

SECTION 3.0

ENVIRONMENTAL ANALYSIS

Canyon Hills Manor ■ Draft Environmental Impact Report

3.1 Scope of Analysis

This section of the draft EIR analyzes the potential environmental impacts that may result from the implementation of the proposed project. The issue areas evaluated in this draft EIR include the following:

- Aesthetic and Visual Impacts (Section 3.2);
- Air Quality Impacts (Section 3.3);
- Biological Resources Impacts (Section 3.4);
- Cultural Resources Impacts (Section 3.5);
- Geology and Earth Impacts (Section 3.6);
- Hydrology/Water Quality, Utilities, and other Service System Impacts (Section 3.7);
- Land Use and Planning Impacts (Section 3.8);
- Noise Impacts (Section 3.9); and,
- Transportation and Circulation Impacts (Section 3.10).

The environmental analysis contained in this section of the draft EIR reflects the findings outlined in the Initial Study circulated by the City of Anaheim. The analysis of environmental effects considered in this section of the draft EIR will assist the City in making a determination as to whether there is a potential for significant or adverse impacts on the environment associated with the implementation of the proposed project as described in Section 2, herein. With regard to the identification of significant effects, CEQA provides the following guidance:

"The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data. An ironclad definition of a significant effect is not possible because the significance of an activity may vary with the setting."¹⁵

The analysis of those issue areas considered in this draft EIR (refer to Table 1-1, provided herein in Section 1) adheres to a logical and consistent format. The analysis of each issue area considers the following:

- Each section begins with a section entitled *Scope of Analysis* that indicates the scope and extent of analysis called for in the Initial Study prepared for the proposed project.
- Before the findings of the environmental analysis are discussed, the *Environmental Setting* section describes the existing conditions relative to the issue being analyzed.

¹⁵ California, State of. Public Resources Code Division 13. *The California Environmental Quality Act. Chapter 2.6, Section 2109(b)*. 2002.

The environmental setting serves as the baseline condition against which the potential impacts are measured.

- Following the discussion of the environmental setting, a section entitled *Thresholds of Significance* is provided indicating those criteria and standards used by the City, responsible agencies, and trustee agencies in identifying potentially significant effects.
- The *Environmental Impacts* discussion follows the description of thresholds of significance, indicating the proposed project's potential short-term (construction-related), long-term (operational), and cumulative impacts with respect to the issue being analyzed.
- The section entitled *Mitigation Measures*, indicates those measures and programs that will be effective in reducing the level of impact or in eliminating an impact altogether.
- Finally, the analysis of each issue area concludes with the *Findings of Significance* indicating whether there are any remaining significant environmental impacts that cannot be mitigated to a level of insignificance.

3.2 Aesthetics and Visual Impacts

3.2.1 Scope of Analysis

The City of Anaheim, acting as Lead Agency in the review of this proposed project, directed the preparation of an Initial Study to determine the nature and scope of the analysis that would be required as part of this draft EIR's preparation.¹⁶ Based on the results of the preliminary environmental analysis undertaken as part of the Initial Study's preparation, the following potential aesthetic impacts were identified as requiring analysis in this draft EIR:

- The proposed project's impact on a scenic vista or scenic highway;
- The proposed project's impact on the existing visual character or quality of the site and its surroundings; and,
- The proposed project's potential for creating new sources of substantial light or glare that would adversely affect day- or night-time views in the area.

3.2.2 Environmental Setting

Applicable Policy Documents

The City of Anaheim General Plan includes a "Scenic Highways Element" that establishes long-range planning policies with respect to scenic corridors and highways. The element acknowledges the State's designation for the Riverside Freeway as an official "State Scenic Highway." The City has also designated Santa Ana Canyon Road and Weir Canyon Road as "Scenic Expressways" on its General Plan in the Circulation Element Map, Land Use Map and the Scenic Highway Element Map.¹⁷ In addition, the Orange County Master Plan of Scenic Highways has designated the segment of the SR-91 Freeway north of the site as a "Type 1 Scenic Highway (Viewscape Corridor)," and Weir Canyon Road as a "Type 2 Scenic Highway" (Landscape Corridor).¹⁸

The proposed project site is also located within a designated "Scenic Corridor Zone Overlay" pursuant to the City of Anaheim Municipal Code (Chapter 18.84). The purpose of this overlay designation is to promote the orderly development of this area and to "protect, preserve, and enhance unique and natural scenic assets." Also applicable to the proposed project are the grading policies and ordinances established in the zoning code under Chapter 17.06 for areas designated as "hillside." In addition to requiring that "excavations and fills are properly engineered to reduce hazards to public and private properties," this chapter also includes

¹⁶ The Initial Study is provided herein in Appendix A.

