CHAPTER 4.0 PROJECT ALTERNATIVES

4.1 Rationale For Alternative Selection

In accordance with Section 15126.6(a) of the CEQA Guidelines, an EIR must contain "a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project," as well as an evaluation of the "comparative merits of the alternatives." In addition, Section 15126.6(b) of the CEQA Guidelines states that "the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."

The proposed Project would develop the 1,869-acre Project site with 1,938 dwelling units, a resort, parks, an elementary school site, and a public safety site, all within a development footprint, including roads and graded slopes, of approximately 779.6 acres. Approximately 1,089.0 acres would be designated as Preserve Open Space and would be preserved. This EIR concludes that the proposed Project would result in significant impacts to aesthetics, air quality, biological resources, cultural resources including paleontology, geology and soils, hazards and hazardous materials, noise, solid waste, and transportation and traffic. Mitigation measures would reduce impacts to less-than-significant levels for all issue areas except direct and cumulative impacts to aesthetics and air quality, which remain significant and unavoidable even after adopting all recommended feasible mitigation measures. In addition, the proposed Project would contribute to significant unavoidable cumulative impacts on solid waste disposal. No significant impacts to agricultural resources, hydrology and water quality, land use and planning, mineral resources, population and housing, public services (except solid waste disposal), or utilities and service systems were identified in this EIR.

4.1.1 Alternatives Selected for Analysis

The Project alternatives that are considered and discussed in this section are summarized below:

Alternative	DU	Change	Developed Acreage	Preserve Conveyance Obligation*	Change in Preserve Acreage	Preserve + Non Preserve OS	Change
Proposed Project	**1,938 DU**	--	**779.6 ac.**	**891 ac**	--	**1,089.0 ac**	--
A	0 DU	-1,938 DU	0.0 ac	0.0 ac	-891 ac	1,868.8 ac	+779.6 ac
B	1,938 DU	0	762 ac.	±826.1 ac	-64.9 ac	±1,107 ac	+18 ac
C	1,241 DU	-697 DU	484 ac.	±562.4 ac	-328.6 ac	±1,385 ac	+296 ac
D	1,938 DU	0	484 ac.	±543.4 ac	-347.6 ac	±1,385 ac	+296 ac
E	1,391 DU	-547 DU	550.1 ac.	±627.4 ac	-263.6 ac	±1,318.9 ac	+230 ac
F	1,938 DU	0	550.1 ac.	±621.9 ac	-269.1 ac	±1,318.9 ac	+230 ac
G	465 DU	-1,473 DU	224 ac.	±261 ac	-630 ac	±1,645 ac	+556 ac

*Conveyance Obligation is based on 1.188 acre per proposed developed acreage, minus "common uses" such as parks, schools, and arterial roadways.

DU = dwelling units; ac = acres; OS = open space

Non-Preserve Open Space – Open Space that is not conveyed to the Otay Ranch Preserve/Owner Manager in satisfaction of Preserve Conveyance Obligation

These alternatives were selected based on avoiding or reducing impacts of the proposed Project. Alternatives B, D, and F achieve the same number of dwelling units (1,938) as the proposed project and increase the total Preserve/Open Space acreage. Alternatives C, E, and G reduce the number of dwelling units and increase Preserve/Open Space acreage. The Preserve Conveyance Obligation of each alternative is also included in the summary table. As with the proposed Project, Alternatives B through F would each still include the elementary school and public safety sites, while Alternative G would provide only the public safety site. Alternative A, the "no project" alternative mandated by CEQA, is also included in this section.

The six site development alternatives are described below:

- Alternative B would develop the Project site as described in the existing Otay SRP. This alternative would result in the development of 1,938 dwelling units, which is the same as the proposed Project; however, 1,408 of these dwelling units would be multi-family residential units compared to the 57 proposed by the project, which reduces the number or single family homes to 530. This alternative would result in 1,107 acres of Preserve, which is approximately 18 acres more than the proposed Project. Additionally, Alternative B would provide for 134.4 acres of resort use and an approximately 141.5-acre golf course. While not included in the SRP, Alternative B would also include a location for a public safety site.

- Alternative C would develop the Project site within a reduced development footprint of 484 acres, would reduce the total number of dwelling units to 1,241, but increase the number of multi-family homes to 859 as compared to the proposed 57 multi-family homes, and reduce the number of single family homes to 382. Development would be focused within the western portion of the site, providing 1,107 acres of Preserve Open Space and 287 acres of Non-Preserve Open Space (i.e. – open space that would not be conveyed to the Otay Ranch Preserve in satisfaction of the preserve conveyance obligation). Other uses associated with Alternative C include 113.7 acres of resort uses and an 82.9-acre golf course.

- Alternative D would develop the Project site within the same reduced development footprint of 484 acres as Alternative C (on the western portion of the Project site), but provide the same number of dwelling units (1,938) as the proposed Project by increasing the number of multi-family residential units to 1,544 and reducing the number of single family homes to 394. As with Alternative C, 1,107 acres of Preserve Open Space 278 acres of Non-Preserve Open Space would be provided, 61.3 acres of resort uses would be provided, though no golf course would be included.

- Alternative E would focus development on approximately 550.1 acres in the western portion of the site, but would extend farther to the northwest in comparison to Alternatives C and D. It would reduce the number of dwelling units to 1,391 in comparison to the proposed Project, and would consist of 1,319 single-family units and 72 multi-family units. Approximately 1,107 acres of Preserve Open Space and 212 acres of Non-Preserve Open Space and 19.9 acres of resort uses would be provided.

- Alternative F would develop the Project site within the same reduced development footprint of 550.1 acres as Alternative E (on the western portion of the Project site,

extending farther to the northwest in comparison to Alternatives C and D), provide the same number of dwelling units (1,938) as the proposed Project, and include 1,268 single-family residential units and 670 multi-family residential units. As with Alternative E, approximately 1,107 acres of Preserve Open Space and 212 acres of Non Preserve Open Space and 19.9 acres of resort uses would be provided.

- Alternative G would reduce the development footprint to a total of approximately 224 acres located in the eastern portion of the Project site. It would consist of 465 single-family residential units on 151.2 acres, a 2.0 acre public safety site and a 17.4-acre resort site in the same location as the proposed Project. Approximately 1,107 acres of Preserve Open Space and 538 acres of Non Preserve Open Space would be provided. This alternative would not include an elementary school site.

These alternatives are compared to the impacts of the proposed Project and are assessed relative to their ability to meet the basic objectives of the proposed Project as listed in Section 1.1 of this EIR.

The impacts of each alternative, including the No Project Alternative are analyzed in Sections 4.2 through 4.7 of this EIR. The discussion of alternatives provides: (1) a description of the alternative considered; (2) the identification of the impacts of the alternative; and (3) a comparative analysis of the impacts of each alternative to the proposed Project. The focus of this comparative analysis is to determine if the alternative is capable of avoiding or lessening any significant effects of the proposed Project.

Table 4.0-1, Comparison of Alternatives to Proposed Project, summarizes the environmental impacts of the Project alternatives compared to the impacts of the proposed Project.

4.1.2 Alternatives Considered but Rejected from Further Study

4.1.2.1 *Alternative Project Location*

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 Project. Factors that may be considered when identifying an alternative site location include the size of the site, its location, the General Plan (or Subregional Plan) land use designation, and 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."

As noted in Section 1.0 of this EIR, the Otay SRP was the basis for the proposed land use types, density, and community character within this particular area of the County. Otay Ranch and the proposed Project also were designed with the vision of the Otay SRP in mind. If another parcel in the general vicinity of the proposed Project site were to become available, development would likely result in impacts similar to those identified for the proposed Project, such as potential effects to aesthetics and air quality. Selection of another location may have avoided impacts to biological resources, cultural resources, and geology and soils, which are specific to this

location; however, these impacts were found to be less than significant with mitigation. Due to the original vision of the proposed Project (conforming to the Otay SRP) and the likelihood that another site would not substantially reduce significant environmental effects, this alternative was rejected from further consideration.

4.1.2.2 *First Project Submittal Alternative*

The First Project Submittal Alternative would develop 2,120 dwelling units, consisting primarily of higher density single-family detached and attached housing types on 783.9 acres with 1,085.1 acres of Preserve lands. In comparison to the proposed Project, this alternative proposal would have included 182 more dwelling units, an increased development footprint of 4.9 acres, and a decrease in Preserve lands of 4.9 acres. In addition, resort uses would be 55.8 acres, or an increase of 38.4 acres over the proposed Project, which would include lakeside facilities.

This alternative would be inconsistent with the Otay SRP because it included 182 more dwelling units than anticipated in Village 13 by the Otay SRP. This alternative would not meet the objectives of the County MSCP Subarea Plan South County Segment because it included development on a ridgeline with important QCB habitat. This also would not meet the goals of the Otay Ranch RMP because it increased the amount of development in the Otay Ranch Preserve.

Additionally, this alternative would have slightly increased the number of vehicle trips compared to the proposed Project, which would result in increased air quality, noise and traffic impacts. The increased footprint would result in greater impacts to biological and cultural resources compared to the proposed Project.

Because this alternative would not meet the goals, objectives, and policies of the Otay SRP, the Otay Ranch RMP, or the County MSCP Subarea Plan South County Segment, it was rejected from further study.

4.1.2.3 *Spring Valley Sewer Interceptor Alternative*

The major sewer facilities within the Spring Valley area proximate to the Project site are the Central Avenue Trunk Sewer and the Spring Valley Interceptor. The Central Avenue Trunk Sewer is a 15-inch gravity line, which conveys flows westerly from Proctor Valley Road to a connection with the Spring Valley Interceptor at the intersection of Central Avenue and Bonita Road. Connection to the Spring Valley Interceptor sewer facility would not require any changes to on-site sewer infrastructure as proposed. However, significant off-site sewer infrastructure installation would be required, as described below.

From Lift Station 1 (on-site), sewage flows would be conveyed along Otay Lakes Road to an off-site lift station in Salt Creek. At this location, the off-site lift station would pump flow through dual 12-inch force mains to a 15-inch gravity sewer that would convey flow to the Spring Valley Interceptor. The 12-inch force main and a portion of the 15-inch gravity main would be constructed in Otay Lakes Road, Hunte Parkway, and Proctor Valley Road (east of Mount Miguel Road) within the existing right-of-way. Once the 15-inch gravity sewer enters Proctor

Valley Road west of Mount Miguel Road it would need to be installed outside of the Right-of-Way within an existing public trail/landscape buffer area easement. The sewer would then re-enter the street Right-of-Way at Rolling Ridge Road until the San Diego County Water Authority easement is reached. At this location, the sewer main would cross the water main and be placed parallel to a 72-inch and 66-inch water aqueduct within the San Diego County Water Authority easement for approximately 2,000 linear feet. Past this point, the 15-inch sewer main would be installed in a siphon both within the existing road and adjacent to the road. The pipe then turns onto San Miguel Road and would require installation of a portion of the sewer in a tunnel before tying into the existing gravity sewer. While there may be some available capacity in the Central Avenue Trunk Sewer System, a new sewer line connecting to the Spring Valley Interceptor would be required to serve the entire Project site. Refer to Appendix C-16 for additional information.

