Exchange Alternative would be a contribution of more than 268 acres of land into the Otay Ranch RMP/MSCP Preserve that is otherwise approved for development under the Otay Ranch GDP/SRP. Moreover, by consolidating development into Village 14, the Land Exchange Alternative would significantly improve the overall Preserve design by eliminating approximately 13 linear miles of Preserve edge effects, and preserving large, interconnected blocks of habitat rather than the archipelago, hop-scotch pattern of Preserve and development currently created by the state's interspersed ownership within Village 14 and Planning Areas 16/19. Further, existing wildlife corridors would be preserved and widened with the elimination of development in Planning Areas 16/19. Compared to the existing Otay Ranch RMP/MSCP Preserve, the land exchange and boundary adjustment components of the Land Exchange Alternative also would result in a net increase of preserved coastal sage scrub; a net increase in preservation of MSCP covered plant species (San Diego goldenstar and Dunn's mariposa lily), special-status plant species (San Diego marsh elder and Munz's sage), suitable habitat for MSCP Covered Species (coastal California gnatcatcher, western bluebird, Southern California rufous-crowned sparrow, northern harrier, golden eagle, and other raptor species), suitable habitat for special-status wildlife species (San Diego black tailed jackrabbit, San Diegan tiger whiptail, loggerhead shrike, white tailed kite, and Nuttall's woodpecker); and the preservation of two additional pairs of California gnatcatchers.

In addition to the superior biological and Preserve design benefits of the Land Exchange Alternative, the Land Exchange Alternative's reduced development footprint generally would result in reduced impacts to aesthetics, agricultural resources, cultural resources, geology and soils, noise, transportation and traffic, and paleontological resources. Additionally, with regard to land use, the land exchange and resulting consolidation of development in Village 14 would enable the County and the applicant to recapture the heart of Village 14 (i.e., the Village Core) in the location where it was originally envisioned, planned for, and approved by the County in 1993 in the Otay Ranch GDP/SRP. Because the state currently owns the land located in the center of Village 14, which is approved as the Village Core in the Otay Ranch GDP/SRP, the Proposed Project designed Village 14 without including that acreage. Although the Proposed Project would retain and implement the approved elements of the Village 14 land plan consistent with the requirements of the Otay Ranch GDP/SRP, it would do so by physically planning "around" the state's property. The Land Exchange Alternative, on the other hand, would be able to directly implement a plan consistent with the original intent and land plan for the Village Core approved by the County in the Otay Ranch GDP/SRP.

From a land use and aesthetics perspective, the Land Exchange Alternative's elimination of approved development in Planning Areas 16/19 would result in a large, natural open space buffer between the existing rural community of Jamul and the more suburban Village 14. Per the language of the Otay Ranch GDP/SRP, Village 14 and Planning Areas 16/19 are intended to serve as a transitional community by providing larger lots in Planning Areas 16/19 adjacent to Jamul that are more characteristic of the existing development in Jamul. The Land Exchange Alternative would meet this same goal by eliminating development adjacent to Jamul rather than downsizing that development compared to Village 14. The result would be a consolidation of development in Village 14 that is geographically, and, for the most part, visually isolated from the community of Jamul. Anyone traveling to Jamul from Village 14 (or vice versa) would transition from the more traditional suburban densities and uses of Village 14 through more than 1 mile of managed natural preserve land before arriving at the rural community of Jamul.

Because the Land Exchange Alternative would result in additional units compared to the Proposed Project, there would be certain population-based impacts that would be greater. At the project level, air quality and GHG emissions would increase. However, due to adoption of the County General Plan Amendment, Otay Ranch GDP/SRP Amendment, Otay Ranch RMP Amendment, and MSCP County Subarea Plan Boundary Adjustment that would eliminate development in Planning Areas 16/19, cumulative impacts to aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, GHG emissions, noise, transportation and traffic, paleontological resources, and tribal cultural resources would be reduced under the Land Exchange Alternative compared to the Proposed Project through the reduced cumulative residential unit count and developable acreage.

On balance, for the reasons described above, the Land Exchange Alternative is the environmentally superior alternative.

The record includes evidence that could support a conclusion that the Alternate Site Location Alternative is the environmentally superior alternative. Unlike the Land Exchange Alternative that would significantly reduce the development footprint but also increase the unit count, the Alternate Site Location Alternative would reduce both. However, on balance, numerous reasons support the determination that the Alternate Site Location Alternative is not the environmentally superior alternative (compared to the Land Exchange Alternative).

First, as noted in Section 4.6.4, the applicant neither owns nor controls all of the land needed to implement the Alternative Site Location Alternative, and has no reasonable means of acquiring it (see CEQA Guidelines Section 15126.6(f)(1)). Acquisition of the land would require successful negotiation with multiple parties having varying degrees of motivation or interest. The City of San Diego, for example, would need to relinquish title to MSCP Preserve Cornerstone Lands that were never anticipated for development by any entitlement documents. Although the City of San Diego must also relinquish title to some of its MSCP Preserve Cornerstone Lands for the Proctor Valley Road right-of-way in the Land Exchange Alternative, that action has been anticipated by the City of San Diego due to Proctor Valley Road being approved in the MSCP Plan as a planned facility through the Preserve.

Likewise, the City of Chula Vista, in its capacity as one of the joint powers of the Otay Ranch POM, would need to relinquish title to, and allow development of, Otay Ranch RMP Preserve land that was never approved for development. The County of San Diego, in its capacity as the other joint power in the Otay Ranch POM, would also have to relinquish title to, and approve the development of, Otay Ranch RMP Preserve land that was never approved for development. Additionally, the cooperation of unrelated third-party private property owners would be required, since they have already paid for and used portions of the Alternate Site Location Alternative as mitigation in satisfaction of their Otay Ranch Preserve conveyance requirement. Substitute mitigation land, therefore, would need to be identified for these property owners, approved by the POM and possibly the Wildlife Agencies, and then possibly acquired through negotiation from yet another property owner or owners. The number of parties involved, the intricacy of the negotiations, and, as a result, the unlikelihood of success, render this alternative infeasible.

By comparison, the Land Exchange Alternative, while also requiring the Proposed Project applicant to acquire property it does not currently own, is significantly more manageable in this regard, and, thus, is the environmentally superior alternative. The Land Exchange Alternative would require only that the Proposed Project applicant exchange identified lands with the California Department of Fish and Wildlife. Approval would only be needed from one party (i.e.,

California Department of Fish and Wildlife), with consent provided by USFWS. No other parties, properties, or negotiations would be involved.

In addition, much of the land included in the Alternate Site Location Alternative would have to be taken out of the RMP Preserve and converted to development. The environmental benefit of the Land Exchange Alternative, on the other hand, is that approximately 268 net acres of land currently approved for development would be converted from development and added to the RMP Preserve rather than taken from the Preserve as with the Alternate Site Location Alternative. In addition, even though the state is currently managing the proposed land exchange property as part of its Rancho Jamul Ecological Preserve, the majority of the exchange land (approximately 230 acres of the proposed 278-acre land exchange) is already approved for development under the Otay Ranch GDP/SRP. Thus, the land exchange, if implemented, would not generally remove land from the Preserve and convert it to development as would occur under the Alternate Site Location Alternative.

Also, because the Alternative Site Location Alternative proposes that development occur in areas not previously approved for development, the discretionary approvals would require a General Plan Amendment to allow development where previously precluded, an Otay Ranch GDP/SRP Amendment, an Otay Ranch RMP Amendment, an MSCP County of San Diego Subarea Plan Boundary Adjustment, and a City of San Diego MSCP Boundary Adjustment for impacts to Cornerstone Lands. It is unlikely that all such amendments could be obtained, especially since the Alternate Site Location Alternative would effectively require that higher-quality habitat currently in Preserve be redesignated for development, and that lower-quality habitat be moved out of development and into Preserve.

For the above reasons, after weighing competing considerations, the Alternative Site Location Alternative is not considered the environmentally superior alternative when compared to the Land Exchange Alternative.

4 Project Alternatives

Table 4-1 Comparison of Proposed Project's Significant Impacts to Alternatives

Environmental Impacts	Proposed Project	No Project	Low Density Alternative	Alternate Site Location Alternative	GDP/SRP Proctor Valley Road Alternative	Land Exchange Alternative
Aesthetics	Significant And Unavoidable Project- level and Cumulative Impacts	Less than Proposed Project; No Impact	Less than Proposed Project; remains significant and unavoidable	Less than Proposed Project; remains significant and unavoidable	Greater than Proposed Project; significant and unavoidable	Reduced Project-level and Cumulative Impact, Less than Proposed Project; remains significant and unavoidable
Agriculture and Forestry Resources	Significant And Unavoidable Project- level and Cumulative Impacts	Less than Proposed Project; No Impact	Similar to Proposed Project; remains significant and unavoidable	Less than Proposed Project; remains significant and unavoidable	Greater than Proposed Project; remains significant and unavoidable	Reduced Project-level and Cumulative Impact, Less than Proposed Project; remains significant and unavoidable
Air Quality	Significant And Unavoidable Project- level and Cumulative Impacts	Less than Proposed Project; No Impact	Less than Proposed Project; remains significant and unavoidable	Less than Proposed Project; remains significant and unavoidable	Greater than Proposed Project; remains significant and unavoidable	Greater Project-level Impacts, than Proposed Project; Reduced Cumulative Impacts; remains significant and unavoidable
Biological Resources	Less than Significant with Mitigation	Less than Proposed Project; No Impact	Similar to Proposed Project; remains significant but mitigable	Similar to Proposed Project; remains significant but mitigable	Greater than Proposed Project; remains significant but mitigable	Reduced Project-level and Cumulative Impact, Less than Proposed Project; remains significant but mitigable
Cultural Resources	Less than Significant with Mitigation	Less than Proposed Project; No Impact	Similar to Proposed Project; remains significant but mitigable	Similar to Proposed Project; remains significant but mitigable	Greater than Proposed Project; remains significant but mitigable	Reduced Project-level and Cumulative Impact, Less than Proposed Project; remains significant but mitigable

Project Alternatives

Table 4-1 **Comparison of Proposed Project's Significant Impacts to Alternatives**

Environmental Impacts	Proposed Project	No Project	Low Density Alternative	Alternate Site Location Alternative	GDP/SRP Proctor Valley Road Alternative	Land Exchange Alternative
Geology and Soils	Less than Significant with Mitigation	Less than Proposed Project; No Impact	Less than Proposed Project; remains significant but mitigable	Less than Proposed Project; remains significant but mitigable	Greater than Proposed Project; remains significant but mitigable	Reduced Project-level and Cumulative Impact, Less than Proposed Project; remains significant but mitigable
Greenhouse Gas Emissions	Less than Significant with Mitigation	Less than Proposed Project; No Impact	Less than Proposed Project; remains significant but mitigable	Less than Proposed Project; remains significant but mitigable	Greater than Proposed Project; remains significant but mitigable	Greater than Proposed Project; remains significant but mitigable
Noise	Significant And Unavoidable Project- level and Cumulative Impacts	Less than Proposed Project; No Impact	Less than Proposed Project; remains significant but mitigable	Less than Proposed Project; remains significant but mitigable	Greater than Proposed Project; remains significant but mitigable	Less than Proposed Project; Cumulative Impact remains significant and unavoidable, Project- level Impacts significant but mitigable
Transportation and Traffic	Significant And Unavoidable Project- level and Cumulative Impacts	Less than Proposed Project; No Impact	Less than Proposed Project; remains significant and unavoidable			
Paleontological Resources	Less than Significant with Mitigation	Less than Proposed Project; No Impact	Similar to Proposed Project; remains significant but mitigable	Similar to Proposed Project; remains significant but mitigable	Greater than Proposed Project; remains significant but mitigable	Reduced Project-level and Cumulative Impact, Less than Proposed Project; remains significant but mitigable