¹⁷ Anaheim, City of, "General Plan, Scenic Highways Element. 1984.

¹⁸ Ibid.

policies that focus on the aesthetic aspects of manufactured slopes and associated drainage facilities.

Key goals and policies related to aesthetic resources, viewsheds, and visual character from the City of Anaheim General Plan and Codes include the following:

Scenic Highways Element

Goal: "To preserve and enhance uniquely scenic or special visual resource areas along highways and designated State scenic routes for the enjoyment of all travelers."

Policies:

- "Continue to work with the State Division of Highways in its implementation of the State Scenic Highway Program."
- "Ensure the preservation and enhancement of scenic routes through special highway design and building regulation."
- "The unique natural features of the Hill and Canyon Area will be considered when arterial streets and highways are aligned and constructed. Traffic ways will follow the natural contours of the land and will avoid significant areas such as archeological and historical sites, vegetation and wildlife habitats."
- "Arterial highways will be landscaped in keeping with the intent of the Scenic Corridor and the Santa Ana River Green-belt Plan, and planned so as to maintain the residential character of the neighborhood by avoiding interference and intrusion."
- "Take such actions as may be necessary to protect the scenic appearance of the scenic corridor, the band of land generally adjacent to the highway right-of-way, including, but not limited to, (1) regulation of land use and intensity (density) of development; (2) detailed land and site planning; (3) control of outdoor advertising; (4) careful attention to and control of earthmoving and landscaping; and (5) the design and appearance of structures and equipment."

Land Use Element

Goal: "Encourage and maintain living areas which preserve the amenities of hillside living and which retain the overall low-density, semi-rural, uncongested character of the Hill and Canyon Area."

Policy:

- "Grading will be kept to the absolute minimum, with developments following the natural contours of the land, and prohibited in steep slope areas."

Scenic Corridor Overlay Zone

The project site, as well as the surrounding properties, are located within a designated "Scenic Corridor Overlay (SC) Zone." Section 18.84.010 of the Anaheim Municipal Code (AMC) states that SC Zone is "intended to provide for and promote orderly growth in certain areas of the City designated as being of distinctive, scenic importance, while implementing local governmental agency actions for the protect, preservation, and enhancement of the unique and natural scenic assets of these areas as a value resource to the community." Section 18.84.030 of the AMC indicates that the development standards for the SC Zone "are intended to provide for the continued orderly development of the City's scenic areas by encouraging a high quality of development in keeping with the natural amenities of these areas and preserving their unique scenic resources as an asset to the community."

The site development standards presented for the underlying zones within said corridor insure harmony with adjacent uses of land and retain the scenic characteristics of the area.

Other Applicable City of Anaheim Codes/Policies

- Drainage structures shall be designed to use "medium or dark earthen tones" (AMC Section 17.06.160).
- "Cut slopes in excess of two hundred feet in length shall be contour graded and shall have a variety of slope ratios" (AMC Section 17.06.110).
- "It is the policy of the City Council to encourage contour grading to be performed by persons engaging in Hillside Grading. In keeping with needs to create an environmental community life that provides aesthetic scenic amenities that enhance human sensibilities by visually harmonious hillsides, contour grading shall be required except where determined to be impractical by the City Engineer" (Council Policy No. 211).

Existing Setting

The proposed 29-acre project site is characterized by hilly terrain with a mix of plant communities (refer to Section 3.4 for a complete discussion of these plant communities). Those parcels immediately adjacent to the project site on the south and west are presently undeveloped. The project site rises steeply from its lowest point near Santa Ana Canyon Road to a hilltop that is visible from the freeway and other more distant points to the north. The site's elevation ranges from 350 feet AMSL to 673 feet AMSL. The adjacent areas to the west, south and east are also characterized by hilly terrain, though much of the topography has been modified as part of the past development.