The Otay Ranch Resort Village Project is within the County of San Diego; however it is not currently within the boundaries of the County Sanitation District. The project would have to be annexed into the SDCSD before it would be able to receive sewer service from County facilities as an alternative. However, implementation of the Spring Valley Interceptor alignment alternative requires extensive off-site infrastructure installation, operation and maintenance that may result in greater impacts to traffic, aesthetics, biological and cultural resources, public services, air quality, recreation, noise and disturbance to numerous residential neighborhoods. As such, it is not an alternative that would substantially lessen the significant effects of the proposed Project in regards to the installation of sewer infrastructure. Therefore, the Spring Valley Interceptor alignment alternative was rejected from further study.

4.1.2.4 2-Lane Otay Lakes Road Alternative

Otay Lakes Road is currently an undivided 2-lane road from Lake Crest Drive within the City of Chula Vista to SR-94 within the unincorporated area including the entire frontage along the Village 13 project site. Otay Lakes Road is approximately 26-feet wide with unimproved shoulders, turn-outs, and a dirt parking area between the Lower and Upper Otay Reservoirs. Current traffic volumes on Otay Lakes Road east of Wueste Road are approximately 2,927 ADT (Average Daily Trips). The Year 2030 without Project ADT is projected to be approximately 6,400 ADT east of Wueste Road. The 6,400 daily trips could be accommodated on a 2-lane road at an acceptable level of service within both the City of Chula Vista and County of San Diego.

Implementation of the proposed Village 13 project would increase the traffic volumes on Otay Lakes Road, east of Wueste Road, from approximately 6,400 ADT to 25,860 ADT. Per the City of Chula Vista and County of San Diego standards, a 2-lane road can accommodate 7,500 ADT and 13,500 ADT, respectively, at an acceptable level of service. The proposed project would therefore be required to widen Otay Lakes Road from 2-lanes to 4-lanes from Lake Crest Drive to Strada Piazza (Project Driveway #2) to mitigate for project's traffic impacts.

In response to impacts associated with the widening of Otay Lakes Road from 2-lanes to 4-lanes, an alternative to keep Otay Lakes Road as a 2-lane improved road was considered. The main impacts to be reduced by the 2- lane alternative are impacts to City of San Diego MHPA Cornerstone Lands (Impact BI-2).

While minimizing improvements to Otay Lakes Road would generally reduce impacts to the City of San Diego MHPA Cornerstone Lands and within the City of Chula Vista, additional impacts would be expected to occur which could not be mitigated by implementation of the 2-lane Alternative. Most notably, Otay Lakes Road between Lake Crest Drive and Strada Piazza would be significantly impacted (LOS F) if Otay Lakes Road remained at 2-lanes. As noted above, the volumes projected under the Existing Plus Project scenario of 25,860 ADT is almost twice the acceptable traffic volumes under the County of San Diego standard of 13,500 ADT for a 2-lane road, and over 3 times more than the City of Chula Vista standard of 7,500 ADT for a 2-lane road.

In addition to traffic impacts, keeping Otay Lakes Road as a 2-lane road would result in inconsistencies with both the County of San Diego General Plan Mobility Element as well as the City of Chula Vista General Plan Circulation Plan East. The County General Plan Mobility Element identified Otay Lakes Road as a 4-lane Major Road. While the project proposes a General Plan Amendment to reduce the roadway classification from a Major Road to a Boulevard, the amendment would (1) maintain Otay Lakes Road as a 4-lane road and (2) achieve and acceptable Level of Service. Further, the Chula Vista General Plan calls for Otay Lakes Road to be widened as a 6-lane Prime Arterial. While the project would only widen the road to 4-lanes, it would not preclude future widening to 6-lanes.

Lastly, maintaining Otay Lakes Road as a two lane road could pose a potential risk in the event of an evacuation associated with a wild fire. As discussed in Section 2.6, the greatest wild fire threat is associated with Santa Ana conditions and an east-west burning fire. This fire pattern would trigger evacuations to the west, along Otay Lakes Road. A two-lane road that is at least 50% undersized may result in delays for evacuees, or could hinder further rescue efforts of response units coming from the west.

Thus, while keeping Otay Lakes Road as a 2-lane road would reduce impacts to City of San Diego MHPA Cornerstone Lands, the impacts associated with the General Plan inconsistencies and to LOS would be much greater and therefore, this alternative was considered but rejected.

4.2 Analysis of the No Project Alternative (Alternative A)

4.2.1 No Project Alternative Description and Setting

The No Project Alternative would leave the Project site in its existing state. As such, the property would continue to be vacant. No development associated with the proposed Project would occur on the property. **Table 4.0-1** provides a summary comparison of the impacts of the Alternatives to the proposed Project.

4.2.2 Comparison of the Effects of the No Project Alternative (Alternative A) to the Proposed Project

Aesthetics

As discussed in Section 2.1, Aesthetics, the proposed Project would result in significant and unavoidable impacts to scenic vistas, scenic highways, and the visual character of the area. No feasible mitigation measures exist to avoid this Project impact.

Under Alternative A, no houses, resort uses, commercial uses, school, parks, or public safety site would be constructed. None of the Project site would be graded and the existing landforms on the site would remain. Significant aesthetic impacts resulting from the proposed Project would be avoided as no alterations to scenic vistas, scenic highways, or the visual character of the area would occur. Alternative A would result in ***no impact*** to aesthetics when compared to the proposed Project.

Air Quality

As discussed in Section 2.2, Air Quality, the proposed Project would result in significant and unavoidable impacts to air quality from construction-related air pollutant emissions. The proposed mitigation measures would reduce these impacts, but not to a less than significant level.

No temporary construction emissions or long-term air emissions from Project-related traffic or operations would occur under Alternative A. ***No impact*** on air quality would occur under Alternative A as compared to the proposed Project.

Biological Resources

As discussed in Section 2.3, Biological Resources, development of the proposed Project would result in significant impacts to biological resources; however, mitigation measures are proposed that would reduce these impacts to a less than significant level. Since no development would occur under this alternative, the Project site would remain in its current undeveloped state and impacts to sensitive biological resources would not occur. When compared to the proposed Project, Alternative A would avoid impacts to biological resources. The No Project Alternative, however, would not provide for the improvement of wildlife crossings under Otay Lakes Road as included in the proposed Project.

Relative to regional conservation planning, Alternative A would not satisfy the objectives set forth in the Otay Ranch RMP or the County MSCP Subarea Plan of establishing a comprehensive, large-scale managed Preserve system. The proposed Project would provide for the conveyance of approximately 891 acres to the Otay Ranch Preserve. Additionally, without the development of Village 13 pursuant to the Otay SRP, it is foreseeable that the 1,089.0 acres of land designated as Preserve by the proposed Project would not be available for conveyance to the Otay Ranch Preserve by other Otay Ranch property owners. Because Alternative A would result in no development occurring on the Project site, no Preserve land would be conveyed to the regional Preserve under this alternative. This would not meet the proposed Project's objective

of implementing the goals, objectives, and policies of the Otay Ranch RMP and County MSCP Subarea Plan South County Segment.

Although Alternative A would hinder the ability of the Otay Ranch RMP and County MSCP Subarea Plan to establish a comprehensive, large-scale managed Preserve system, the No Project Alternative would result in ***no impact*** to biological resources as compared to the proposed Project.

Cultural Resources

As discussed in Section 2.4, Cultural Resources, development of the proposed Project would result in significant impacts to prehistoric and historic cultural resources; however, mitigation measures are proposed that would reduce project-level and cumulative impacts to less than significant levels.

Under Alternative A, no development would occur. Cultural resources identified on the Project site would remain and would not be affected. Additionally, there would be no construction and grading activities, so the potential for impacts to unknown (buried) cultural resources would be avoided. ***No impacts*** to cultural resources would occur under Alternative A as compared to the proposed Project.

Geology and Soils

As discussed in Section 2.5, Geology and Soils, development of the proposed Project would result in significant impacts to geology and soils; however, mitigation measures would be implemented that would reduce these impacts to a less than significant level.

Alternative A would avoid impacts associated with geology and soils, because no development on the Project site would occur. ***No impacts*** would occur under Alternative A as compared to the proposed Project.

Hazards and Hazardous Materials

As discussed in Section 2.6, Hazards and Hazardous Materials, development of the proposed Project would result in significant impacts related to hazards and hazardous materials; however, mitigation measures would be implemented that would reduce these impacts to a less than significant level.

Alternative A would result in no development on the Project site. As discussed in Section 2.6, the proposed Project would result in the increased potential to expose people to hazards and hazardous materials. Alternative A would eliminate the potential to expose people to these hazards. As a result, ***no impacts*** from hazards and hazardous materials would occur under Alternative A as compared to the proposed Project.

Noise

As discussed in Section 2.7, Noise, the proposed Project would result in significant impacts to noise; however, mitigation measures would be implemented that would reduce these impacts to a less than significant level.

Under Alternative A, no development of the Project site would occur. No additional traffic noise would be created by the proposed Project, nor would construction-related activities take place that would lead to significant temporary noise impacts. Under Alternative A, ***no impacts*** related to noise would occur as compared to the proposed Project.

Solid Waste

As discussed in Section 2.8, Solid Waste, the proposed Project would contribute to significant cumulative impacts to solid waste disposal.

Under Alternative A, the Project site would remain undeveloped and no solid waste would be generated that would require disposal in a landfill. Under Alternative A, ***no impacts*** to solid waste would occur as compared to the proposed Project.

Transportation and Traffic

As discussed in Section 2.9, Transportation and Traffic, the proposed Project would result in significant traffic impacts along certain roadway segments in the traffic study area, absent mitigation. However, improvements and mitigation have been identified to reduce these traffic impacts to less than significant levels.

Under Alternative A, no development would be constructed on-site. Eliminating development on the Project site would also eliminate the Project's traffic contributions to existing and planned roadways. No impacts to intersections or roadway segments would occur. ***No impacts*** would occur to transportation and traffic as compared to the proposed Project.

4.3 Analysis of Alternative B (Existing Otay SRP)

4.3.1 Alternative B Description and Setting

Under Alternative B, the 1,869-acre Project site would be developed as defined in the existing Otay SRP. As shown in **Figure 4.0-1**, development of the Project site would consist of 530 single-family homes and 1,408 multi-family homes for a total of 1,938 homes. Resort uses would encompass most of the southwestern portion of the Project site for a total of 134.4 acres and includes 800 rooms. An additional 141.5 acres are identified for a golf course. Two parks would be included under this alternative for a total of 16.4 acres. While no public safety site was included within Village 13 in the Otay SRP, which located a fire station in Village 15, Alternative B would include a Public Safety Site. This alternative would include the realignment of Otay Lakes Road from its existing location on the southern edge of the Project site to the approximate middle of the site (refer to **Figure 4.0-1**). This alternative includes 1,107 acres of

Preserve land. **Table 4.0-1** provides a summary comparison of the impacts of Alternative B to the proposed Project.

4.3.2 Comparison of the Effects of the Existing Otay SRP Alternative (Alternative B) to the Proposed Project

Aesthetics

As discussed in Section 2.1, Aesthetics, the proposed Project would result in significant and unavoidable impacts to scenic vistas, scenic highways, and the visual character of the area. No feasible mitigation measures exist to avoid or minimize this effect.