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Table 4-1 Comparison of Proposed Project's Significant Impacts to Alternatives

Environmental Impacts	Proposed Project	No Project	Low Density Alternative	Alternate Site Location Alternative	GDP/SRP Proctor Valley Road Alternative	Land Exchange Alternative
Tribal Cultural Resources	Less than Significant with Mitigation	Less than Proposed Project; No Impact	Similar to Proposed Project; remains significant but mitigable	Similar to Proposed Project; remains significant but mitigable	Potentially Greater than Proposed Project; remains significant but mitigable	Reduced Project-level and Cumulative Impact, Similar to Proposed Project; remains significant but mitigable

Table 4-2
Estimated Average Daily Trips for Proposed Project vs. Low Density Alternative

	Proposed Project			Low Density Alternative		
Land Use	Units/Acres	Trip Rate	Daily Trips	Units/Acres	Trip Rate	Daily Trips
Estate	125 DU	12/DU	1,500	257	12/DU	3,084
Single Family Detached	994 DU	10/DU	9,940	-	10/DU	-
Neighborhood/ Community Park	15.2 AC	5/AC	76	2.3	5/AC	12
Community Facility	4.5 AC	30/AC	135	-	30/AC	-
Fire Station/Sheriff's Facility	3 Staff	5.33/Staff	16	-	5.33/Staff	-
Mixed Use Commercial/ Residential	10 KSF	110/KSF	1,100	-	110/KSF	-
TOTAL	-	-	12,767	-	-	3,096

Table 4-3
Estimated Average Daily Trips for
Proposed Project vs. Alternate Site Location Alternative

	Proposed Project			Alternate Site Location Alternative			
Land Use	Units/Acres	Trip Rate	Daily Trips	Units/Acres	Trip Rate	Daily Trips	
Estate	125 DU	12/DU	1,500	-	12/DU	-	
Single Family Detached	994 DU	10/DU	9,940	468-	10/DU	4,680	
Multi-Family			-		8/DU		
Neighborhood/Community Park	15.2 AC	5/AC	76	4.3	5/AC	22	
Community Facility	4.5 AC	30/AC	135	-	30/AC	-	
Fire Station/Sheriff's Facility	3 Staff	5.33/Staff	16	-	5.33/Staff	-	
Mixed Use Commercial/Residential	10 KSF	110/KSF	1,100	-	110/KSF	-	
TOTAL	-	-	12,767	-	-	4,702	

Table 4-4
Estimated Average Daily Trips for Proposed Project vs.
GDP/SRP Proctor Valley Road Alternative

	Proposed Project			GDP/SRP Proctor Valley Road Alternative		
Land Use	Units/Acres	Trip Rate	Daily Trips	Units/Acres	Trip Rate	Daily Trips
Estate	125 DU	12/DU	1,500	125 DU	12/DU	1,500
Single Family Detached	994 DU	10/DU	9,940	980 DU	10/DU	9,800

Table 4-4
Estimated Average Daily Trips for Proposed Project vs.
GDP/SRP Proctor Valley Road Alternative

	Proposed Project			GDP/SRP Proctor Valley Road Alternative			
Land Use	Units/Acres	Trip Rate	Daily Trips	Units/Acres	Trip Rate	Daily Trips	
Multi-Family			-			-	
Neighborhood/Community Park	15.2 AC	5/AC	76	15.2 AC	5/AC	76	
Community Facility	4.5 AC	30/AC	135	4.5 AC	30/AC	135	
Fire Station/Sheriff's Facility	3 Staff	5.33/Staff	16	3 Staff	5.33/Staff	16	
Mixed Use Commercial/Residential	10 KSF	110/KSF	1,100	10 KSF	110/KSF	1,100	
TOTAL	_	_	12,767	_	_	12,627	

Table 4-5
Estimated Average Daily Trips for Proposed Project vs. Land Exchange Alternative

	Proposed Project			Land Exchange Location Alternative			
Land Use	Units/Acres	Trip Rate	Daily Trips	Units/Acres	Trip Rate	Daily Trips	
Estate	125 DU	12/DU	1,500	-	12/DU	-	
Single Family Detached	994 DU	10/DU	9,940	1,124 DU	10/DU	11,240	
Mixed Use Commercial/ Residential				54 DU	5/DU	270	
Multi-Family			-	69 DU	8/DU	552	
Retirement Community				283 DU	4/DU	1,132	
Neighborhood/Community Park	15.2 AC	5/AC	76	13.5 AC	5/AC	67	
Community Facility	4.5 AC	30/AC	135	5.6 AC	30/AC	168	
Elementary School				8 Acre	90/AC	720	
Fire Station/Sheriff's Facility	3 Staff	5.33/Staff	16	3 Staff	5.33/Staff	16	
Mixed Use Commercial/Residential	10 KSF	110/KSF	1,100	15 KSF-	110/KSF	1,650	
TOTAL	-	-	12,767	-	•	15,815	

Table 4-6A
Land Exchange Alternative
Combined Estimated Maximum Daily Construction Emissions – Unmitigated

	VOC	NOx	CO	SO _x	PM ₁₀	PM _{2.5}
Activity			pounds	s per day		
		20	19			
Construction Activities ¹	20.09	227.00	137.58	0.25	140.55	33.64
Blasting ²	_	140.25	552.75	16.50	0.35	0.02
Rock Crushing ²	4.91	94.75	28.79	0.13	31.12	5.82
Maximum Daily Emissions	25.00	462.00	719.12	16.88	172.02	39.48
		20	20			
Construction Activities ¹	72.55	207.52	154.59	0.30	137.68	38.71
Blasting ²	_	140.25	552.75	16.50	0.35	0.02
Rock Crushing ²	2.45	47.37	14.4	0.07	15.56	2.92
Maximum Daily Emissions	75.00	395.14	721.74	16.87	153.59	41.65
		20	21			
Construction Activities ¹	82.12	207.10	165.11	0.31	101.48	25.60
Blasting ²	_	140.25	552.75	16.50	0.35	0.02
Rock Crushing ²	7.36	142.12	43.19	0.2	46.68	8.74
Maximum Daily Emissions	89.48	489.47	761.05	17.01	148.51	34.36
		20	22			
Construction Activities ¹	199.19	228.47	199.26	0.40	205.59	38.78
Blasting ²	_	140.25	552.75	16.50	0.35	0.02
Rock Crushing ²	2.45	47.37	14.4	0.07	15.56	2.92
Maximum Daily Emissions	201.64	416.09	766.41	16.97	221.5	41.72
		20	23			
Construction Activities ¹	102.65	201.12	192.62	0.39	65.59	21.51
		20	24			
Construction Activities ¹	84.04	54.35	68.16	0.13	22.99	4.41
		20	25			
Construction Activities ¹	86.08	32.98	42.89	0.09	13.90	2.60
		20	26			
Construction Activities ¹	3.24	5.40	7.56	0.01	1.98	0.50
		Maximum Da	•		_	
Maximum Daily Emissions During Any Construction Year	201.64	489.47	766.41	17.01	221.5	41.72
Pollutant Threshold	75	250	550	250	100	55
Threshold Exceeded?	Yes	Yes	Yes	No	Yes	No

Notes:

VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.

See Appendices A and B to Appendix 4.1-3.

Estimated emissions include implementation of REG-AQ-1, REG-AQ-3, PDF-AQ/GHG-1, and PDF-AQ/GHG-2.

- Emissions represent maximum daily construction activities from overlapping construction phases at any one point for a given year.
- Appendix B of Appendix 4.1-3.

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Table 4-6B
Land Exchange Alternative
Estimated Maximum Daily Construction Emissions – Mitigated

	VOC	NOx	CO	SO _x	PM ₁₀	PM _{2.5}
Activity			Pounds	per Day		
		2	2019			
Construction Activities ^a	8.09	119.01	150.37	0.25	133.08	26.80
Blasting (Phase 1)b	_	140.25	552.75	16.5	0.35	0.02
Rock Crushing (Phase 1)b	1.13	55.43	67.87	0.13	29.54	4.25
Maximum Daily Emissions	13.00	314.69	770.99	16.88	162.97	31.94
		2	2020			
Construction Activities ^a	63.15	146.44	180.20	0.30	132.49	33.91
Blasting (Phase 1)b	_	140.25	552.75	16.5	0.35	0.02
Rock Crushing (Phase 1)b	0.56	27.71	33.93	0.07	14.77	2.12
Maximum Daily Emissions	65.60	314.40	766.88	16.87	147.61	36.49
		2	2021			
Construction Activities ^a	68.44	113.58	185.58	0.31	93.48	18.20
Blasting (Phase 2)b	_	140.25	552.75	16.50	0.35	0.02
Rock Crushing (Phase 2)b	1.69	83.14	101.80	0.20	44.32	6.37
Maximum Daily Emissions	75.80	336.97	840.13	17.01	138.15	25.90
			2022			
Construction Activities ^a	189.16	140.38	231.28	0.40	197.61	31.16
Blasting (Phase 2)b	_	140.25	552.75	16.5	0.35	0.02
Rock Crushing (Phase 2)b	0.56	27.71	33.93	0.07	14.77	2.12
Maximum Daily Emissions	191.61	308.34	817.96	16.97	212.73	33.74
			2023			
Construction Activities ^a	91.40	137.31	235.47	0.39	58.31	14.69
			2024			
Construction Activities ^a	80.52	47.55	76.71	0.13	21.13	2.67
			2025			
Construction Activities ^a	84.38	30.96	48.51	0.09	13.10	1.85
			2026			
Construction Activities ^a	3.24	5.40	7.56	0.01	1.98	0.50
Maximum Daily Emissions During Any Construction Year	191.61	336.97	840.13	17.01	212.73	36.49
Pollutant Threshold	75	250	550	250	100	55
Threshold Exceeded?	Yes	Yes	Yes	No	Yes	No

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.

See Appendix A of Appendix 4.1-3.

Estimated emissions include compliance with all regulations, PDF-AQ-1, and PDF-AQ-2, and implementation of M-AQ-1.

¹ Emissions represent maximum daily construction activities from overlapping construction phases at any one point for a given year.

Appendix B of Appendix 4.1-3.

Table 4-7
Land Exchange Alternative Estimated Maximum Daily Operational Emissions

	VOC	NOx	СО	SOx	PM ₁₀	PM _{2.5}
Emission Source			pounds	per day		
		Su	mmer			
Area	121.08	1.45	126.14	0.01	0.70	0.70
Energy	1.01	8.68	3.75	0.06	0.70	0.70
Mobile	23.24	91.31	296.17	1.22	130.56	35.43
Total	145.33	101.44	426.06	1.28	131.96	36.83
		И	/inter			
Area	121.08	1.45	126.14	0.01	0.70	0.70
Energy	1.01	8.68	3.75	0.06	0.70	0.70
Mobile	22.48	93.82	286.23	1.16	130.56	35.43
Total	144.57	103.96	416.13	1.22	131.96	36.83
		Maximum D	aily Emissions			
Maximum Daily Emissions	145.33	103.96	426.06	1.28	131.96	36.83
Pollutant Threshold	75	250	550	250	100	55
Threshold Exceeded?	Yes	No	No	No	Yes	No

Notes:

VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.