The proposed project site and neighboring properties are located within a portion of the Santa Ana corridor that has experienced significant development during the past several decades. As indicated previously, the proposed project site, together with properties located immediately adjacent to it on the south, east, and west, are the only remaining undeveloped parcels found within the area. The parcel immediately north of Santa Ana Canyon Road includes an access

road. The parcel east of the site is a Southern California Edison (SCE) right-of-way that includes an unpaved service road and large transmission towers. The transmission towers are the most prominent features in the immediate area due to their height. Development within close proximity to the proposed project site, as detailed in Exhibit 3-1, includes the following:

- The "Anaheim Hills Festival," a regional, commercial and retail development located approximately 900 feet east of the proposed project site and east of Festival Drive. This commercial area is separated from the project site by the SCE right-of-way.
- The "Marriott Residence Inn," a hotel facility located approximately 500 feet east of the proposed project site between the SCE right-of-way and Festival Drive. This hotel is separated from the project site by the SCE right-of-way.
- The "Fountains at Anaheim Hills," a senior apartment complex located approximately 400 feet southeast of the proposed project site between the SCE right-of-way and Festival Drive.
- The "Madison Square Self Storage," a storage business located approximately 200 feet northwest of the project site between the SR-91 Freeway and Santa Ana Canyon Road.
- Single-family residential neighborhoods are located to the west of the site along Eucalyptus Drive, and extending further south, to the southeast corner of the site adjacent to the SCE right-of-way and a senior apartment complex.
- Vacant undeveloped land is located immediately to the west and south of the project site. A vacant undeveloped parcel of land also abuts the project site to the east in addition to the SCE right-of-way containing electrical transmission towers.

Views and Visual Characteristics

Exhibits 3-2 and 3-3 show views of and from the proposed project site. Exhibit 3-12 provides an aerial photo detailing the site's existing zoning and land uses. The proposed project site's natural landform provides a bold contrast in visual character from the surrounding urbanized hillsides. The site's peaks, open character, and proximity to the freeway make it visible for some distance. The proposed project site is visible from several areas north of the site, including from SR-91, the Santa Ana River Trail, and the Yorba Linda Regional Park equestrian trail. Views from areas located south, east, and west of the proposed project site are limited to the properties adjacent to the site because of the surrounding urbanization and winding hillside character of the immediate project area.

Views from the proposed project site's taller peaks include broad panoramic views of the surrounding area including more distant views of the local foothills. Other views from the proposed project site include surrounding uses and adjacent properties.



Storage Business

Project Site

91 Freeway

Santa Ana Canyon Road

Site of Marriott Residence Inn

Anaheim Hills Festival Shopping Center

Senior Housing Complex

Single - family residential units

Single - family residential units

SCE Right of Way



**City of Anaheim Draft EIR No. 327
Exhibit 3-1 - Project Setting**

Source: Eagle Aerial, 2000



Photo View A



Photo View B

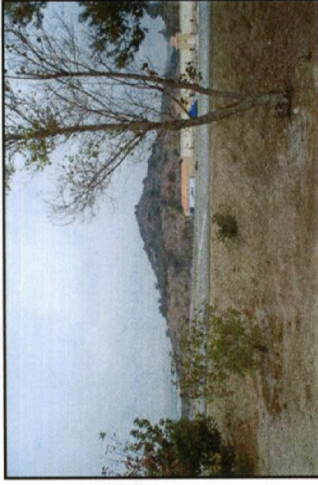
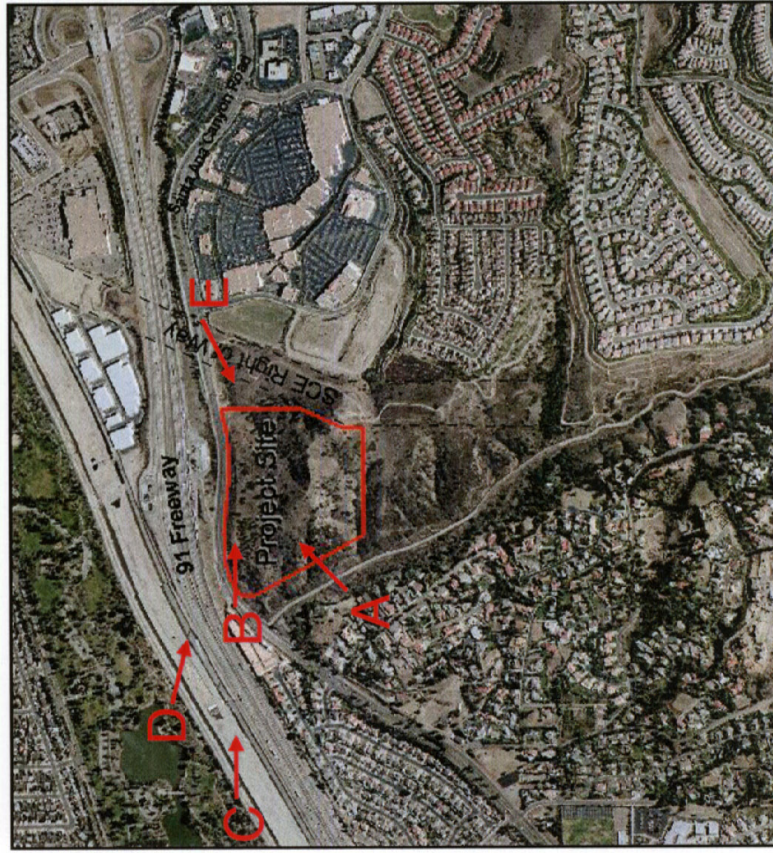