Alternative B would develop the Project site with 1,938 homes, resort uses, parks, and a golf course, and result in a development footprint of 761.6 acres, a decrease of 18 acres compared to the proposed Project. Development under Alternative B would result in similar impacts to aesthetics when compared to the proposed Project because Alternative B would provide for generally the same amount of development distributed throughout the site as the proposed Project. Additionally, development under this alternative would consist primarily of multi-family homes and include up to 800 hotel rooms, resulting in development at a greater intensity in terms of height, bulk, and scale when compared to the proposed Project. Development of multi-family homes and a larger resort area requires larger pads. Due to the existing topography of the site, large pads would have a greater visual impact compared to the more terraced single-family neighborhoods proposed by the project. Therefore, like the proposed Project, development under this alternative would result in ***significant impacts***.

Air Quality

As discussed in Section 2.2, Air Quality, the proposed Project would result in significant and unavoidable impacts to air quality from construction-related pollutant emissions. Mitigation measures proposed would reduce these impacts, but not to a less than significant level.

Alternative B would result in the development of approximately the same number of acres as the proposed Project; therefore, construction emissions are anticipated to be the same under Alternative B as would occur from development of the proposed Project.

Alternative B would result in the development of 1,938 dwelling units and other uses (resort, golf course, parks, and Open Space). These other uses would result in similar stationary source emissions under this alternative when compared to the proposed Project. However, the increased acreage for resort and golf course uses proposed by this alternative would result in 3,728 more ADT. This increase in trips would result in an increase in vehicular emissions (primarily carbon monoxide). Therefore, operational emissions associated with this alternative would be greater than the proposed Project.

The increase of mobile emissions associated with Alternative B would result in greater impacts to air quality when compared to the proposed Project; therefore, impacts to air quality would ***remain significant and unavoidable***.

Biological Resources

As discussed in Section 2.3, Biological Resources, development of the proposed Project would result in significant impacts to biological resources; however, proposed mitigation measures would reduce these impacts to a less than significant level.

Alternative B would result in the development of approximately the same number of acres as the proposed Project. However, this alternative would not provide for the same conservation/preservation of high-quality habitat for the Quino checkerspot butterfly or high-quality vernal pools, nor would it provide for wildlife corridors as would the proposed Project. This alternative impacts the K8 vernal pool group, which includes San Diego Fairy Shrimp. Alternative B also would impact 25 Quino checkerspot butterfly sighting areas, which is 13 more than the proposed Project. Additionally, Alternative B includes Otay Lakes Road as a six-lane prime arterial running through the Project site, including the rocky canyon in the eastern portion, which is proposed to be a wildlife crossing under the proposed Project. As such, impacts to biological resources would be greater under this alternative when compared to the proposed Project.

Relative to regional conservation planning, Alternative B would satisfy the objectives set forth in the Otay Ranch RMP and the County MSCP Subarea Plan of establishing a comprehensive, large-scale managed Preserve system by designating 1,107 acres as Preserve land, an increase of 18 acres as compared to the proposed Project.

Under Alternative B, approximately 762 acres would be developed. Of this amount, approximately 67 acres are "common uses" (as defined by the Otay Ranch RMP), including 40.2 acres for circulation element roads (Otay Lakes Road), 16.4 acres for parks, and 10.0 acres for an elementary school. As a result, the total amount of land conveyed to the Otay Ranch Preserve would be roughly 826 acres, which is 65 acres less than the proposed Project.

Development under Alternative B would result in greater impacts to biological resources because it would conserve/preserve less habitat for the Quino checkerspot butterfly, not conserve/ preserve high-quality vernal pools, and not provide wildlife corridors as proposed by the Project. Development under Alternative B would result in ***greater impacts*** to biological resources when compared to the proposed Project.

Cultural Resources

As discussed in Section 2.4, Cultural Resources, development of the proposed Project would result in significant impacts to cultural resources; however, while mitigation measures would be implemented that would reduce Project impacts to a less than significant level, cumulative impacts would remain significant and unavoidable.

Development under Alternative B would result in similar impacts to cultural resources when compared to the proposed Project because Alternative B would result in the development of essentially the same number of acres as the proposed Project. Similar to the proposed Project, development under Alternative B would require adherence to the mitigation measures discussed

in Section 2.4. Overall, impacts to cultural resources under Alternative B would be similar to the proposed Project.

Geology and Soils

As discussed in Section 2.5, Geology and Soils, development of the proposed Project would result in significant impacts to geology and soils; however, mitigation measures would be implemented that would reduce these impacts to a less than significant level.

Development under Alternative B would generally result in the same number of acres developed as the proposed Project. Similar potential for rock fall, soil erosion, seismic ground shaking, and surficial instability would result when compared to the proposed Project. Similar to the proposed Project, development under Alternative B would require adherence to the mitigation measures discussed in Section 2.5. Overall, Alternative B would result in similar geology and soils impacts when compared to the proposed Project.

Hazards and Hazardous Materials

As discussed in Section 2.6, Hazards and Hazardous Materials, development of the proposed Project would result in significant impacts related to wildland fire hazards; however, mitigation measures would be implemented that would reduce this impact to a less than significant level.

Development under Alternative B would result in the same number of dwelling units as the proposed Project and would be subject to a similar level of wildland fire hazards as the proposed Project. Alternative B includes a public safety site and therefore meets the General Plan Safety Element Response Objective of five minutes. Similar to the proposed Project, development under Alternative B would require adherence to the mitigation measures discussed in Section 2.6. As a result, impacts from hazards and hazardous materials would be similar to the proposed Project.

Noise

As discussed in Section 2.7, Noise, the proposed Project would result in significant traffic-generated noise impacts and operational noise impacts associated with mechanical equipment in residential and commercial developments and deliveries to the neighborhood commercial site; however, mitigation measures would be implemented that would reduce these impacts to a less than significant level.

Alternative B would increase vehicular trips by 3,728 ADT, and result in increased operational noise levels when compared to the proposed Project. Noise impacts associated with construction activities would be similar to the proposed Project, as this alternative calls for the development of approximately the same number of acres. Other operational noise emissions are anticipated to be the same under Alternative B and the proposed Project. Overall, Alternative B would result in ***greater impacts*** related to noise when compared to the proposed Project.

Solid Waste

As discussed in Section 2.8, Solid Waste, the proposed Project would contribute to significant cumulative impacts to solid waste disposal.

Development of 1,938 dwelling units under Alternative B would cause a similar demand for solid waste disposal, and the cumulative impact would ***remain significant and unavoidable*** under this alternative.

Transportation and Traffic

As discussed in Section 2.9, Transportation and Traffic, the proposed Project would result in significant traffic impacts in the traffic study area, absent mitigation. Improvements and mitigation have been identified to reduce these impacts to less than significant levels.

Based on the trip generation rates presented in Section 2.9, the proposed Project would generate 27,191 ADT. As discussed above, Alternative B would decrease the number of single-family homes to 530 and increase to 1,408 the number of multi-family homes, which would result in a net decrease of 2,702 residential ADT. However, the proposed 134.4 acres of resort uses, and 141.5 acres of golf course uses would increase traffic from these uses, for a net increase of approximately 3,728 ADT in comparison to the proposed Project. The increase of ADT under this alternative would result in ***greater traffic impacts*** when compared to the proposed Project.

4.3.3 Summary of Alternative B Analysis

Development of the Project site under Alternative B would result in the same number of housing units and approximately the same amount of acreage would be developed as the proposed Project. However, this alternative would include a larger amount of acreage devoted to multi-family uses, resort uses, and a golf course, and would result in an increase in traffic volumes by approximately 3,728 ADT as compared to the proposed Project. This alternative would result in similar impacts to aesthetics, cultural resources, geology and soils, hazards and hazardous materials, and solid waste when compared to the proposed Project. Impacts to air quality, biological resources, noise, and traffic would be greater under Alternative B when compared to the proposed Project. Additionally, Alternative B would result in less Preserve land conveyed to the Otay Ranch Preserve as a result of the reduced development footprint.

4.4 Analysis of Alternative C

4.4.1 Alternative C Description and Setting

Under Alternative C, development would occur only within the western portion of the Project site (**Figure 4.0-2)**. This alternative would result in the development of fewer homes (1,241), but would provide for a different distribution between single-family homes (382 compared to the proposed 1,881) and multi-family homes (859 homes compared to the proposed 57). Alternative C would designate 113.7 acres of land for resort uses and a golf course would be provided on 82.9 acres. Alternative C would still provide the public safety and school sites. Local parks

would be reduced from nine sites and 29.6 acres to one site of 10.6 acres (which meets the PLDO requirement for park demand). **Table 4.0-1** provides a summary comparison of Alternative C to the proposed Project.

4.4.2 Comparison of the Effects of Alternative C to the Proposed Project

Aesthetics

Alternative C would concentrate land uses within the western portion of the Project site and reduce the development footprint by roughly 296 acres compared to the proposed Project. Development under Alternative C would generally result in reduced impacts to aesthetics when compared to the proposed Project because of the reduced area of development. Although this alternative proposes fewer homes, development within the western portion of the Project site would be at a greater intensity in terms of height, bulk, and scale when compared to the proposed Project. While development under Alternative C would not fully mitigate all impacts to aesthetics, it would result in less impact than the proposed Project.

Air Quality

Alternative C would result in the development of 697 fewer dwelling units, have a smaller footprint of development in comparison to the proposed Project, but would provide increased acreage of resort uses and a golf course when compared to the proposed Project. The net result of Alternative C would be a decrease of 3,308 ADT in comparison to the proposed Project. Therefore, construction and operational emissions associated with Alternative C would be less than the proposed Project.

Biological Resources

Under Alternative C, the development footprint of the Project site would be reduced by roughly 296 acres and the eastern portion of the Project site would remain undeveloped. Because the Project site is predominantly composed of coastal sage scrub, Alternative C would reduce the overall acreage of CSS impacts.

Alternative C would not provide for the same conservation/preservation of high-quality habitat for the Quino checkerspot butterfly as it includes development on a central ridgeline with approximately seven Quino sightings. This alternative does not impact the K8 vernal pool group, which includes San Diego Fairy Shrimp.

Relative to regional conservation planning, Alternative C would satisfy the objectives set forth in the Otay Ranch RMP and the County MSCP Subarea Plan of establishing a comprehensive, large-scale managed Preserve system by designating 1,107 acres as Preserve land, an increase of 18 acres as compared to the proposed Project.

Under Alternative C, approximately 484 acres would be developed. Of this amount, approximately 10.6 acres are parks, which are a common use and not subject to Preserve conveyance requirements. As a result, the total amount of land conveyed to the Otay Ranch

Preserve would be roughly 562.4 acres, which is 328.6 acres less than the proposed Project. Due to the smaller development footprint, while Alternative C would designate a larger Preserve area than the proposed project, a smaller amount of the Preserve would be conveyed to public ownership.

When compared to the proposed Project, Alternative C would result in less overall impacts to biological resources, although the actual resources impacted vary between the proposed Project and this alternative and the overall dedicated Preserve size would be smaller.

Cultural Resources

Development under Alternative C would result in reduced impacts to cultural and paleontological resources when compared to the proposed Project because Alternative C would focus development within the western portion of the Project site. This avoids development within the eastern portion of the Project site, resulting in the disturbance of 25 fewer significant and limited significance archaeological resources than would the proposed Project. While the impact to cultural resources from development under Alternative C would remain significant, it would result in less impact than would the proposed Project.