Table 4-8A
Land Exchange Alternative
Construction Cancer Risk Assessment Results – Unmitigated Emissions

Impact Parameter	Units	Land Exchange Alternative Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk—On-Site Residential	Per Million	1.0	10	Less than Significant
Maximum Individual Cancer Risk—Off-Site Residential	Per Million	0.1	10	Less than Significant

Source: See Appendix D of Appendix 4.1-3 for complete results.

The estimated cancer risk (unmitigated emissions) assumes the following annual diesel exhaust PM emissions:

On-Site Residential: 121.6 pounds per year diesel exhaust PM Off-Site Residential: 121.6 pounds per year diesel exhaust PM

Table 4-8B Land Exchange Alternative Construction Cancer Risk Assessment Results – Mitigated Emissions

Impact Parameter	Units	Land Exchange Alternative Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk—On-Site Residential	Per Million	0.2	10	Less than Significant
Maximum Individual Cancer Risk—Off-Site Residential	Per Million	0.02	10	Less than Significant

Source: See Appendix D of Appendix 4.1-3 for complete results.

The estimated cancer risk (mitigated emissions) assumes the following annual diesel exhaust PM emissions:

On-Site Residential: 24.0 pounds per year diesel exhaust PM Off-Site Residential: 24.0 pounds per year diesel exhaust PM

Table 4-9A

Land Exchange Alternative

Construction Chronic Hazard Index Assessment Results – Unmitigated Emissions

Impact Parameter	Units	Land Exchange Alternative Impact	CEQA Threshold	Level of Significance
Chronic Hazard Index—On-Site Residential	Index Value	0.0005	1.0	Less than Significant
Chronic Hazard Index—Off-Site Residential	Index Value	0.00006	1.0	Less than Significant

Source: See Appendix D of Appendix 4.1-3 for complete results.

The estimated chronic hazard index (unmitigated emissions) assumes the following annual diesel exhaust PM emissions:

On-Site Residential: 121.6 pounds per year diesel exhaust PM Off-Site Residential: 121.6 pounds per year diesel exhaust PM

Table 4-9B
Land Exchange Alternative
Construction Chronic Hazard Index Results – Mitigated Emissions

Impact Parameter	Units	Land Exchange Alternative Impact	CEQA Threshold	Level of Significance
Chronic Hazard Index—On-Site Residential	Index Value	0.00009	1.0	Less than Significant
Chronic Hazard Index—Off-Site Residential	Index Value	0.00001	1.0	Less than Significant

Source: See Appendix D of Appendix 4.1-3 for complete results.

The estimated chronic hazard index risk (mitigated emissions) assumes the following annual diesel exhaust PM emissions:

On-Site Residential: 24.0 pounds per year diesel exhaust PM Off-Site Residential: 24.0 pounds per year diesel exhaust PM

Table 4-10
Land Exchange Alternative
CALINE4 Predicted Carbon Monoxide Concentrations

	Maximum Modeled Impact for Year 2040 Cumulative Plus Project (ppm)				
Intersection	1-hour	8-hour ^a			
SR-94 & Lyons Valley Rd (AM peak hour)	2.3	1.6			
Agua Vista Drive / Northwoods Drive & Proctor Valley Road (PM peak hour)	2.3	1.6			

Source: Caltrans 1998a (CALINE4).

Notes:

CO = carbon monoxide; ppm = parts per million.

See Appendix C of Appendix 4.1-3.

Table 4-11 Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities, and Jurisdictional Areas

Section of Report Where Analysis Is Described	lmpact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
candidate, s	ensitive, or spec		ocal or regiona	ither directly or through habitat al plans, policies, or regulations		
6.2.1	Preventative Measure	Potential habitat for San Diego Fairy Shrimp	None	M-BI-7 (San Diego fairy shrimp take authorization)	Less than significant	4.1.A
6.2.1 6.2.2.2	W-1	Habitat for Special- Status Wildlife Species	Temporary Direct	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing) M-BI-5 (nesting bird survey) M-BI-11 (restoration of temporary impacts) M-BI-18 (noise)	Less than significant	4.1.A 4.1.B
6.2.1 6.2.2.2 6.2.3.2 6.2.6 6.2.12	W-2	Habitat for Special- Status Wildlife Species	Permanent Direct	M-BI-1 (biological monitoring) M-BI-3 (habitat conveyance and preservation) M-BI-4 (permanent fencing and signage) M-BI-5 (nesting bird	Less than significant	4.1.A 4.1.B

⁸⁻hour concentrations were obtained by multiplying the 1-hour concentration by a persistence factor of 0.7 (Caltrans 2010).

Table 4-11 Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities, and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
				survey) M-BI-12 (preconstruction bat survey) M-BI-13 (burrowing owl preconstruction survey)		
6.2.5	W-3	Golden Eagle	Permanent Direct	M-BI-3 (habitat conveyance and preservation) M-BI-4 (permanent fencing and signage)	Less than significant	4.1.E
6.2.1	W-4	Quino Checkerspot Butterfly Suitable Habitat	Permanent Direct	M-BI-3 (habitat conveyance and preservation) M-BI-4 (permanent fencing and signage) M-BI-7 (Quino checkerspot butterfly take authorization) M-BI-8 (Quino checkerspot butterfly habitat preservation) M-BI-9 (Quino checkerspot butterfly management/enhancement plan)	Less than significant	4.1.A
6.2.1 6.2.2.2	W-5	Direct Loss of Birds under the MBTA	Permanent Direct	M-BI-1 (biological monitoring) M-BI-5 (nesting bird survey)	Less than significant	4.1.A 4.1.B
6.2.1	W-6	Hermes Copper Butterfly	Permanent Direct	M-BI-3 (habitat conveyance and preservation) M-BI-4 (permanent fencing and signage)	Less than significant	4.1.A
6.2.8.2 6.2.12	W-7	Special-Status Wildlife Species	Temporary Indirect	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing) M-BI-14 (SWPPP) M-BI-15 (erosion and runoff control)	Less than significant	4.1.H 4.1.L

Table 4-11 Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities, and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
			7.	M-BI-16 (prevention of invasive plant species) M-BI-17 (prevention of chemical pollutants) M-BI-18 (noise)		
6.2.8.2	W-8	Special-Status Wildlife Species	Permanent Indirect	M-BI-4 (permanent fencing and signage) M-BI-14 (SWPPP) M-BI-15 (erosion and runoff control) M-BI-16 (prevention of invasive plant species) M-BI-18 (noise) M-BI-19 (fire protection) M-BI-20 (lighting)	Less than significant	4.1.H
6.2.2.1	SP-1	Special-Status Plant Species (County List A and B Species)	Temporary Direct	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing)	Less than significant	4.1.B
6.2.2.1	SP-2	Special-Status Plant Species (County List A and B Species)	Permanent Direct	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing) M-BI-3 (habitat conveyance and preservation) M-BI-10 (biological resource salvage plan)	Less than significant	4.1.B
6.2.8.1	SP-3	Special-Status Plant Species	Temporary Indirect	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing) M-BI-14 (SWPPP) M-BI-15 (erosion and runoff control) M-BI-17 (prevention of chemical pollutants)	Less than significant	4.1.H
6.2.8.1	SP-4	Special-Status Plant Species	Permanent Indirect	M-BI-4 (permanent fencing and signage M-BI-14 (SWPPP)	Less than significant	4.1.H

Table 4-11 Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities, and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
Guideline	42. The project	t would have a substantial a	adverse effect	M-BI-15 (erosion and runoff control) M-BI-16 (prevention of invasive plant species) M-BI-17 (prevention of chemical pollutants) M-BI-19 (fire protection) on riparian habitat or another signature.	ensitive natural c	ommunitv
				nia Department of Fish and Ga		
7.2.1	V-1	Sensitive Vegetation Communities – Off-Site Areas Only	Temporary Direct	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing) M-BI-11 (restoration of temporary impacts) M-BI-21 (federal and state agency permits	Less than significant	4.2.A
7.2.1	V-2	Sensitive Vegetation Communities - On-Site	Permanent Direct	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing) M-BI-3 (habitat conveyance and preservation) M-BI-4 (permanent fencing and signage) M-BI-21 (federal and state agency permits)	Less than significant	4.2.A
7.2.1	V-3	City of San Diego MSCP Cornerstone Lands	Temporary and Permanent Direct	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing) M-BI-11 (restoration of temporary impacts) M-BI-21 (federal and state agency permits	Less than significant	4.2.A
7.2.1	V-4	Lands Within City of Chula Vista	Temporary and Permanent	M-BI-1 (biological monitoring) M-BI-2 (temporary	Less than significant	4.2.A

Table 4-11 Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities, and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
			Direct	construction fencing) M-BI-11 (restoration of temporary impacts) M-BI-21 (federal and state agency permits)		
7.2.1	V-5	Off-Site Otay Ranch Lands	Temporary and Permanent Direct	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing) M-BI-11 (restoration of temporary impacts)	Less than significant	4.2.A
7.2.4	V-6	Off-Site Otay Ranch RMP Preserve	Temporary and Permanent Direct	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing) M-BI-11 (restoration of temporary impacts)	Less than significant	4.2.A
7.2.4	V-7	County of San Diego Road Easement	Temporary and Permanent Direct	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing) M-BI-3 (habitat conveyance and preservation) M-BI-11 (restoration of temporary impacts)	Less than significant	4.2.A
7.2.4	V-8	Sensitive Vegetation Communities – Land Exchange Area	Temporary Indirect	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing) M-BI-14 (SWPPP) M-BI-15 (erosion and runoff control) M-BI-17 (prevention of chemical pollutants) M-BI-21 (federal and state agency permits	Less than significant	4.2.D
7.2.4	V-9	Sensitive Vegetation Communities – Land Exchange Area	Permanent Indirect	M-BI-4 (permanent fencing and signage M-BI-14 (SWPPP)	Less than significant	4.2.D

Table 4-11 Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities, and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
				M-BI-15 (erosion and runoff control) M-BI-16 (prevention of invasive plant species) M-BI-17 (prevention of chemical pollutants) M-BI-18 (fire protection)	J	
7.2.2	V-10	Jurisdictional Aquatic Resources – Off-Site Areas Only	Temporary Direct	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing) M-BI-11 (restoration of temporary impacts) M-BI-21 (federal and state agency permits	Less than significant	4.2.B
7.2.2	V-11	Jurisdictional Aquatic Resources – Land Exchange Alternative (including off-site areas)	Permanent Direct	M-BI-21 (federal and state agency permits	Less than significant	4.2.B
7.2.2	V-12	Jurisdictional Aquatic Resources – Land Exchange Area	Temporary Indirect	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing) M-BI-14 (SWPPP) M-BI-15 (erosion and runoff control) M-BI-17 (prevention of chemical pollutants)	Less than significant	4.2.B
7.2.2	V-13	Jurisdictional Aquatic Resources – Land Exchange Area	Permanent Indirect	M-BI-4 (permanent fencing and signage M-BI-14 (SWPPP) M-BI-15 (erosion and runoff control) M-BI-16 (prevention of invasive plant species) M-BI-17 (prevention of chemical pollutants)	Less than significant	4.2.B

Table 4-11 Summary of Impacts and Mitigation for Special-Status Species, Vegetation Communities, and Jurisdictional Areas

Section of Report Where Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter					
the Clean W	Guideline 4.3: The project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means.										

Refer to Impacts V-10 through V-13.

Guideline 4.4: The project would interfere substantially with the movement of a 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.