Photo View D



Photo View C



Photo View E



City of Anaheim Draft EIR No. 327
Exhibit 3-2 – Views of the Site
Source: Eagle Aerial, 2000

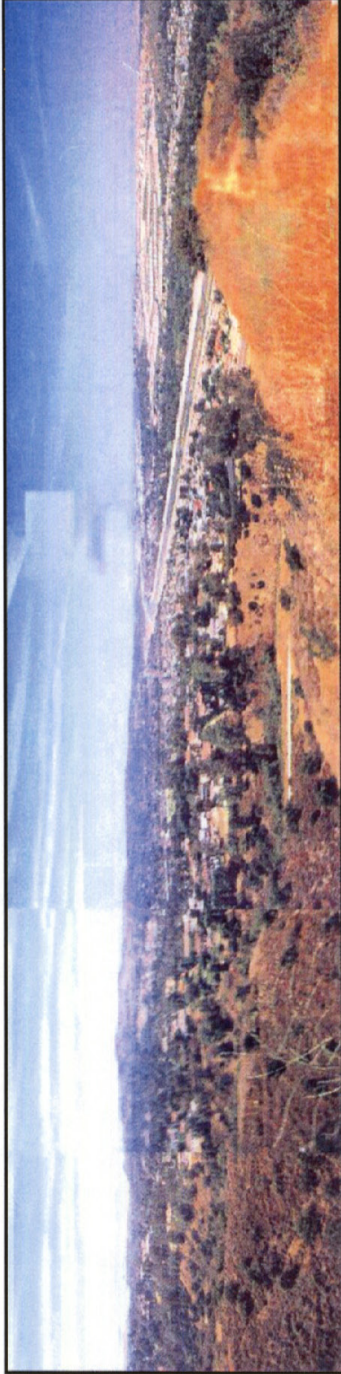


Photo View F
Looking north-west at the
surrounding area

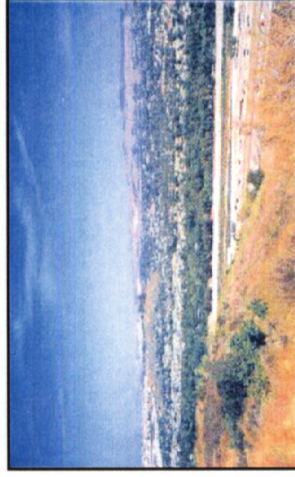


Photo View G
Looking north from the
top of the site



Photo View H
Looking across
Santa Ana Canyon Road



Existing Light and Glare Conditions

The proposed project site, together with the adjacent parcels to the south, east, and west, are undeveloped and do not contain or produce any sources of light or glare. Sources of light in the surrounding area include street lights, parking lot lighting, security lighting, and interior lighting associated with the commercial, business, and residential properties located in nearby areas. Lighting associated with the commercial development to the east and SR-91 to the north provide a substantial source of light for safety and security purposes, making the nighttime light environment for those areas fairly bright. The residential areas to the south and west of the proposed project site provide a moderately lit environment.

Sources of glare in the surrounding area are associated with vehicular traffic on SR-91 and along Santa Ana Canyon Road. These two areas experience a majority of the glare effects. Residential neighborhoods within the study area experience minimal glare effects associated with local street traffic.

3.2.3 Thresholds of Significance

According to the City of Anaheim, acting as Lead Agency, a project may be deemed to have a significant adverse aesthetic impact if it results in any of the following:

- An adverse effect on a scenic vista;
- A new source of substantial light and glare that would adversely affect day or nighttime views in the area; or
- Significant changes to natural landforms.