Geology and Soils

Development under Alternative C would focus development within the western portion of the Project site. This would avoid development within the eastern portion of the Project site and would result in less potential for rock fall, soil erosion, and surficial instability when compared to the proposed Project. However, potential impacts from seismic ground shaking would be the same as the proposed Project. Similar to the proposed Project, development under Alternative C would require adherence to the mitigation measures discussed in Section 2.5 of this EIR. Therefore, Alternative C would result in similar impacts to geology and soils when compared to the proposed Project.

Hazards and Hazardous Materials

Development under Alternative C would result in 1,241 dwelling units within the Project site, but would reduce the footprint of development and, therefore, may reduce the potential for wildland fire impacts. Alternative C is within the 5-minute response radius from an existing fire station. Overall, however, Alternative C would result in hazards and hazardous materials impacts similar to the proposed Project, and development under Alternative C would require adherence to the mitigation measures identified in Section 2.6 of this EIR.

Noise

Alternative C would reduce vehicular trips by 3,308 ADT and result in decreased operational noise levels when compared to the proposed Project. Noise impacts associated with construction activities would be reduced, as less grading and site preparation (blasting, hauling trips, etc.) would be required with the reduced acreage to be graded under this alternative. The reduction in ADT under this alternative would reduce operational noise emissions after development of the

Project site. Overall, Alternative C would result in less impact related to noise when compared to the proposed Project.

Solid Waste

Alternative C would provide fewer dwelling units than the proposed Project; therefore, solid waste disposal requirements would be reduced. However, the cumulative impact would still be significant and unavoidable because a reduction of 697 dwelling units in comparison to the proposed Project would not avoid the future need for additional landfill space. However, the cumulative impacts of solid waste disposal under Alternative C would be similar to the proposed Project.

Transportation and Traffic

Based on the trip generation rates presented in Section 2.9 of this EIR, the proposed Project would generate 27,191 ADT. Alternative C would decrease the number of single-family homes to 382 and increase the number of multi-family homes to 859, which would result in a net decrease of 8,574 residential ADT. The proposed 113.7 acres of resort uses and 82.9 acres of golf course uses would increase traffic from these uses, though the net result of Alternative C would be a decrease of approximately 3,308 ADT in comparison to the proposed Project. The decrease in ADT under this alternative would result in reduced traffic impacts when compared to the proposed Project.

4.4.3 Summary of Alternative C Analysis

Development of the Project site under Alternative C would result in reducing the number of housing units from 1,938 to 1,241 and reducing the amount of acreage that would be developed by 296 acres compared to the proposed Project. However, this alternative would include a larger amount of acreage devoted to multi-family uses, resort uses, and a golf course. Overall, Alternative C would decrease traffic volumes by approximately 3,308 ADT as compared to the proposed Project. This alternative would result in similar impacts to geology and soils, hazards and hazardous materials, and solid waste when compared to the proposed Project. Impacts to aesthetics, air quality, biological resources, cultural resources, noise, and traffic would be less under Alternative C when compared to the proposed Project. Additionally, Alternative C would result in less Preserve land conveyed to the Otay Ranch Preserve as a result of the reduced development footprint.

4.5 Analysis of Alternative D

4.5.1 Alternative D Description and Setting

Under Alternative D, development of the 1,869-acre site would occur only within the western portion of the Project site as shown in **Figure 4.0-3**. This alternative would result in the development of 394 single-family homes (compared with the proposed Project's 1,881) and 1,544 multi-family or single-family attached homes (compared with the proposed Project's 57) for the same total of 1,938 dwelling units as the proposed Project. Alternative D would designate

61.3 acres of land for resort uses, compared to 17.4 acres under the proposed Project. No golf course would be included. An elementary school site and public safety site would be reserved under this alternative. Local parks would be reduced from nine sites of 29.6 total acres to two sites of 16.6 total acres. As shown in **Figure 4.0-3**, Alternative D would locate the resort uses adjacent to Otay Lakes Road, overlooking Lower Otay Lake. **Table 4.0-1** provides a summary comparison of the impacts of the Alternatives to the proposed Project.

4.5.2 Comparison of the Effects of Alternative D to the Proposed Project

Aesthetics

Alternative D would concentrate land uses within the western portion of the Project site and reduce the development footprint by roughly 296 acres as compared to the proposed Project. Development under Alternative D would generally result in reduced impacts to aesthetics when compared to the proposed Project because of the reduced area of development. Although this alternative proposes all development within the western portion of the Project site, the resulting development would be at a greater intensity in terms of height, bulk, and scale when compared to the proposed Project. While development under Alternative D would not fully mitigate all impacts to aesthetics, it would result in less impact than the proposed Project.

Air Quality

Alternative D would result in the development of the same number of dwelling units; however, the resort uses would increase to 61.3 acres and cause a net increase of 1,742 ADT. The reduced development footprint would reduce construction air emissions, but not to a level that would avoid a significant air quality impact. Overall, the air quality impacts of Alternative D would be similar to the proposed Project.

Biological Resources

Under Alternative D, the development footprint of the Project site would be reduced by roughly 296 acres and the eastern portion of the Project site would remain undeveloped. Because the Project site is predominantly composed of coastal sage scrub, Alternative D would reduce the overall acreage of CSS impacts.

Alternative D would not provide for the same conservation/preservation of high-quality habitat for the Quino checkerspot butterfly as it includes development on a central ridgeline with approximately seven Quino sightings. This alternative does not impact the K8 vernal pool group, which includes San Diego fairy shrimp.

Relative to regional conservation planning, Alternative D would satisfy the objectives set forth in the Otay Ranch RMP and the County MSCP Subarea Plan of establishing a comprehensive, large-scale managed Preserve system by designating 1,107 acres as Preserve land, an increase of 18 acres as compared to the proposed Project.

Under Alternative D, approximately 484 acres would be developed. Of this amount, approximately 10.6 acres are parks and 10 acres are for an elementary school site, which are common uses and not subject to Preserve conveyance requirements. As a result, the total amount of land conveyed to the Otay Ranch Preserve would be roughly 564.3 acres, which is 327.6 acres less than the proposed Project. Due to the smaller development footprint, while Alternative D would designate a larger Preserve area than the proposed project, a smaller amount of the Preserve would be conveyed to public ownership.

When compared to the proposed Project, Alternative D would result in less overall impacts to biological resources, although the actual resources impacted vary between the proposed Project and this alternative and the overall dedicated Preserve size would be smaller.

Cultural Resources

Development under Alternative D would result in reduced impacts to cultural and paleontological resources when compared to the proposed Project because Alternative D would focus development within the western portion of the Project site. This avoids development within the eastern portion of the Project site, resulting in the disturbance of 20 fewer significant and limited significance archaeological resources than would the proposed Project. While the impact to cultural resources from development under Alternative D would remain significant, it would result in less impact than would the proposed Project.

Geology and Soils

Development under Alternative D would focus development within the western portion of the Project site. This would avoid development within the eastern portion of the Project site and would result in less potential for rock fall, soil erosion, and surficial instability when compared to the proposed Project. However, potential impacts from seismic ground shaking would be similar to the proposed Project. Development under Alternative D would require the same adherence to the mitigation measures discussed in Section 2.5 of this EIR. Therefore, Alternative D would result in similar impacts to geology and soils when compared to the proposed Project.

Hazards and Hazardous Materials

Development under Alternative D would result in the same 1,938 dwelling units as the proposed Project, but would reduce the footprint of development, and, therefore, may reduce the potential for wildland fire impacts. Alternative D is within the 5-minute response radius from an existing fire station. Overall, however, Alternative D would result in hazards and hazardous materials impacts similar to the proposed Project and development under Alternative D would require adherence to the mitigation measures identified in Section 2.6 of this EIR.

Noise

Alternative D would result in the same 1,938 dwelling units as the proposed Project, but would decrease the number of single-family homes to 394 and increase to 1,544 the number of multi-family homes. This would result in a net decrease of 2,974 residential ADT. However, the

proposed 61.3 acres of resort uses would increase traffic from these uses for a net Project increase of approximately 1,742 ADT under Alternative D in comparison to the proposed Project. Noise impacts associated with construction activities would be reduced, as less grading and site preparation (blasting, hauling trips, etc.) would be required with the reduced acreage to be graded under this alternative. Operational noise emissions are anticipated to be similar to the proposed Project after development of the Project site. Overall, Alternative D would result in similar impacts related to noise when compared to the proposed Project.

Solid Waste

Alternative D would provide the same number of dwelling units as the proposed Project and would cause a similar demand for solid waste disposal. Therefore, the cumulative impact of Alternative D would be significant and unavoidable. Overall, Alternative D would result in similar impacts of solid waste disposal when compared to the proposed Project.

Transportation and Traffic

Based on the trip generation rates presented in Section 2.9 of this EIR, the proposed Project would generate 27,191 ADT. Alternative D would decrease the number of single-family homes to 394 and increase to 1,544 the number of multi-family homes, which would result in a net decrease of 2,974 residential ADT. However, the proposed 61.3 acres of resort uses would increase traffic, for a net increase of approximately 1,742 ADT under Alternative D in comparison to the proposed Project. The relatively small increase of ADT under this alternative would result in a similar level of traffic impacts when compared to the proposed Project.

4.5.3 Summary of Alternative D Analysis

Development of the Project site under Alternative D would result in the same number of housing units, although in a different mix with more multi-family homes compared to the proposed Project, and would reduce the amount of acreage that would be developed by 296 acres compared to the proposed Project. This alternative would include a larger amount of acreage devoted to multi-family and resort uses. Overall, Alternative D would increase traffic volumes by approximately 1,742 ADT as compared to the proposed Project. This alternative would result in similar impacts to air quality, geology and soils, hazards and hazardous materials, noise, solid waste, and traffic when compared to the proposed Project. Impacts to aesthetics, biological resources, and cultural resources would be less under Alternative D when compared to the proposed Project. Additionally, Alternative D would result in less Preserve land conveyed to the Otay Ranch Preserve as a result of the reduced development footprint.

4.6 Analysis of Alternative E

4.6.1 Alternative E Description and Setting

Under Alternative E, development would occur only within the western portion of the Project site (**Figure 4.0-4**). This alternative would result in the development of fewer homes (1,391 compared to 1,938 with the proposed Project) and would slightly increase the number of multi-

family homes (72 homes compared to the proposed 57). Lands designated for resort uses would be increased slightly to 19.9 acres and the golf course would not be provided. Six local park sites totaling 12 acres would be provided. Under Alternative E, an elementary school site and public safety site would be reserved. **Table 4.0-1** provides a summary comparison of the impacts of the Alternatives to the proposed Project.

4.6.2 Comparison of the Effects of Alternative E to the Proposed Project

Aesthetics

Alternative E would concentrate land uses within the western portion of the Project site and reduce the development footprint by roughly 229.5 acres as compared to the proposed Project. Development under Alternative E would generally result in reduced impacts to aesthetics when compared to the proposed Project due to the reduced area of development. Although this alternative proposes fewer homes, development within the western portion of the Project site would be at a greater intensity in terms of height, bulk, and scale when compared to the proposed Project. While development under Alternative E would not fully mitigate all impacts to aesthetics, it would result in fewer impacts than the proposed Project.

Air Quality

Alternative E would result in the development of 547 fewer dwelling units, have a smaller footprint of development in comparison to the proposed Project, and would result in a net decrease of 5,493 ADT. The reduced development footprint would reduce construction air emissions, but not to a level that would avoid a significant air quality impact. Overall, the air quality impacts of Alternative E would be similar to the proposed Project; however, the reduction in vehicle trips would result in reduced emissions.