		J ,		· · · · · · · · · · · · · · · · · · ·		
9.2.1	WLC-1	Habitat Connectivity and Wildlife Corridors	Temporary Direct	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing) M-BI-11 (restoration of temporary impacts)	Less than significant	4.4.A
9.2.4	WLC-2	Habitat Connectivity and Wildlife Corridors	Temporary Indirect	M-BI-1 (biological monitoring) M-BI-2 (temporary construction fencing) M-BI-18 (noise) M-BI-20 (lighting)	Less than significant	4.4.D
9.2.4	WLC-3	Habitat Connectivity and Wildlife Corridors	Permanent Indirect	M-BI-3 (habitat conveyance and preservation) M-BI-4 (permanent fencing and signage) M-BI-18 (noise) M-BI-20 (lighting)	Less than significant	4.4.D

Guideline 4.5: The project would conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state HCP.

None

Table 4-12 Land Exchange Alternative Estimated Annual Net GHG Emissions (2028)

Emission Source	CO ₂ e
Total Construction Emissions (MT)	7,988
Loss of Carbon from Vegetation Removal (MT)	8,740
Subtotal (MT)	16,728

Table 4-12
Land Exchange Alternative Estimated Annual Net GHG Emissions (2028)

Emission Source	CO ₂ e		
Amortized Over 30 Years (MT/Year)	558		
Operational Emissions (MT/year)	20,882		
Annual Gain from Sequestered Carbon (Amortized Over 30 Years) (MT/Year)	(142)		
Subtotal (MT/Year)	20,470		
Total Annual Operational Emissions (MT/Year)	21,298		

Notes:

CO₂e = carbon dioxide equivalent. MT – metric tons. Numbers in parentheses represent negative numbers.

Table 4-13
Land Exchange Alternative
Estimated Net GHG Emissions With Mitigation Measures (2028)

Emission Source	CO₂e (Metric Tons per Year)
Construction Emissions (one time)	16,728
Reductions from M-GHG-1	(16,728)
Annual Operational Emissions	20,470
Project Life Operational Emissions (30 years)	622,270
Reductions from M-GHG-2	(622,207)
Net Emissions After Mitigation	0

Table 4-14
Land Exchange Alternative Modeled On-Site Ground-Floor Traffic Noise Levels (dBA CNEL) with Noise Barriers

Receiver	Land Use Type	County of San Diego Exterior Noise Standard	Future (Year 2030) plus Proposed Project without Mitigation	County of San Diego Noise Standard ¹ Exceeded?	Future (Year 2030) plus Proposed Project with Mitigation (6-Foot-High Noise Barriers)	County of San Diego Noise Standard ¹ Exceeded with Mitigation?
R19 P-2 Park	Park	65	61	No	n/a²	n/a²
R20 Lot 21 R-1	Single-family residential	60	58	No	n/a²	n/a ²
R21 Lot 15 R-1	Single-family residential	60	66	Yes	56	No
R22 Lot 6 R-1	Single-family residential	60	66	Yes	56	No
R23 Lot 4 R-1	Single-family residential	60	67	Yes	56	No
R24 Lot 15 R-5	Single-family residential	60	59	No	50	No
R25 Lot 13 R-5	Single-family residential	60	62	Yes	53	No
R26 Lot 8 R-5	Single-family residential	60	65	Yes	55	No
R27 Lot 2 R-5	Single-family residential	60	67	Yes	58	No
R28 Lot 2 R-4	Single-family residential	60	64	Yes	56	No
R29 Lot 7 R-4	Single-family residential	60	63	Yes	54	No
R30 Lot 15 R-4	Single-family residential	60	63	Yes	54	No
R31 P-4 Park	Park	65	64	No	n/a²	n/a²
R32 MF-1	Multi-family residential	65	63	No	n/a²	n/a²
R33 MF-1	Multi-family residential	65	63	No	n/a²	n/a²
R34 FS-1	Public Safety (Fire Station)	65	64	No	n/a²	n/a²
R35 MU-1/CF-1	Mixed-Use / Commercial	65	61	No	n/a²	n/a ²
R36 P-1 Park	Park	65	56	No	n/a²	n/a²
R37 S-1 School	School	65	64	No	n/a²	n/a²
R38 Lot 38 R-10	Single-family residential	60	63	Yes	54	No
R39 Lot 45 R-10	Single-family residential	60	62	Yes	54	No
R40 Lot 32 R-10	Single-family residential	60	64	Yes	54	No
R41 Lot 19 R-11	Single-family residential	60	64	Yes	53	No
R42 Lot 13 R-11	Single-family residential	60	63	Yes	53	No

Table 4-14
Land Exchange Alternative Modeled On-Site Ground-Floor Traffic Noise Levels (dBA CNEL) with Noise Barriers

Receiver	Land Use Type	County of San Diego Exterior Noise Standard	Future (Year 2030) plus Proposed Project without Mitigation	County of San Diego Noise Standard ¹ Exceeded?	Future (Year 2030) plus Proposed Project with Mitigation (6-Foot-High Noise Barriers)	County of San Diego Noise Standard ¹ Exceeded with Mitigation?
R43 Lot 2 R-11	Single-family residential	60	63	Yes	52	No
R44 Lot MF-2	Multifamily residential	65	62	No	n/a²	n/a²
R45 Lot MF-2	Multifamily residential	65	62	No	n/a²	n/a²
R46 Lot MF-2	Multifamily residential	65	62	No	n/a²	n/a²
R47 Lot 35 R-12	Single-family residential	60	58	No	n/a²	n/a²
R48 Lot 43 R-12	Single-family residential	60	65	Yes	56	No
R49 Lot R-14	Single-family residential	60	65	Yes	55	No
R50 Lot 3 R-12	Single-family residential	60	58	No	n/a²	n/a²
R51 Lot 8 R-12	Single-family residential	60	63	Yes	54	No
R52 Lot 38 R-13	Single-family residential	60	57	No	n/a²	n/a²
R53 Lot 10 R-15	Single-family residential	60	64	Yes	54	No
R54 Lot 12 R-15	Single-family residential	60	58	No	n/a²	n/a²

Table 4-15
Land Exchange Alternative Modeled On-Site Second-Floor Traffic Noise Levels

Receiver (Second-Floor Level) ²	Land Use Type	County of San Diego CNEL Exterior Noise Standard (dB)	Future (Year 2030) plus Proposed Project	County of San Diego Noise Standard¹ Exceeded?
R20 Lot 21 R-1 2nd Floor	Single-family residential	60	59	No
R21 Lot 15 R-1 2nd Floor	Single-family residential	60	67	Yes
R22 Lot 6 R-1 2nd Floor	Single-family residential	60	67	Yes
R23 Lot 4 R-1 2nd Floor	Single-family residential	60	67	Yes
R24 Lot 15 R-5 2nd Floor	Single-family residential	60	60	No

Table 4-15
Land Exchange Alternative Modeled On-Site Second-Floor Traffic Noise Levels

Receiver (Second-Floor Level) ²	Land Use Type	County of San Diego CNEL Exterior Noise Standard (dB)	Future (Year 2030) plus Proposed Project	County of San Diego Noise Standard¹ Exceeded?
R25 Lot 13 R-52nd Floor	Single-family residential	60	63	Yes
R26 Lot 8 R-5 2nd Floor	Single-family residential	60	66	Yes
R27 Lot 2 R-5 2nd Floor	Single-family residential	60	67	Yes
R28 Lot 2 R-4 2nd Floor	Single-family residential	60	64	Yes
R29 Lot 7 R-4 2nd Floor	Single-family residential	60	64	Yes
R30 Lot 15 R-4 2nd Floor	Single-family residential	60	64	Yes
R32 MF-1 2nd Floor	Multifamily residential	65	64	No
R33 MF-1 2nd Floor	Multifamily residential	65	64	No
R34 FS-1 2nd Floor	Fire Station	65	65	No
R35 MU-1/CF-1 2nd Floor	Mixed-Use	65	65	No
R38 Lot 38 R-10 2nd Floor	Single-family residential	60	64	Yes
R39 Lot 45 R-10 2nd Floor	Single-family residential	60	63	Yes
R40 Lot 32 R-10 2nd Floor	Single-family residential	60	65	Yes
R41 Lot 19 R-11 2nd Floor	Single-family residential	60	64	Yes
R42 Lot 13 R-11 2nd Floor	Single-family residential	60	65	Yes
R43 Lot 2 R-11 2nd Floor	Single-family residential	60	64	Yes
R44 Lot MF-2 2nd Floor	Multifamily residential	65	62	No
R45 Lot MF-2 2nd Floor	Multifamily residential	65	62	No
R46 Lot MF-2 2nd Floor	Multifamily residential	65	62	No
R47 Lot 35 R-12 2nd Floor	Single-family residential	60	65	Yes
R48 Lot 43 R-12 2nd Floor	Single-family residential	60	65	Yes
R49 Lot R-14 2nd Floor	Single-family residential	60	65	Yes
R50 Lot 3 R-12 2nd Floor	Single-family residential	60	65	Yes
R51 Lot 8 R-12 2nd Floor	Single-family residential	60	65	Yes
R52 Lot 38 R-13 2nd Floor	Single-family residential	60	63	Yes

Table 4-15
Land Exchange Alternative Modeled On-Site Second-Floor Traffic Noise Levels

Receiver (Second-Floor Level) ²	Land Use Type	County of San Diego CNEL Exterior Noise Standard (dB)	Future (Year 2030) plus Proposed Project	County of San Diego Noise Standard¹ Exceeded?
R53 Lot 10 R-15 2nd Floor	Single-family residential	60	64	Yes
R54 Lot 12 R-15 2nd Floor	Single-family residential	60	59	No

Table 4-16
Land Exchange Alternative Modeled Off-Site Traffic Noise Levels

		Modeled Exterior Noise Levels (dBA CNEL)									
Receiver: Location	Applicable Exterior Noise Standard (dBA CNEL)	Existing	Existing plus Proposed Project	Increase from Proposed Project	Noise Standard Exceedance as a result of the Proposed Project?	Significant Impact (Noise Standard Exceedance or Substantial Increase)?	Future (Year 2030)	Future (Year 2030) plus Proposed Project	Increase from Proposed Project	Noise Standard Exceedan ce as a result of the Proposed Project?	Significant Cumulative Impact (Noise Standard Exceedance or Substantial Increase)?
R1: San Miguel Ranch Rd.; w. of SR- 125	65 (City of Chula Vista)	64	65	1	No	No	66	67	1	No	No
R2: Mt. Miguel Rd.; Proctor Valley Rd. – San Miguel Ranch Rd.	65 (City of Chula Vista)	54	54	0	No	No	54	55	1	No	No
R3: Proctor Valley Rd.; SR125 – Mt Miguel Rd	65 (City of Chula Vista)	55	55	0	No	No	55	56	1	No	No
R4: Proctor Valley Rd.; Mt. Miguel Rd Lane Ave.	65 (City of Chula Vista)	59	60	1	No	No	61	62	1	No	No

Table 4-16
Land Exchange Alternative Modeled Off-Site Traffic Noise Levels

		Modeled Exterior Noise Levels (dBA CNEL)									
Receiver: Location	Applicable Exterior Noise Standard (dBA CNEL)	Existing	Existing plus Proposed Project	Increase from Proposed Project	Noise Standard Exceedance as a result of the Proposed Project?	Significant Impact (Noise Standard Exceedance or Substantial Increase)?	Future (Year 2030)	Future (Year 2030) plus Proposed Project	Increase from Proposed Project	Noise Standard Exceedan ce as a result of the Proposed Project?	Significant Cumulative Impact (Noise Standard Exceedance or Substantial Increase)?
R5: Lane Ave: Proctor Valley Rd. – Otay Lakes Rd.	65 (City of Chula Vista)	54	55	1	No	No	55	56	1	No	No
R6: Proctor Valley Rd.; Lane Ave. – Hunte Pkwy	65 (City of Chula Vista)	55	57	2	No	No	57	58	1	No	No
R7: Hunte Pkwy; Proctor Valley Rd Otay Lakes Rd.	65 (City of Chula Vista)	52	54	2	No	No	54	55	1	No	No
R8: Hunte Pkwy; Otay Lakes Rd. – Olympic Pkwy	65 (City of Chula Vista)	57	58	1	No	No	59	60	1	No	No
R9: Hunte Pkwy; Olympic Pkwy - Eastlake Pkwy	65 (City of Chula Vista)	47	48	1	No	No	59	59	0	No	No
R10: Proctor Valley Rd.; Hunte Pkwy - Northwoods Dr.	65 (City of Chula Vista)	50	54	4	No	No	53	56	3	No	No

Table 4-16
Land Exchange Alternative Modeled Off-Site Traffic Noise Levels

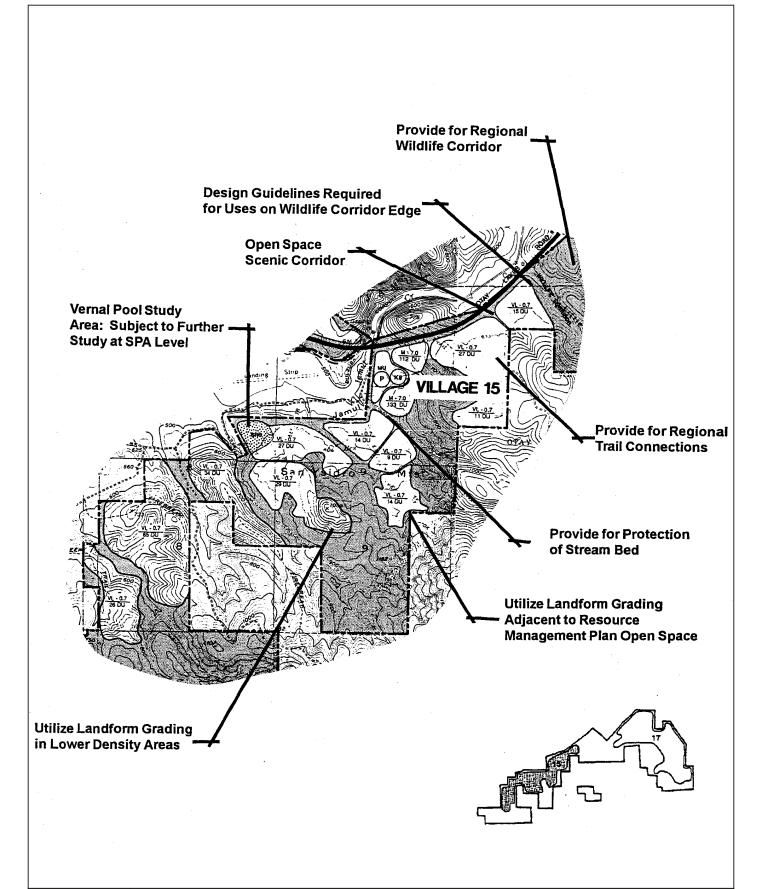
	Modeled Exterior Noise Levels (dBA CNEL)										
Receiver: Location	Applicable Exterior Noise Standard (dBA CNEL)	Existing	Existing plus Proposed Project	Increase from Proposed Project	Noise Standard Exceedance as a result of the Proposed Project?	Significant Impact (Noise Standard Exceedance or Substantial Increase)?	Future (Year 2030)	Future (Year 2030) plus Proposed Project	Increase from Proposed Project	Noise Standard Exceedan ce as a result of the Proposed Project?	Significant Cumulative Impact (Noise Standard Exceedance or Substantial Increase)?
R11: Northwoods Dr.; Proctor Valley Rd. – Blue Ridge Dr.	65 (City of Chula Vista)	50	52	2	No	No	48	52	4	No	No
M4 / R12: Proctor Valley Rd. w. of Northwoods Dr.	65 (City of Chula Vista)	51	55	4	No	No	55	57	2	No	No
M6 / R13: San Miguel Ranch Rd. e. of SR- 125	65 (City of Chula Vista)	59	60	1	No	No	61	61	0	No	No
M8 / R14: Proctor Valley Rd. n. of Proposed Project	60 (County of San Diego)	39	54	15	No	Yes (Substantial Increase)	60	61	1	Yes	No (less than 2 dB increase)
M9 / R15: Proctor Valley Rd.; Melody Rd.–Schlee Canyon Rd.	60 (County of San Diego)	49	51	2	No	No	54	55	1	No	No
M10 / R16: Melody Rd.; Proctor Valley Rd. –SR-94	60 (County of San Diego)	48	51	3	No	No	60	60	0	No	No

Table 4-16
Land Exchange Alternative Modeled Off-Site Traffic Noise Levels

	Modeled Exterior Noise Levels (dBA CNEL)										
Receiver: Location	Applicable Exterior Noise Standard (dBA CNEL)	Existing	Existing plus Proposed Project	Increase from Proposed Project	Noise Standard Exceedance as a result of the Proposed Project?	Significant Impact (Noise Standard Exceedance or Substantial Increase)?	Future (Year 2030)	Future (Year 2030) plus Proposed Project	Increase from Proposed Project	Noise Standard Exceedan ce as a result of the Proposed Project?	Significant Cumulative Impact (Noise Standard Exceedance or Substantial Increase)?
M11 / R17: Proctor Valley Rd.; Schlee Cyn. Rd.– Maxfield Rd.	60 (County of San Diego)	57	58	1	No	No	61	61	0	No	No
R18: Proctor Valley Rd.; Maxfield Rd.–SR- 94	60 (County of San Diego)	59	60	1	No	No	63	63	0	No	No

Table 4-17 Land Exchange Alternative Summary of Significant Impacts and Mitigation Measures

	Existing Plus Land				
Location	Exchange Alternative	Year 2025	Year 2030		
	Intersection				
SR-94 & Lyons Valley Road	Direct Caltrans Facility – Significant and Unavoidable Impact	None	N/A		
Northwoods Drive / Agua Vista Drive & Proctor Valley Road	Direct City of CV Facility – Significant and Unavoidable Impact	Direct City of CV Facility – Significant and Unavoidable Impact	Direct City of CV Facility – Significant and Unavoidable Impact		
	Roadway Segme	ent			
Proctor Valley Road between Northwoods Drive and the County of San Diego Boundary Proctor Valley Road between City of Chula Vista boundary to Project	Direct City of CV Facility – Significant and Unavoidable Impact None	Direct City of CV Facility – Significant and Unavoidable Impact Cumulative Significant and	Direct City of CV Facility – Significant and Unavoidable Impact N/A		
Proctor Valley Road between Project Driveway No. 1 to Project Driveway No. 2	None	Unavoidable Impact Cumulative Significant and Unavoidable Impact	N/A		
Proctor Valley Road between Project Driveway No. 2 to Project Driveway No. 3	None	Cumulative Significant and Unavoidable Impact	N/A		
	2-Ln Highway Seg	ment	_		
None					
	Freeway Segme	ent			
None					
	Ramp Meter				
None					

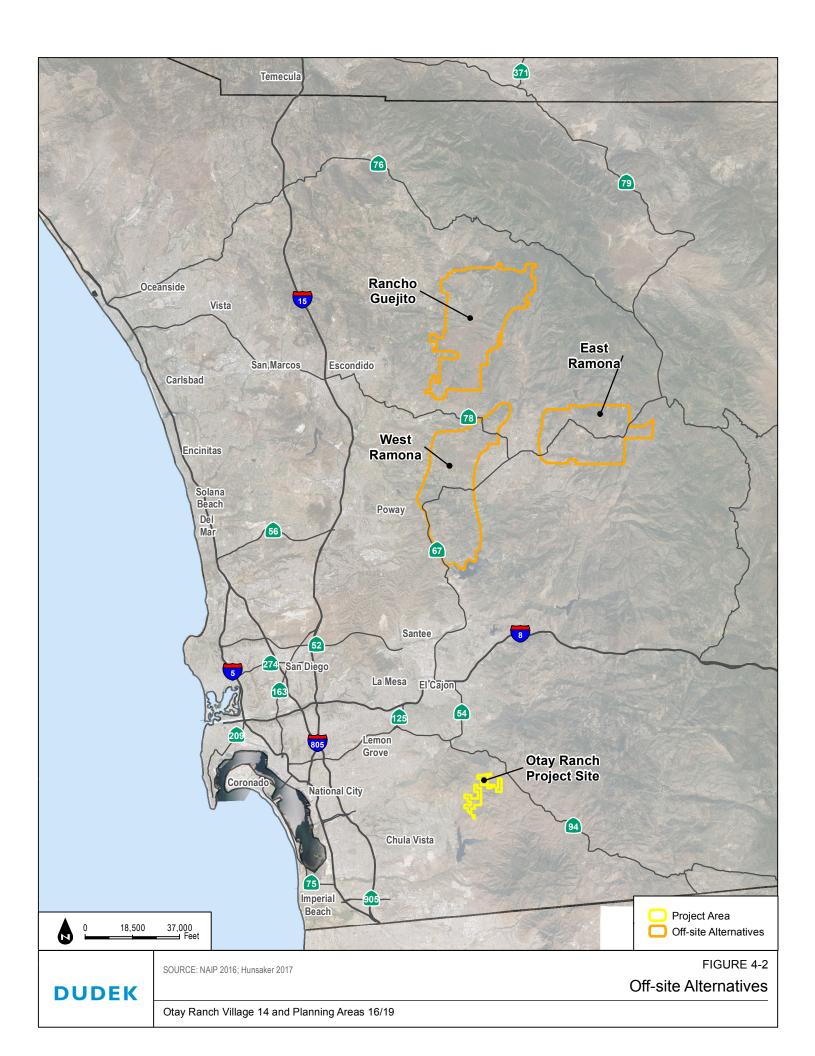




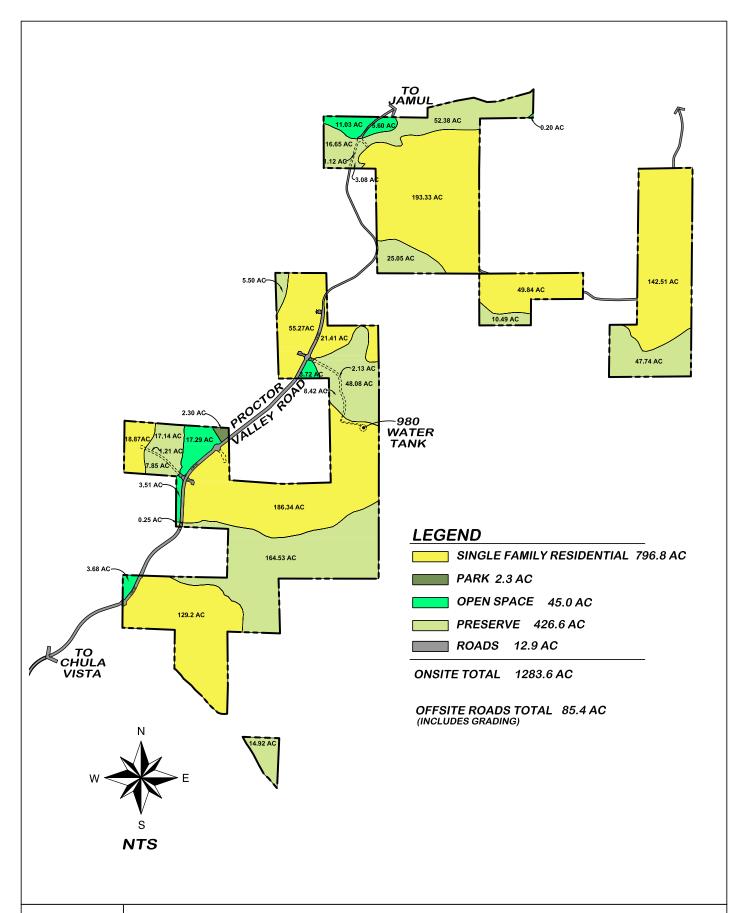
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FIGURE 4-1
Otay Ranch GDP/SRP Village 15