Biological Resources

Under Alternative E, the development footprint of the Project site would be reduced by roughly 227.0 acres and the eastern portion of the Project site would remain undeveloped. Because the Project site is predominantly composed of coastal sage scrub, Alternative E would reduce the overall acreage of CSS impacts.

Relative to regional conservation planning, Alternative E would satisfy the objectives set forth in the Otay Ranch RMP and the County MSCP Subarea Plan of establishing a comprehensive, large-scale managed Preserve system by designating 1,107 acres as Preserve land, an increase of 18 acres as compared to the proposed Project.

Under Alternative D, approximately 550.1 acres would be developed. Of this amount, approximately 12 acres are parks and 10 acres are for an elementary school, which are common uses and not subject to Preserve conveyance requirements. As a result, the total amount of land conveyed to the Otay Ranch Preserve would be roughly 627.4 acres, which is 263.6 acres less than the proposed Project. Due to the smaller development footprint, while Alternative E would

designate a larger Preserve area than the proposed project, a smaller amount of the Preserve would be conveyed to public ownership.

When compared to the proposed Project, Alternative E would result in less overall impacts to biological resources, although the actual resources impacted vary between the proposed Project and this alternative and the overall dedicated Preserve size would be smaller.

Cultural Resources

Development under Alternative E would result in reduced impacts to cultural and paleontological resources when compared to the proposed Project because Alternative E would focus development within the western portion of the Project site. This avoids development within the eastern portion of the Project site, resulting in the disturbance of 23 fewer significant and limited significance archaeological resources than the proposed Project. While the impact to cultural resources from development under Alternative E would be significant, it would result in less impact than would the proposed Project.

Geology and Soils

Development under Alternative E would focus development within the western portion of the Project site. This would avoid development within the eastern portion of the Project site and would result in less potential for rock fall, soil erosion, and surficial instability when compared to the proposed Project. However, potential impacts from seismic ground shaking would be the same as the proposed Project. Development under Alternative E would require adherence to the mitigation measures discussed in Section 2.5 of this EIR. Therefore, Alternative E would result in similar impacts to geology and soils when compared to the proposed Project.

Hazards and Hazardous Materials

Development under Alternative E would result in 1,391 dwelling units within the Project site, but would reduce the footprint of development and, therefore, may reduce the potential for wildland fire impacts. Overall, however, Alternative E would result in hazards and hazardous materials impacts similar to the proposed Project and development under Alternative E would require adherence to the mitigation measures identified in Section 2.6 of this EIR.

Noise

Alternative E would reduce vehicular trips by 5,493 ADT and result in decreased operational noise levels when compared to the proposed Project. Noise impacts associated with construction activities would be reduced as less grading and site preparation (blasting, hauling trips, etc.) would be required with the reduced acreage to be graded under this alternative. The reduction in ADT under this alternative would reduce operational noise emissions after development of the Project site. Overall, Alternative E would result in less impact related to noise when compared to the proposed Project.

Solid Waste

Alternative E would provide 547 fewer dwelling units than the proposed Project; therefore, solid waste disposal requirements would be reduced. However, the cumulative impact would still be significant and unavoidable because the reduction in dwelling units in comparison to the proposed Project would not avoid the need for additional landfill space. Therefore, the cumulative impacts of solid waste disposal under Alternative E would be similar to the proposed Project.

Transportation and Traffic

Based on the trip generation rates presented in Section 2.9 of this EIR, the proposed Project would generate 27,191 ADT. Alternative E would decrease the total number of residences and result in a net decrease of ADT. The resort acreage would be slightly increased in comparison to the proposed Project. The overall decrease of 5,493 ADT under this alternative would result in less traffic impact when compared to the proposed Project. While the impact to transportation and traffic from development under Alternative E would be significant, it would result in less impact than would the proposed Project.

4.6.3 Summary of Alternative E Analysis

Development of the Project site under Alternative E would result in reducing the number of housing units from 1,938 to 1,391, and reducing the amount of acreage that would be developed by 229 acres compared to the proposed Project. This alternative would include a larger amount of acreage devoted to multi-family and resort uses. Overall, Alternative E would decrease traffic volumes by approximately 5,493 ADT as compared to the proposed Project. This alternative would result in similar impacts to geology and soils, hazards and hazardous materials, and solid waste when compared to the proposed Project. Impacts to aesthetics, air quality, biological resources, cultural resources, noise, and traffic would be less under Alternative E when compared to the proposed Project. Additionally, Alternative E would result in less Preserve land conveyed to the Otay Ranch Preserve as a result of the reduced development footprint.

4.7 Analysis of Alternative F

4.7.1 Alternative F Description and Setting

Under Alternative F, development of the 1,869-acre site would occur only within the western portion of the Project site. As shown in **Figure 4.0-5**, this alternative would result in the development of 1,268 single-family homes (as compared to 1,881 under the proposed Project) and 670 multi-family homes (as compared to 57 under the proposed Project) for the same total of 1,938 dwelling units as the proposed Project. Lands designated for resort uses would increase to 19.9 acres, in comparison to 17.4 acres under the proposed Project. Under Alternative F, an elementary school site and public safety site would be reserved and six park sites totaling 16.6 acres would be provided. **Table 4.0-1** provides a summary comparison of the impacts of the Alternatives to the proposed Project.

4.7.2 Comparison of the Effects of Alternative F to the Proposed Project

Aesthetics

Alternative F would concentrate land uses within the western portion of the Project site and reduce the development footprint by roughly 229.5 acres as compared to the proposed Project. Development under Alternative F would generally result in reduced impacts to aesthetics when compared to the proposed Project because of the reduced area of development. Although this alternative proposes all development within the western portion of the Project site, the resulting development would be at a greater intensity in terms of height, bulk, and scale when compared to the proposed Project. Thus, the aesthetic benefits of a smaller project footprint are reduced by the greater intensity of buildings within the development footprint. While development under Alternative F would not fully mitigate all impacts to aesthetics, it would result in less impact than the proposed Project.

Air Quality

Alternative F would result in the development of the same number of dwelling units, with a minor traffic reduction of 1,196 ADT from the greater reliance on multi-family homes as compared to the proposed Project. The footprint of development would be reduced by 229 acres and, therefore, construction air emissions would be reduced, but not to a level to avoid a significant air quality impact. Overall, the air quality impact of Alternative F would be similar to the proposed Project; however, the reduction in vehicle trips would result in reduced emissions.

Biological Resources

Under Alternative F, the development footprint of the Project site would be reduced by roughly 229 acres and the eastern portion of the Project site would remain undeveloped. Because the Project site is predominantly composed of coastal sage scrub, Alternative F would reduce the overall acreage of CSS impacts.

Relative to regional conservation planning, Alternative E would satisfy the objectives set forth in the Otay Ranch RMP and the County MSCP Subarea Plan of establishing a comprehensive, large-scale managed Preserve system by designating 1,107 acres as Preserve land, an increase of 18 acres as compared to the proposed Project.

Under Alternative E, approximately 550.1 acres would be developed. Of this amount, approximately 16.6 acres are parks and 10 acres are for an elementary school, which are common uses and not subject to Preserve conveyance requirements. As a result, the total amount of land conveyed to the Otay Ranch Preserve would be roughly 621.9 acres, which is 269.1 acres less than the proposed Project. Due to the smaller development footprint, while Alternative F would designate a larger Preserve area than the proposed project, a smaller amount of the Preserve would be conveyed to public ownership.

When compared to the proposed Project, Alternative F would result in less overall impacts to biological resources, although the actual resources impacted vary between the proposed Project and this alternative and the overall dedicated Preserve size would be smaller.

Cultural Resources

Development under Alternative F would result in reduced impacts to cultural resources when compared to the proposed Project because Alternative F would focus development within the western portion of the Project site. This results in the disturbance of 23 fewer significant and limited significance cultural resources in the eastern portion of the Project site than would the proposed Project. While the impact to cultural resources from development under Alternative F would be significant, it would result in less impact than would the proposed Project.

Geology and Soils

Development under Alternative F would focus development within the western portion of the Project site. Alternative F would avoid development within the eastern portion of the Project site, which would result in less potential for rock fall, soil erosion, and surficial instability when compared to the proposed Project. However, potential impacts from seismic ground shaking would be similar to the proposed Project. Development under Alternative F would require the same adherence to the mitigation measures discussed in Section 2.5 of this EIR. Therefore, Alternative F would result in similar impacts to geology and soils when compared to the proposed Project.

Hazards and Hazardous Materials

Development under Alternative F would result in the same 1,938 dwelling units as the proposed Project, but would reduce the footprint of development and, therefore, may reduce the potential for wildland fire impacts. Overall, however, Alternative F would result in hazards and hazardous materials impacts similar to the proposed Project, and the development under Alternative F would require adherence to the mitigation measures identified in Section 2.6 of this EIR.

Noise

Alternative F would result in the same 1,938 dwelling units as the proposed Project, but would decrease the number of single-family homes to 1,268 and increase to 670 the number of multi-family homes. This would result in a minor traffic reduction of 1,196 ADT as compared to the proposed project and, therefore, traffic noise levels would be similar to the proposed Project. Noise impacts associated with construction activities would be reduced, as less grading and site preparation (blasting, hauling trips, etc.) would be required with the reduced acreage to be graded under this alternative. Other operational noise emissions under Alternative F are anticipated to be similar to the proposed Project. Overall, Alternative F would result in similar impacts related to noise when compared to the proposed Project.

Solid Waste

Alternative F would provide the same number of dwelling units as the proposed Project and would cause a similar demand for solid waste disposal. Therefore, the cumulative impact of Alternative E would be significant and unavoidable. Overall, Alternative F would result in similar impacts to solid waste disposal when compared to the proposed Project.

Transportation and Traffic

Based on the trip generation rates presented in Section 2.9 of this EIR, the proposed Project would generate 27,191 ADT. Alternative F would decrease the number of single-family homes to 1,268 and increase to 670 the number of multi-family homes, and would result in a net decrease of 1,196 ADT in comparison to the proposed Project. Overall, this alternative would result in a similar level of traffic impacts when compared to the proposed Project.

4.7.3 Summary of Alternative F Analysis

Development of the Project site under Alternative F would result in the same number of housing units, with many more multi-family homes and fewer single family homes compared to the proposed Project. The amount of acreage that would be developed would be reduced by 229.5 acres compared to the proposed Project. This alternative would include a larger amount of acreage devoted to multi-family and resort uses. Overall, Alternative F would decrease traffic volumes by approximately 1,196 ADT as compared to the proposed Project. This alternative would result in similar impacts to air quality, geology and soils, hazards and hazardous materials, noise, solid waste, and traffic when compared to the proposed Project. Impacts to aesthetics, biological resources, and cultural resources would be less under Alternative F when compared to the proposed Project. Additionally, Alternative F would result in less Preserve land conveyed to the Otay Ranch Preserve as a result of the reduced development footprint.

4.8 Analysis of Alternative G

4.8.1 Alternative G Description and Setting

Under Alternative G, development would occur only within a reduced development footprint of 224 acres in the eastern portion of the Project site (**Figure 4.0-6**). This alternative would result in the development of only 465 single-family detached homes. Lands designated for resort uses would be the same as the proposed Project. Under Alternative G, a public safety site would be reserved, but not the elementary school site. Three park sites totaling 4.3 acres would be provided. **Table 4.0-1** provides a summary comparison of the impacts of the Alternatives to the proposed Project.