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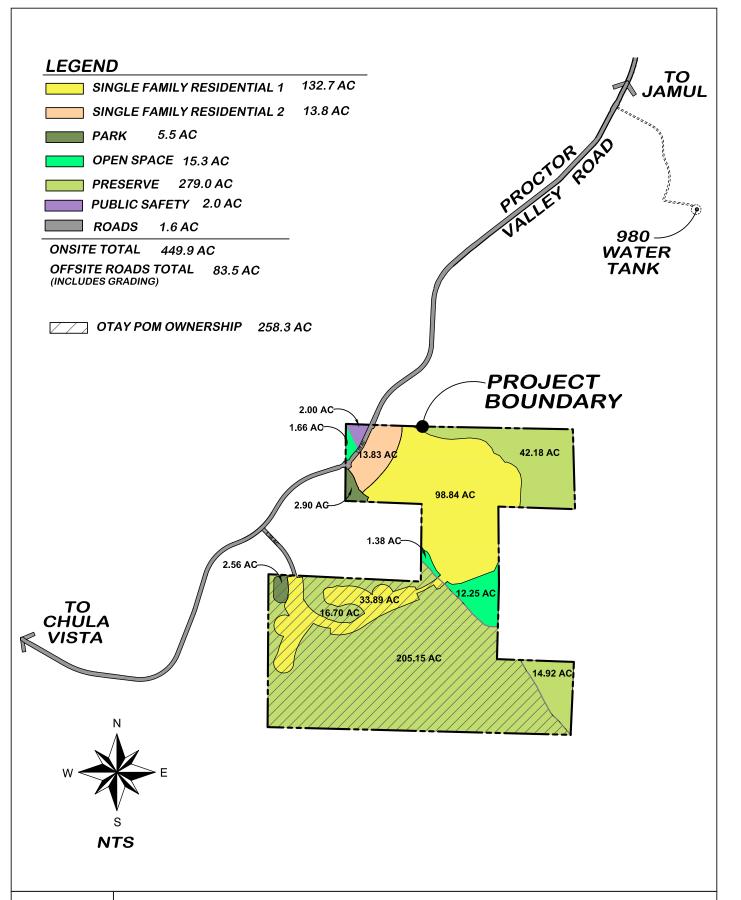
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SOURCE: Hunsaker 2017

FIGURE 4-3 Low Density Alternative

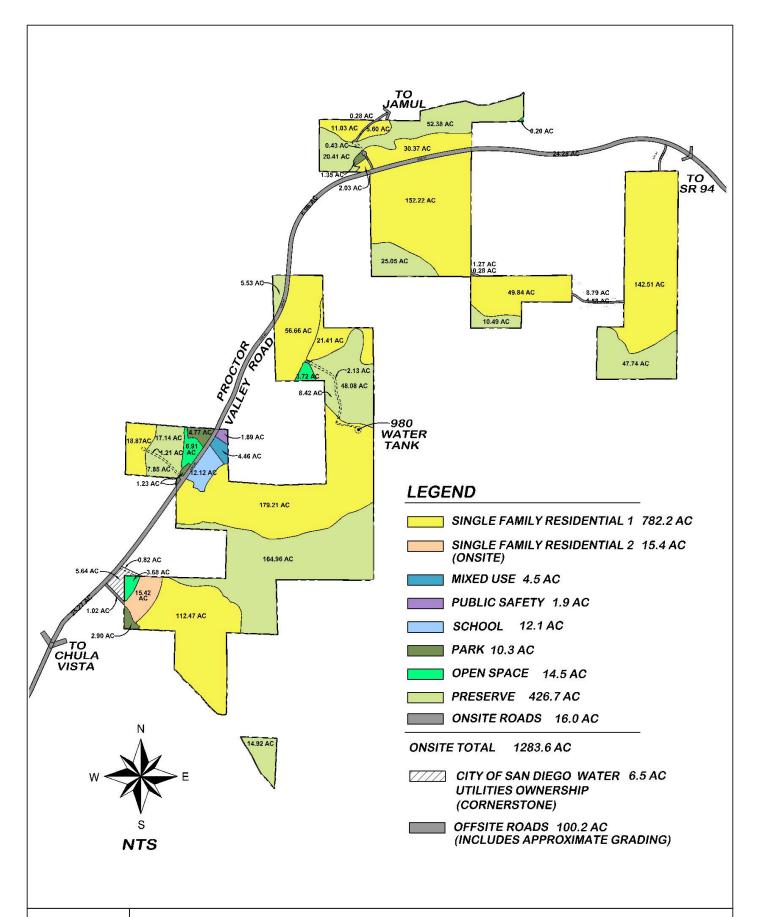
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SOURCE: Hunsaker 2017

FIGURE 4-4
Alternative Site Location

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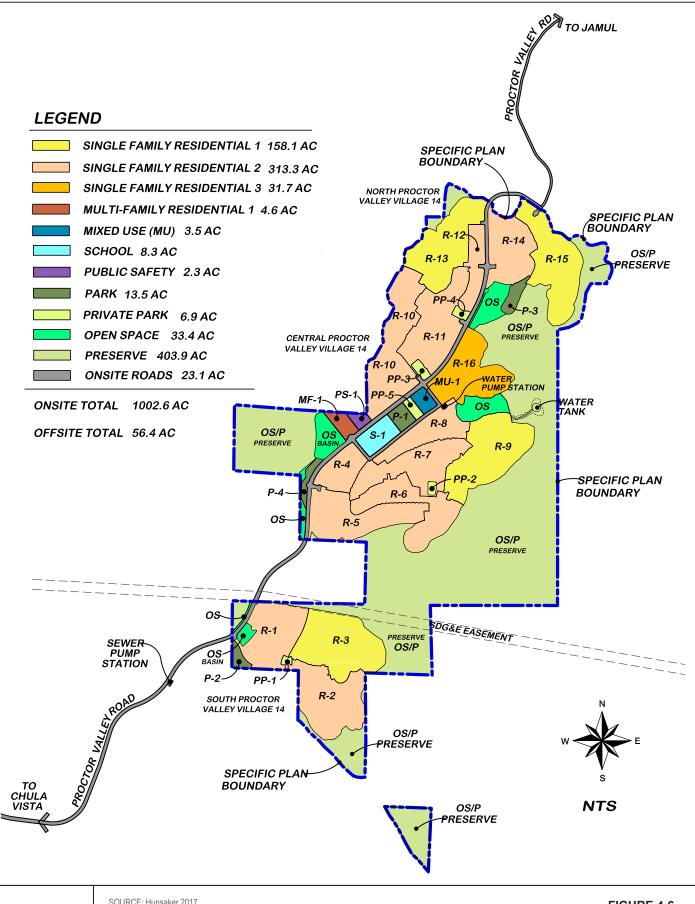


SOURCE: Hunsaker 2017

FIGURE 4-5

Existing GDP/SRP 4-Lane Proctor Valley Road

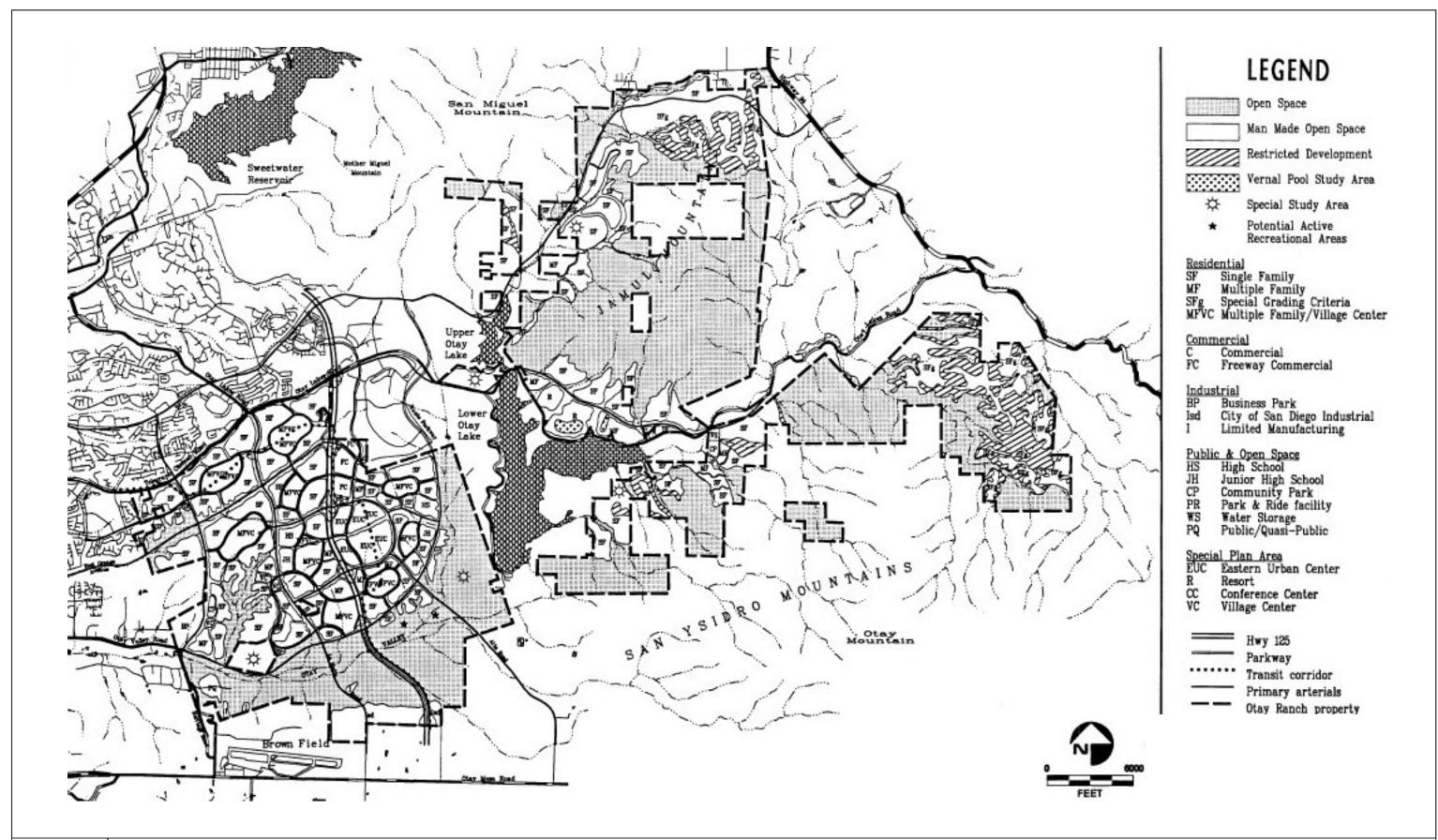
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SOURCE: Hunsaker 2017