4.8.2 Comparison of the Effects of the Alternative G to the Proposed Project

Aesthetics

Alternative G would concentrate land uses within the eastern portion of the Project site and reduce the development footprint by roughly 555.6 acres as compared to the proposed Project. Development under Alternative G would generally result in reduced impacts to aesthetics when compared to the proposed Project because of the reduced area of development and because development would occur farther east of existing development and views would be obstructed by a sloping mesa. While development under Alternative G would not fully mitigate all impacts to aesthetics, it would result in less impact than the proposed Project.

Air Quality

Alternative G would result in the development of 1,473 fewer dwelling units and have a smaller footprint of development, reduce total net vehicle trips by 15,662 ADT, and increase open space in comparison to the proposed Project. Therefore, construction and operational emissions associated with this alternative would be less than the proposed Project. The reduction of construction emissions and mobile emissions associated with Alternative G would result in less air quality impacts than the proposed Project. However, only long-term operational $PM_{2.5}$ emissions at full buildout would be reduced to a less-than-significant level in comparison to the proposed Project. This alternative would result in less impact than the proposed Project; however, long-term operational air quality impacts to VOC, CO, and PM_{10} would still exceed the County's significance level thresholds and would require mitigation. **Table 4.0-2** provides a summary of Alternative G's long-term operational emissions.

Biological Resources

Under Alternative G, the development footprint of the Project site would be reduced by roughly 555.6 acres and would be located in the eastern portion of the Project site where there are fewer sensitive biological resources. Because the Project site is predominantly composed of coastal sage scrub, Alternative G would reduce the overall acreage of CSS impacts.

Relative to regional conservation planning, Alternative G would satisfy the objectives set forth in the Otay Ranch RMP and the County MSCP Subarea Plan of establishing a comprehensive, large-scale managed Preserve system by designating 1,107 acres as Preserve land, an increase of 18 acres as compared to the proposed Project.

Under Alternative G, approximately 224 acres would be developed. Of this amount, approximately 4.3 acres are parks, which are common uses and not subject to Preserve conveyance requirements. As a result, the total amount of land conveyed to the Otay Ranch Preserve would be roughly 261 acres, which is 630 acres less than the proposed Project. Due to the smaller development footprint, while Alternative G would designate a larger Preserve area than the proposed project, a smaller amount of the Preserve would be conveyed to public ownership.

While the impact to biological resources from development under Alternative G would be significant, it would result in much less impact than would the proposed Project.

Cultural Resources

Development under Alternative G would result in reduced impacts to cultural and paleontological resources when compared to the proposed Project. With the reduced development footprint under Alternative G, there would be 41 fewer significant and limited significance cultural resource sites impacted. While the impact to cultural resources from development under Alternative G would be significant, it would result in less impact than would the proposed Project.

Geology and Soils

With the reduced development footprint under Alternative G, impacts to geology and soils would be less when compared to the proposed Project; however, because the underlying geology is similar, many of the same design considerations per the mitigation measures discussed in Section 2.5 of this EIR would be required.

Hazards and Hazardous Materials

Development under Alternative G would reduce impacts of hazards and hazardous materials, though potential impacts from wildland fire would still occur. Alternative G includes a public safety site and therefore meets the General Plan Safety Element Response Objective of five minutes. Similar to the proposed Project, development under Alternative G would require adherence to the mitigation measures discussed in Section 2.6 of this EIR. Overall, Alternative G would result in less hazards and hazardous materials impacts when compared to the proposed Project.

Noise

Alternative G would reduce vehicular trips by 15,662 ADT and result in lower operational noise levels when compared to the proposed Project. Noise impacts associated with construction activities would also be reduced, as less grading and site preparation (would be required with the reduced acreage of this alternative. Overall, Alternative G would result in less noise impacts when compared to the proposed Project.

Solid Waste

Alternative G would provide fewer dwelling units than the proposed Project and, therefore, solid waste disposal requirements would be reduced. However, the cumulative impact of 465 dwelling units and a resort would still be significant and unavoidable, because a reduction of dwelling units in comparison to the proposed Project would not avoid the need for additional landfill space. However, cumulative impacts of solid waste disposal under Alternative G would be less than the proposed Project.

Transportation and Traffic

Based on the trip generation rates presented in Section 2.9 of this EIR, Alternative G would generate approximately 11,530 ADT, which would be 15,662 ADT less than the proposed Project. While the impact to transportation and traffic from development under Alternative G would be significant, it would result in less transportation and traffic impacts than would the proposed Project.

4.8.3 Summary of Alternative G Analysis

Development of the Project site under Alternative G would result in 1,473 fewer residential units and reduce the amount of acreage that would be developed by 555.6 acres compared to the proposed Project. Overall, Alternative G would decrease traffic volumes by approximately 15,662 ADT as compared to the proposed Project. This alternative would result in fewer impacts to aesthetics, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, noise, solid waste, and traffic when compared to the proposed Project. Alternative F would result in less Preserve land conveyed to the Otay Ranch Preserve as a result of the reduced development footprint.

4.9 Environmentally Superior Alternative

Table 4.0-1 summarizes the potential environmental impacts associated with the different alternatives and provides a comparison with the potential impacts of the proposed Project. CEQA requires an EIR to identify the environmentally superior alternative among all of the alternatives considered, including the proposed Project. If the "no project" alternative is selected as the environmentally superior alternative, then the EIR shall also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6[e][2]).

The environmental analysis of alternatives indicates, through a comparison of potential impacts from each of the proposed alternatives and the proposed Project, that Alternative A, the "no project" alternative, would be considered environmentally superior because all potential environmental impacts would be reduced under this alternative. However, as required by CEQA, when the "no project" alternative is selected as environmentally superior, an environmentally superior alternative must be selected among the other alternatives remaining. Based on the environmental analysis of the Project alternatives provided above, Alternative G would be considered the environmentally superior alternative among the remaining alternatives. This alternative would reduce or avoid impacts associated with aesthetics, air quality, biological resources, cultural resources, noise, and transportation and traffic when compared to the proposed Project.

Table 4.0-1
Comparison of Alternatives to Proposed Project

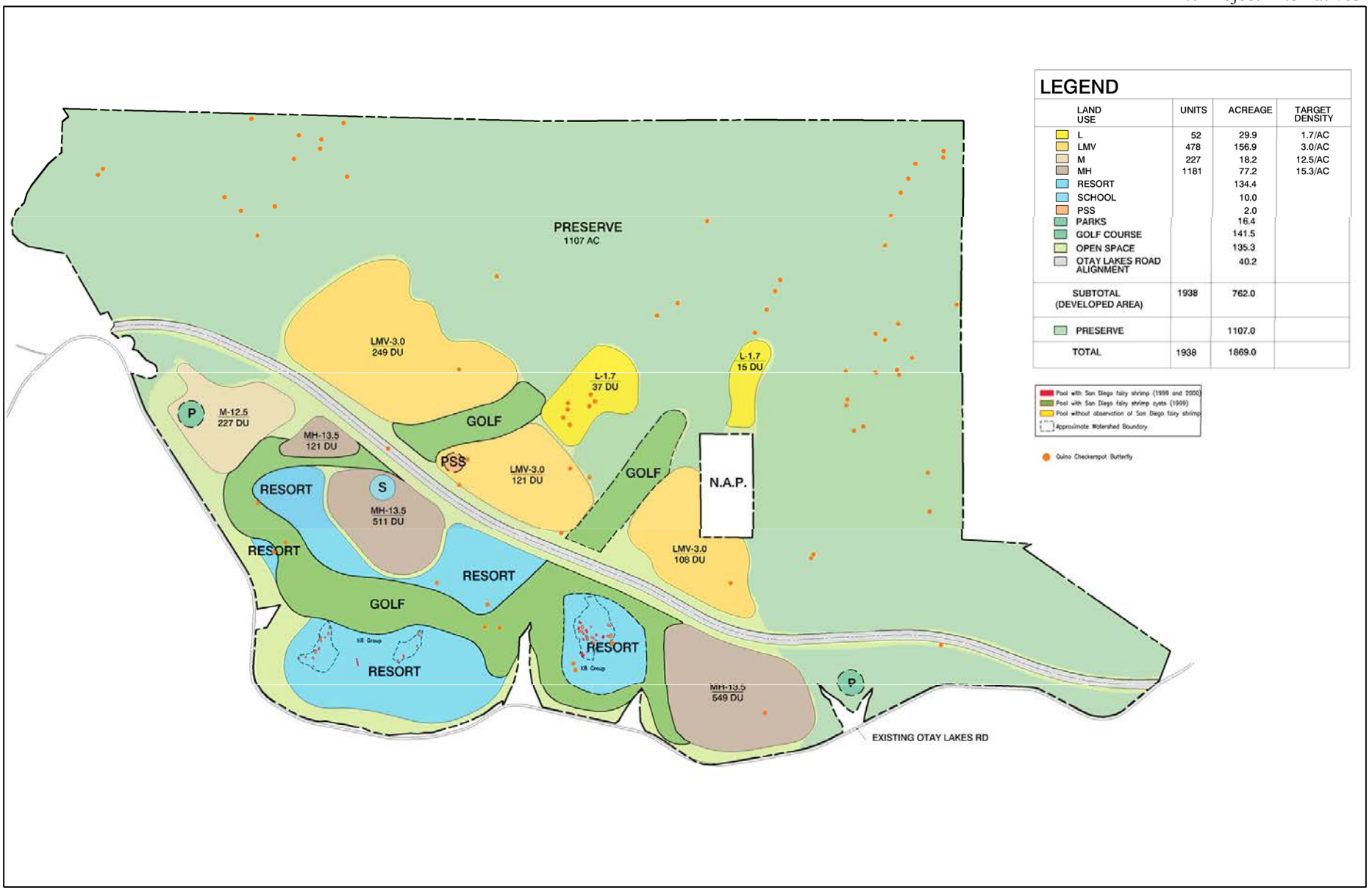
Environmental Impacts	Proposed Project	Alternative A No Project	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Aesthetics	Unmitigable Significant Project-level and Cumulative Impacts	Less than proposed Project; No Impact	Similar to proposed Project; remains significant	Less than proposed Project; remains significant	Less than Proposed Project; remains significant	Less than Proposed Project; remains significant	Less than proposed Project; remains significant	Less than proposed Project; remains significant
Air Quality	Unmitigable Significant Project-level and Cumulative Impacts	Less than proposed Project; No Impact	Greater than proposed Project; remains significant and unavoidable	Less than proposed Project; remains significant	Similar to proposed Project	Less than proposed Project; remains significant	Similar to proposed Project; remains significant	Less than proposed Project; remains significant
Biological Resources	Less than Significant with Mitigation	Less than proposed Project; No Impact	Greater than proposed Project; remains significant	Less than proposed Project; remains significant but mitigable	Less than proposed Project; remains significant but mitigable	Less than proposed Project; remains significant but mitigable	Less than proposed Project; remains significant but mitigable	Much 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	Less than proposed Project; remains significant but mitigable	Less than proposed Project; remains significant but mitigable	Less than proposed Project; remains significant but mitigable	Less than proposed Project; remains significant but mitigable	Less than proposed Project; remains significant but mitigable
Geology and Soils	Less than Significant with Mitigation	Less than proposed Project; No Impact	Similar to proposed Project; remains significant but mitigable	Similar to proposed Project	Similar to proposed Project	Similar to proposed Project	Similar to proposed Project	Less than proposed Project; remains significant but mitigable
Hazards and Hazardous Materials	Less than Significant with Mitigation	Less than proposed Project; No Impact	Similar to proposed Project; remains significant but mitigable	Similar to proposed Project	Similar to proposed Project	Similar to proposed Project	Similar to proposed Project	Less than proposed Project; remains significant but mitigable
Noise	Less than Significant with Mitigation	Less than proposed Project; No Impact	Greater than proposed Project; remains significant but mitigable	Less than proposed Project; remains significant but mitigable	Similar to proposed Project	Less than proposed Project; remains significant but mitigable	Similar to proposed Project	Less than proposed Project; remains significant but mitigable

Environmental Impacts	Proposed Project	Alternative A No Project	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Solid Waste	Unmitigable Significant Cumulative Impacts	Less than proposed Project; No Impact	Similar to proposed Project; remains significant and unavoidable	Similar to proposed Project; remains significant	Similar to proposed Project	Similar to proposed Project; remains significant	Similar to proposed Project	Less than proposed Project; remains significant
Transportation and Traffic	Less than Significant with Mitigation	Less than proposed Project; No Impact	Greater than proposed Project; remains significant but mitigable	Less than proposed Project; remains significant but mitigable	Similar to proposed Project	Less than proposed Project; remains significant but mitigable	Similar to proposed Project; remains significant but mitigable	Less than proposed Project; remains significant but mitigable

Table 4.0-2
Area Source/Motor Vehicle Emissions for Alternative G, Unmitigated

Phase/Emissions Source	VOC (lbs/day)	NO_X (lbs/day)	CO (lbs/day)	SO_2 (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Full Buildout Operations [1]						
Motor Vehicles	51.35	77.55	590.92	0.70	114.78	22.34
Area Sources	100.01	15.79	206.81	0.57	31.39	30.22
Total Full Buildout Emissions	151.36	93.34	797.73	1.27	146.17	52.56
Screening Level Thresholds	75	250	550	250	100	55
Significant Impact?	Yes	No	Yes	No	Yes	No

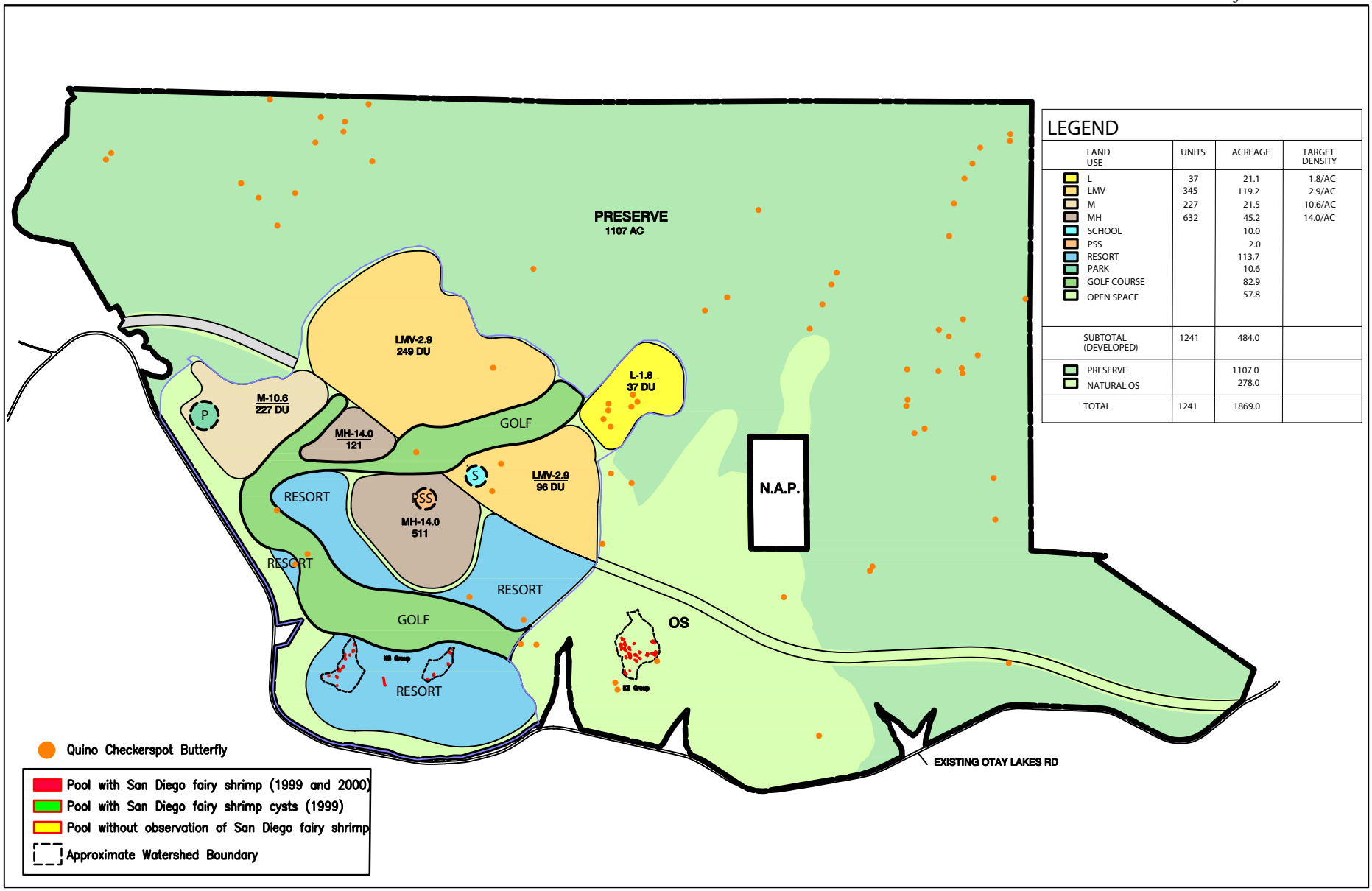
Notes:
[1] Emissions shown represent the maximum daily motor vehicle- or area-source emissions that would occur from summertime or wintertime operations calculated by URBEMIS.
VOC =volatile organic compounds; NO_X = oxides of nitrogen; CO = carbon monoxide; SO_2 = sulfur dioxide;
PM_{10} = suspended particulate matter;
$PM_{2.5}$ = fine particulate matter
Source: AECOM 2011



SOURCE: Hunsaker & Associates 2009

No Scale

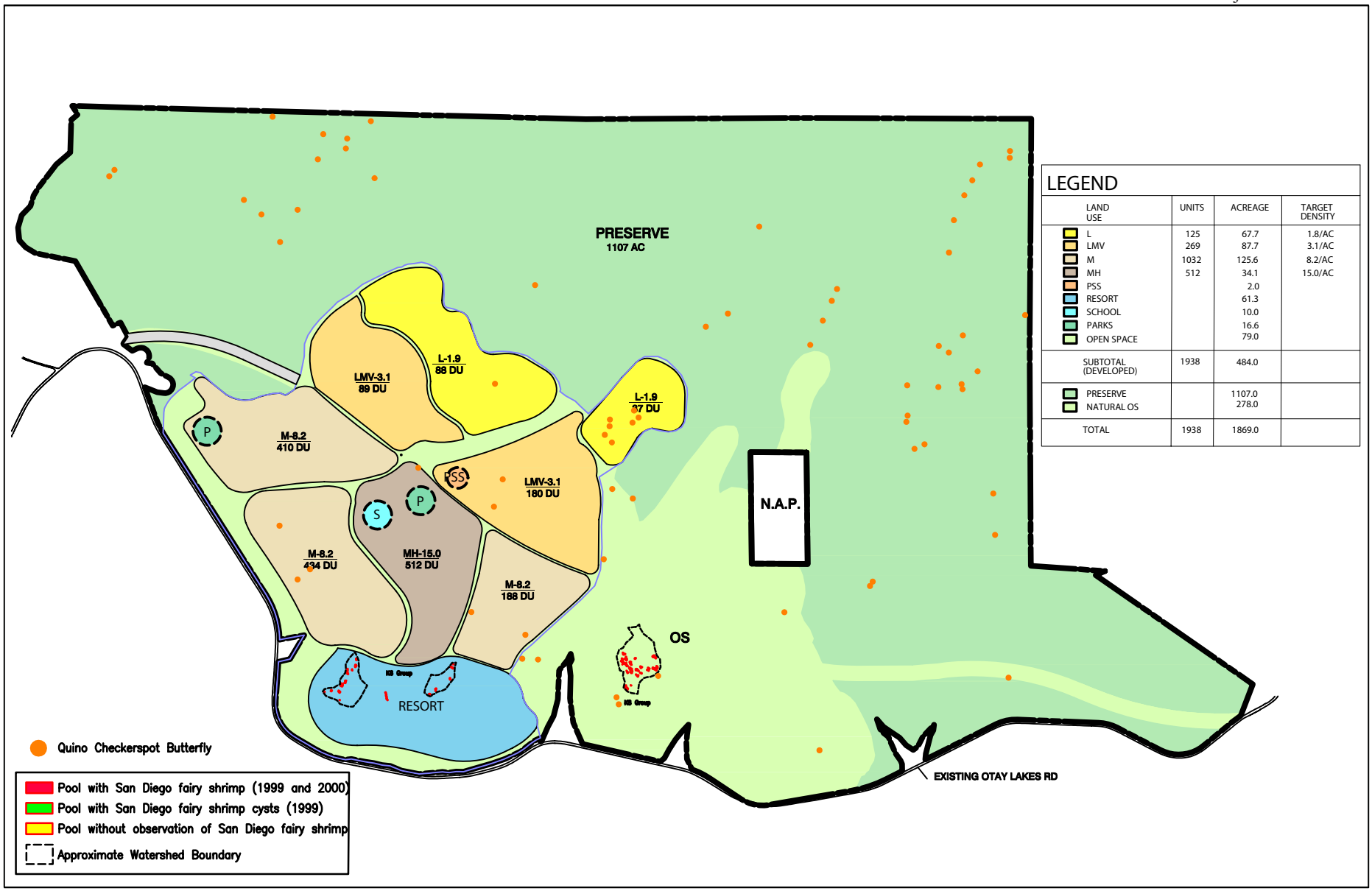
Figure 4.0-1
Alternative B Land Use Plan