FIGURE 4-6 **Land Exchange Alternative**

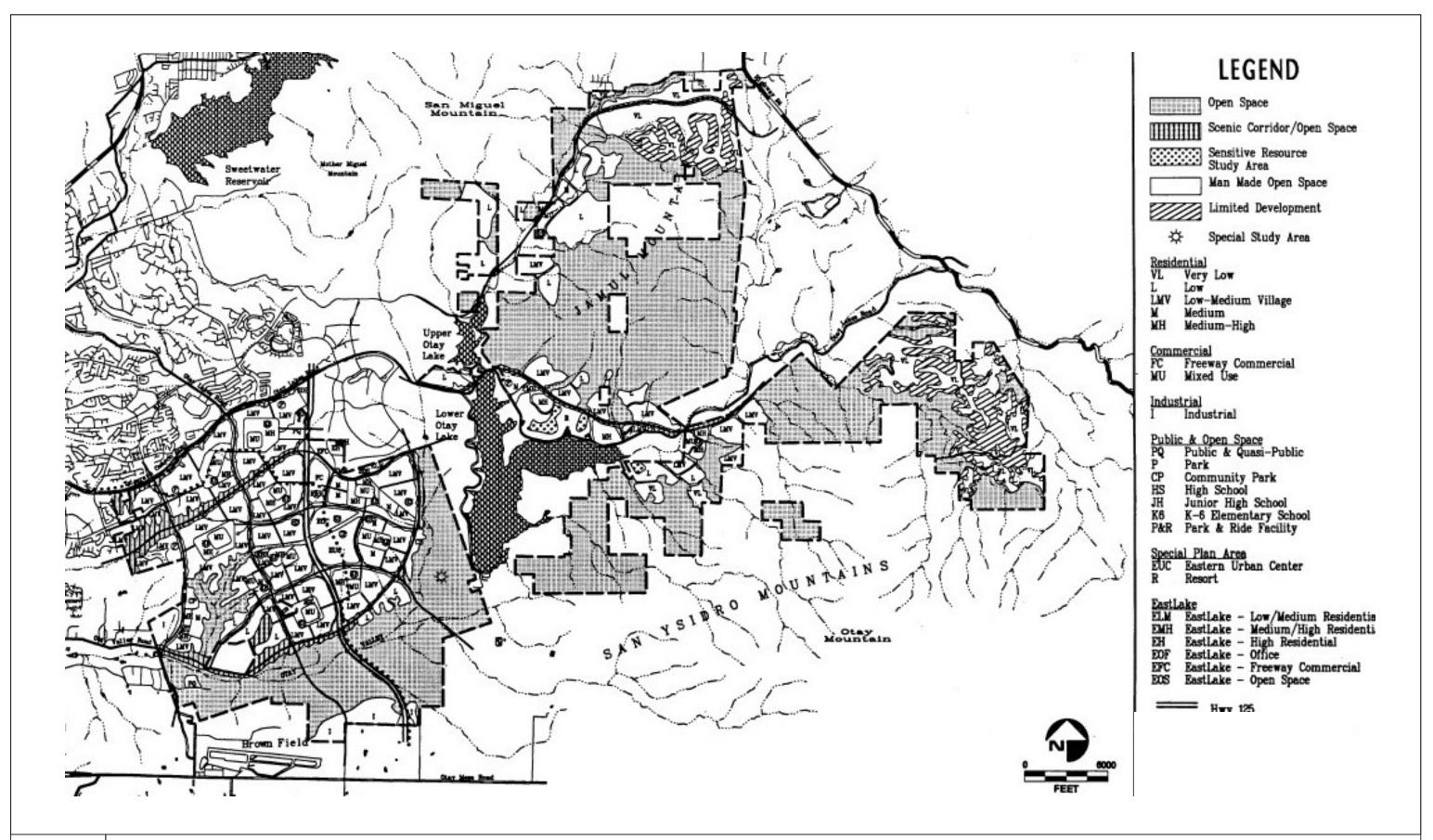
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SOURCE: Ogden 1993

FIGURE 4-7a
Phase I - Progress Plan Alternative

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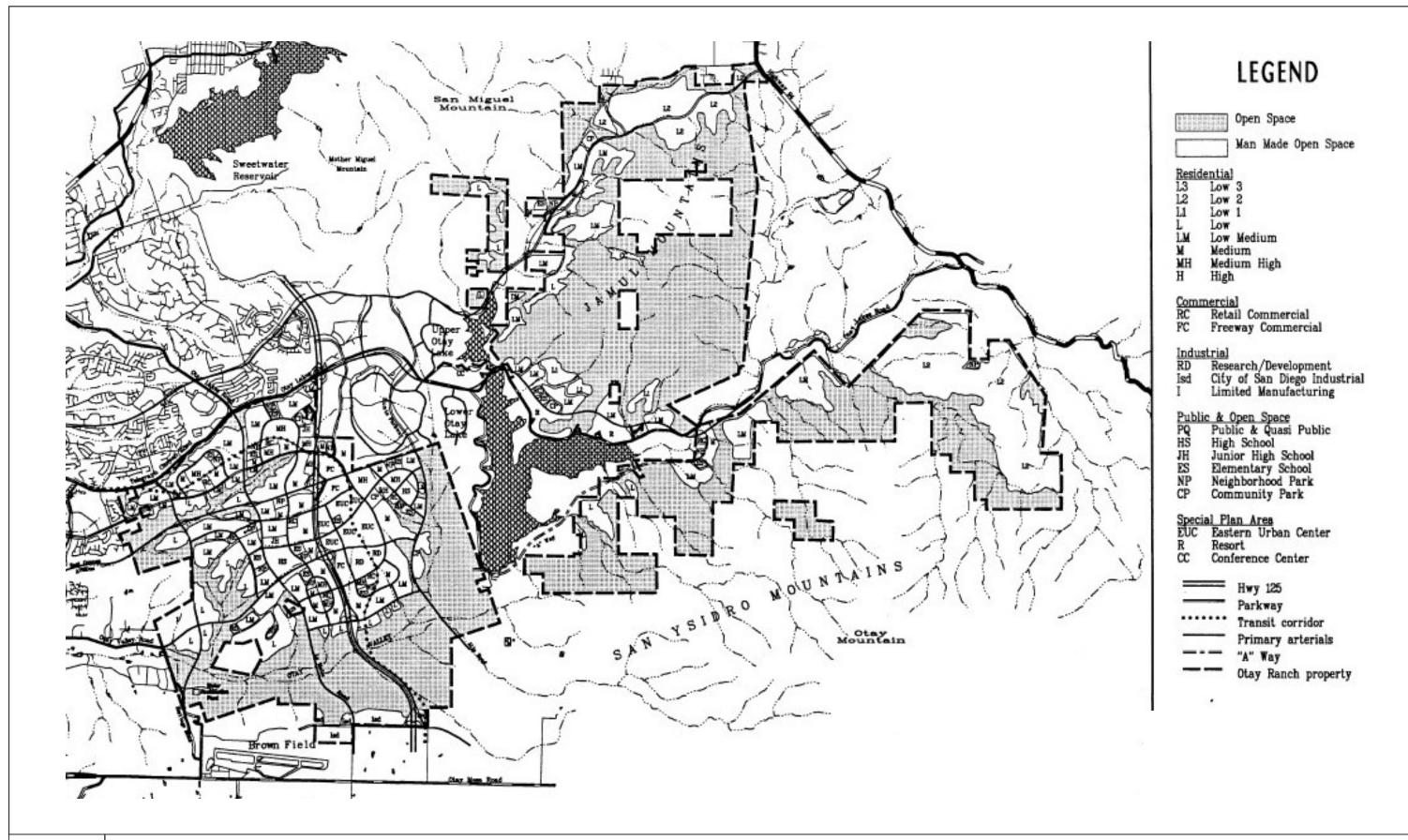


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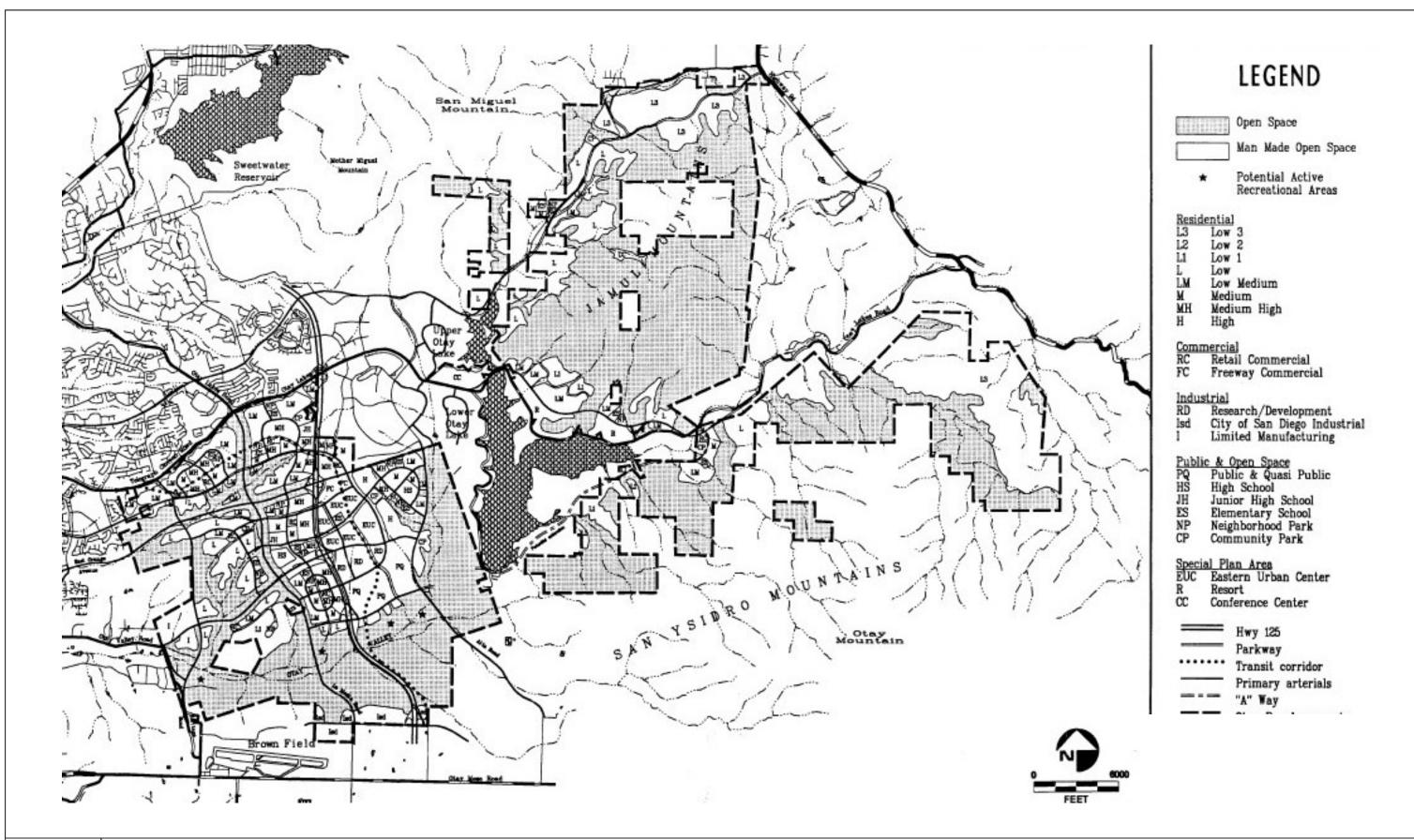
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SOURCE: Ogden 1993