SOURCE: Hunsaker & Associates 2009

No Scale

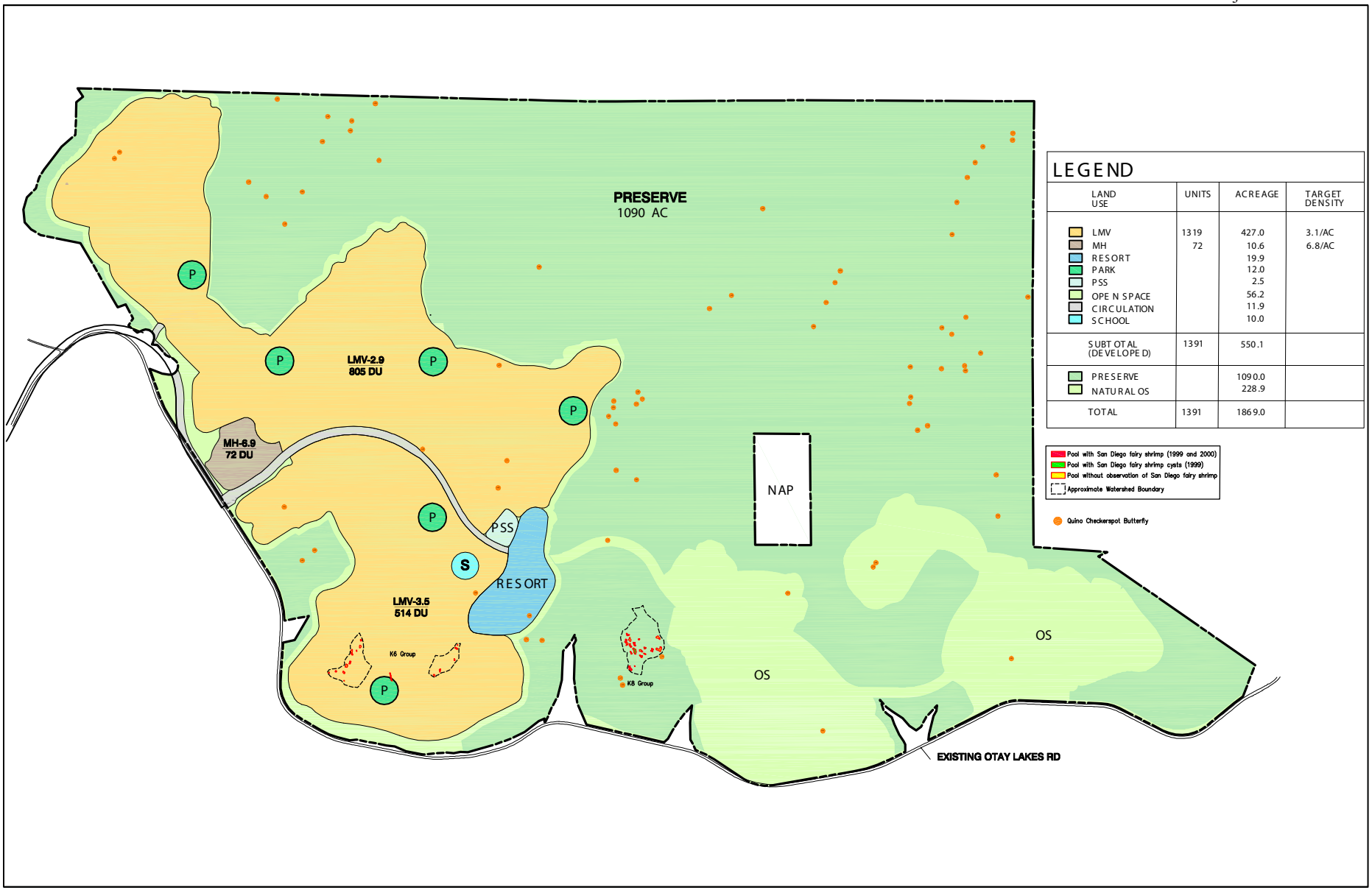
Figure 4.0-2
Alternative C Land Use Plan



SOURCE: Hunsaker & Associates 2014

No Scale

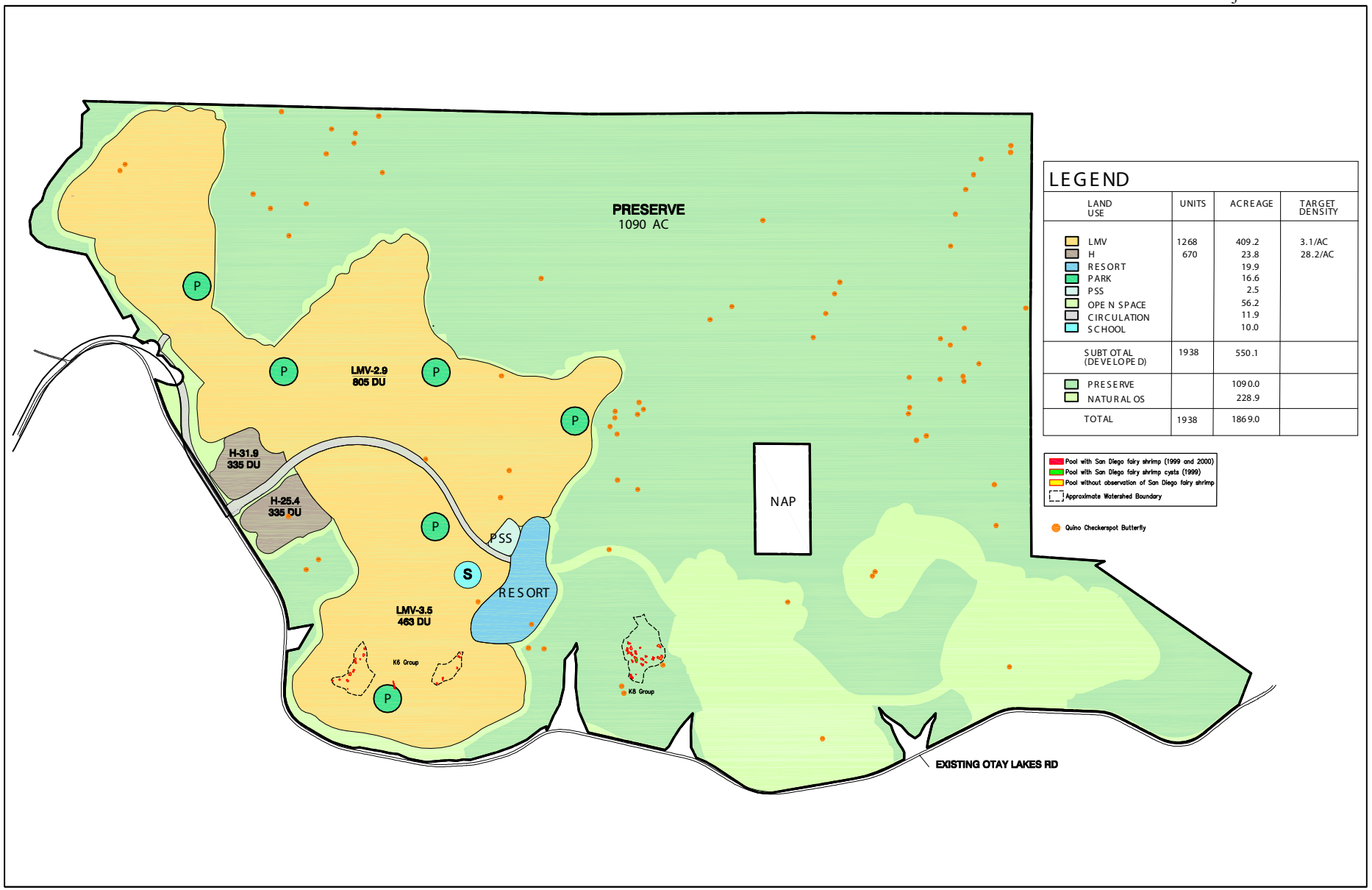
Figure 4.0-3
Alternative D Land Use Plan



SOURCE: Hunsaker & Associates 2009

No Scale

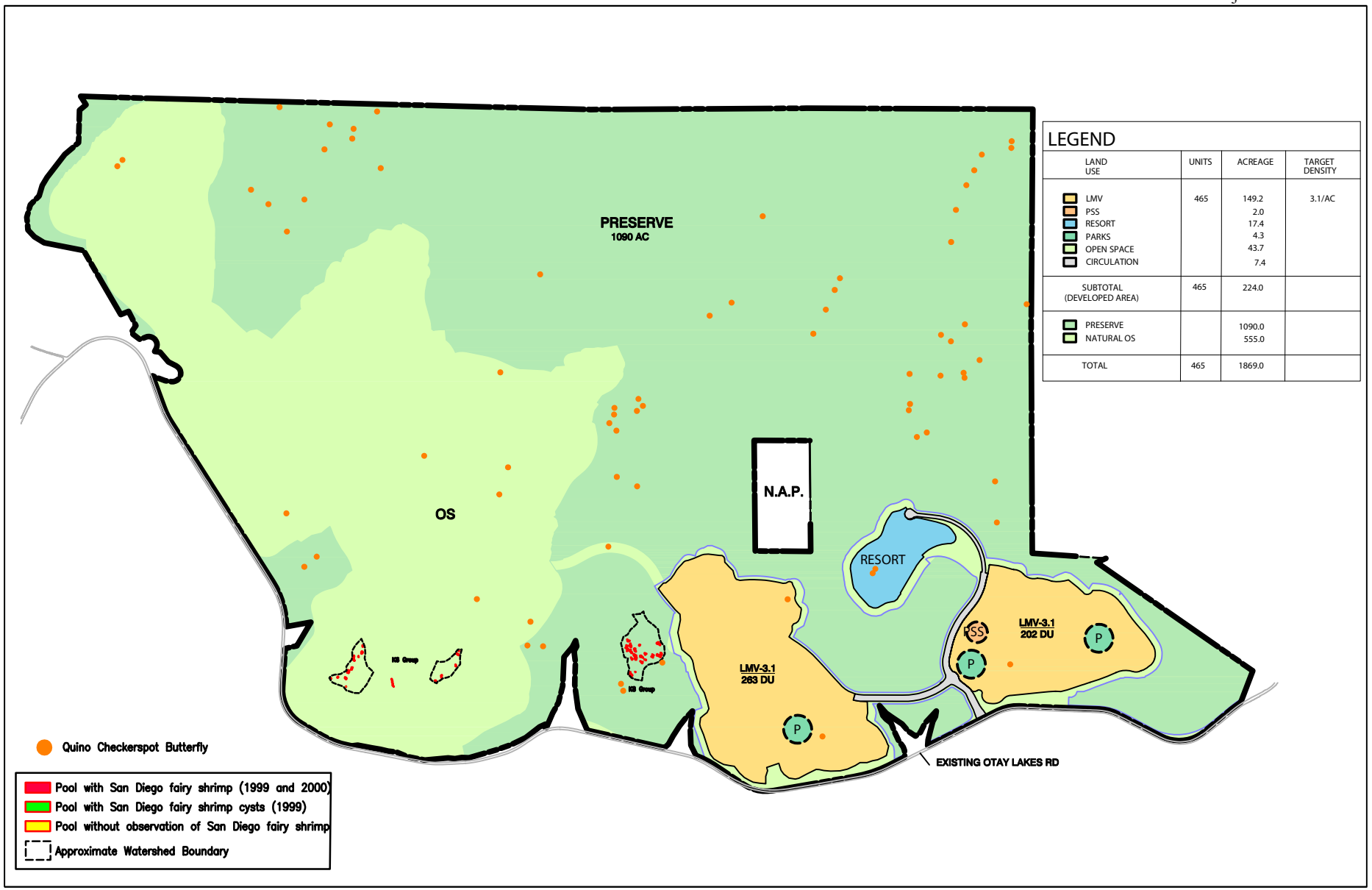
Figure 4.0-4
Alternative E Land Use Plan



SOURCE: Hunsaker & Associates 2014

No Scale

Figure 4.0-5
Alternative F Land Use Plan



SOURCE: Hunsaker & Associates 2015

No Scale

Figure 4.0-6
Alternative G Land Use Plan

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