FIGURE 4-7c Fourth Alternative

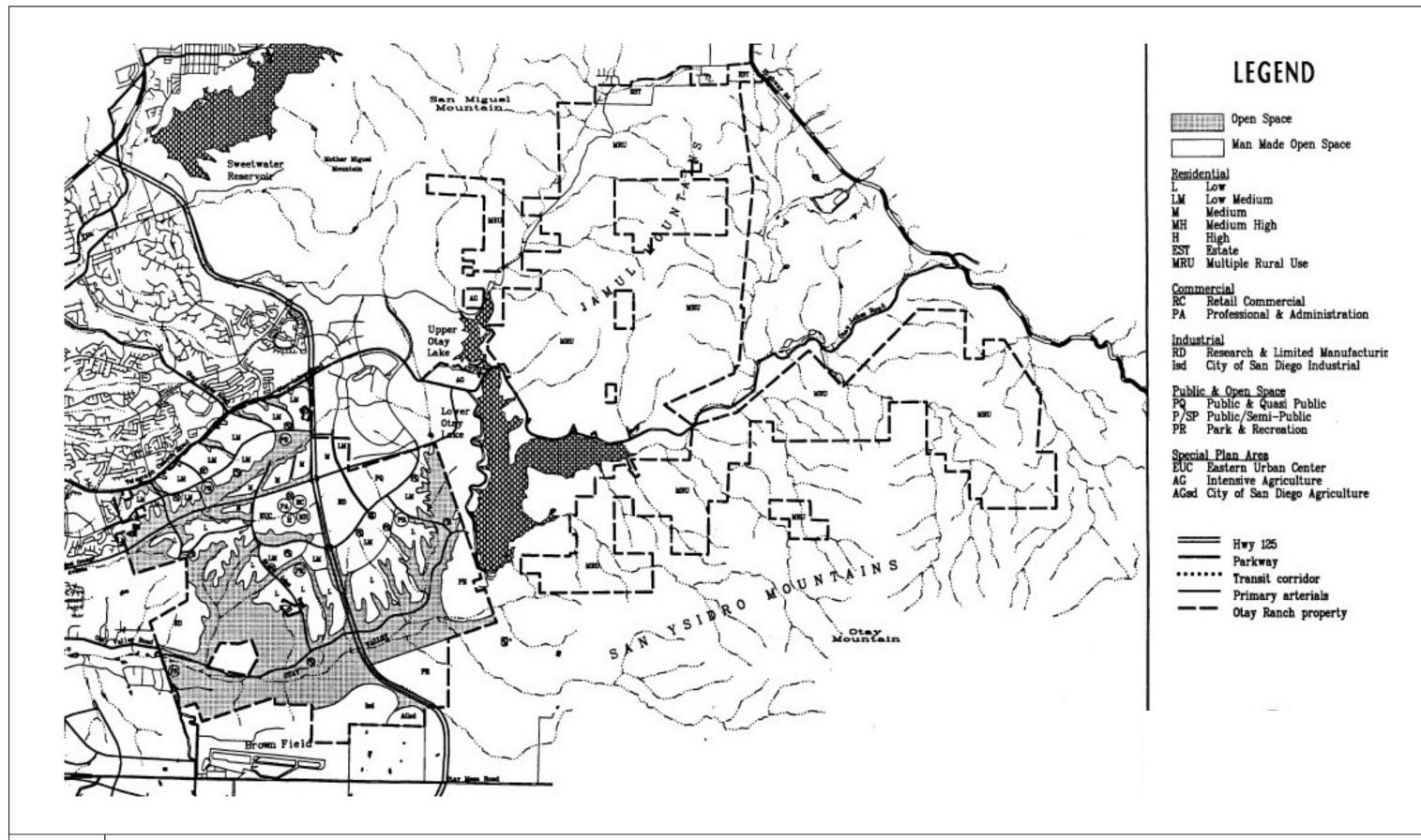
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SOURCE: Ogden 1993

FIGURE 4-7d **Project Team Alternative**

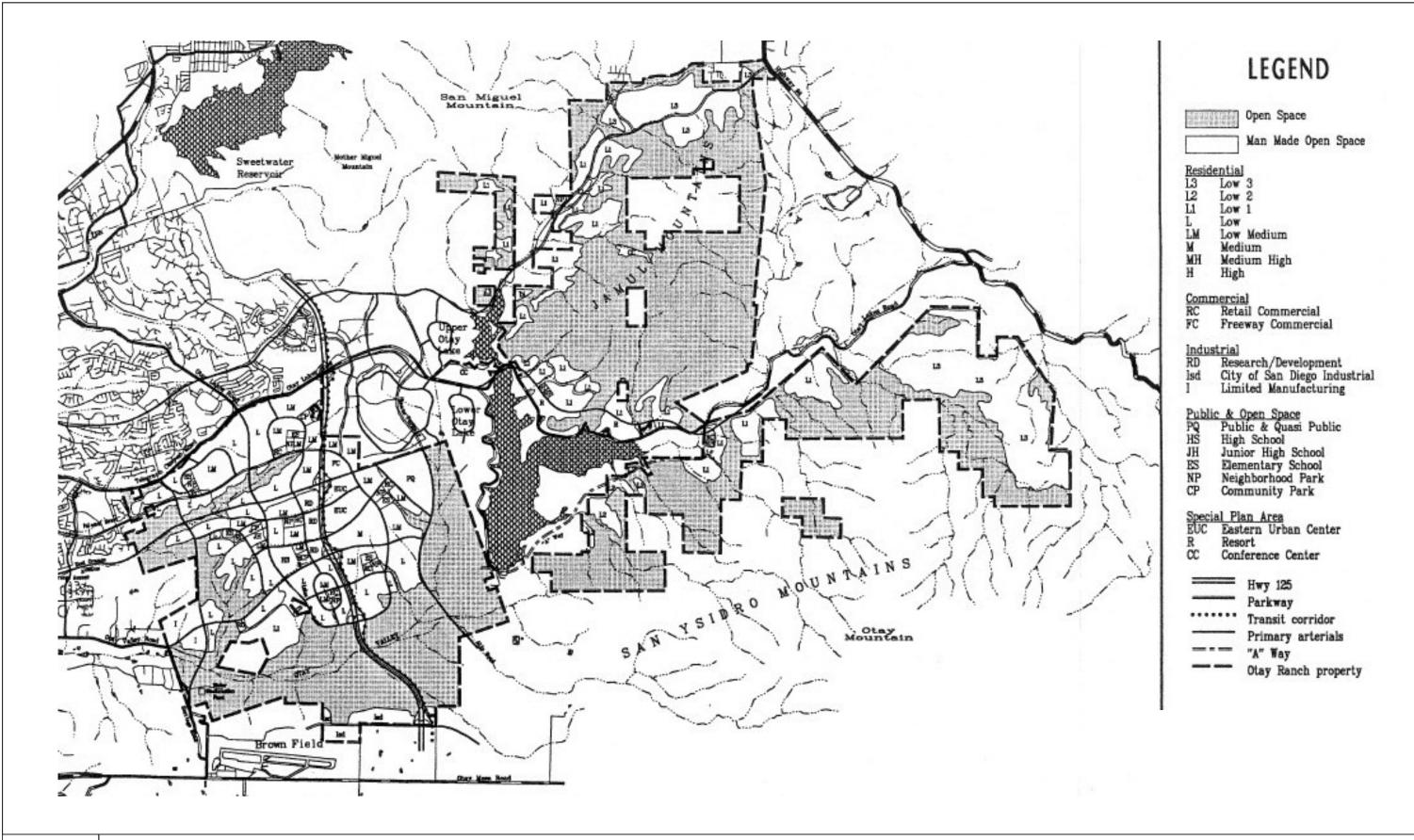
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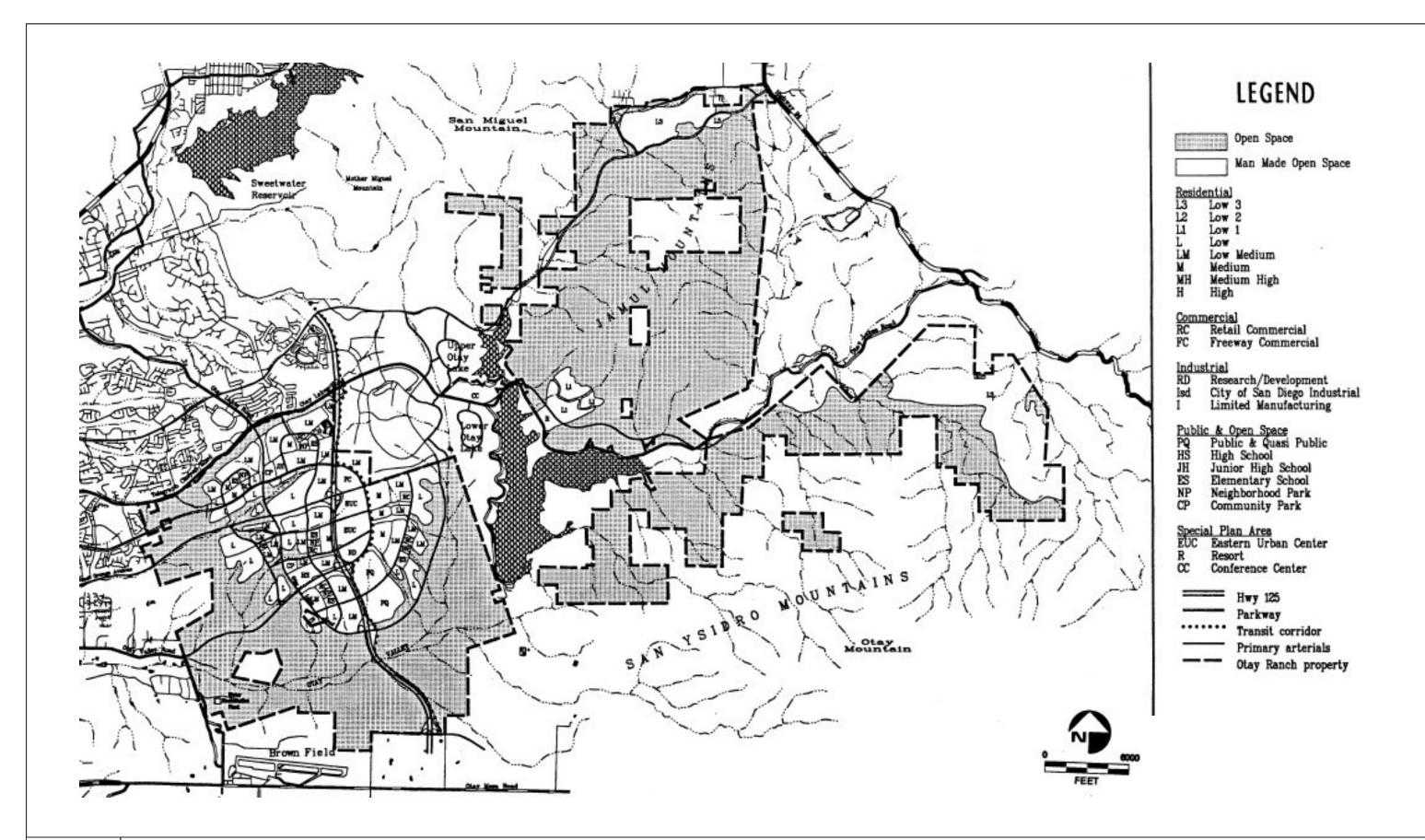
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