3.2.4 Analysis of Environmental Impacts

Significant Changes to Natural Landforms

Implementation of the proposed project would require alteration of the site's existing topography to accommodate a structure, parking, and access road. The primary elements that will contribute to the site's physical changes include the following:

- *Grading.* The grading required to accommodate the proposed access road, parking areas, and building pads will involve the movement of 350,000 cubic yards (c.y.) of earth. Of this total, 250,000 c.y. will consist of cut and 100,000 c.y. will consist of fill.¹⁹ This grading is necessary to facilitate the construction of the access roadway (at a 10 percent grade) and the creation of the building pads for the structures and surface parking areas. In addition, relative to the rough grading for the eventual widening of

¹⁹ Danjon Engineering, Inc. Personal communication with project engineer, Mr. Jim Schreder. 2001, 2002.

Santa Ana Canyon Road, the ultimate grading will be incorporated into and completed with the project grading. This would avoid disruption of the site by future grading for the roadway and ensure consistent grading and landscaping on the property in conformance with the requirements for contour grading. Up to 300,000 c.y. of export may be removed as part of this grading. The maximum vertical cut at any one specific location would be 82 feet above mean sea level (AMSL).

- *Development.* Once developed, the site's physical character will be accentuated by the 27,910-square foot structure that would be situated at the top of the hill located in the central portion of the proposed project site. The majority of the building will be 25 feet in height, however, due to the design of the chapel's ceilings, a small portion of the building (less than 10 percent of the building) is proposed to be 29.5 feet in height which exceeds the City's 25-foot height limit for structures located within the Scenic Corridor Overlay Zone.
- *Access and Roadways.* A new gated entryway will be constructed at the proposed project site's connection to Santa Ana Canyon Road. A two-lane roadway will also be constructed to connect the parking areas with the Santa Ana Canyon Road. An entryway sign will be constructed at the roadway's connection with Santa Ana Canyon Road, and a turn around will be added at the gate location in a design and location acceptable to the City Engineer.

Table 3-1 summarizes the proposed project site's land use and land cover characteristics following development. As indicated in Table 3-1, the proposed buildings will account for approximately 2 percent of the total site area. Roadways and surface parking areas will account for approximately 25 percent of the site's total land area. Approximately 73 percent of the site's total land area will either remain in open space or be landscaped following development. This landscaping includes a 300-foot wide fuel modification zone.²⁰

A large buffer area will be retained around the perimeter of the site. The grading required to accommodate the roadway (at a 10 percent grade) and the future widening of Santa Ana Canyon Road, will involve a substantial alteration of the site's topography²¹ (the greatest alteration to the site's visual character is associated with this grading). Up to 300,000 c.y. of earth will be disturbed, and ultimately exported, to accommodate the ultimate grading of Santa Ana Canyon Road. The proposed project will be required to conform to all pertinent requirements of the City's Hillside Grading Ordinance, including those associated with contour grading and screening of on-site drainage facilities (culverts, v-ditch gutters, etc.).

Although the development pad would be lowered by approximately 82 feet from existing grade, the project site represents a minor foreground topographic feature as viewed from the SR-91 Freeway and Santa Ana Canyon Road. From these roadways the dominant visual feature is the

²⁰ Kristi K. Skelton Architect, AIA. *Site Plan*. 2001, 2002 and James Schreder, P.E., Danjon Engineering, 2002.

²¹ Danjon Engineering, Inc. *Preliminary Grading Plan*. 2001

east-west trending ridgeline which provides a backdrop for views within Santa Ana Canyon. Implementation of the proposed mitigation measures and site improvements would avoid manufactured slopes, recreate natural features, and shield views of the proposed structures and parking areas.

Table 3-1 Site's Characteristics Following Development		
Project Element	Area in acres	Percent of Total Area
Development		
Structures	0.69	2.4%
Surface Parking Areas	5.71	19.8%
Roadway	1.50	5.2%
Landscaping and Open Space Areas		
Landscaping & Open Space (including 300 ft. fuel modification zone)	21.00	72.6%
Site Area	28.90	100.0%
Sources: Kristi K. Skelton Architect, AIA. <i>Site Plan</i> . 2001, 2002 James Schreder, P.E., Danjon Engineering, Inc., 2002		

The intent of the proposed landscape plan is to provide a manicured area (e.g., non-invasive trees) around the main building, and at the entrance of Santa Ana Canyon Road. The remainder of the site will consist of a combination of existing natural vegetation (including coastal sage scrub, to comply with biological mitigation requirements) and landscaping to conceal the buildings and parking areas, as well as a 300-foot wide fuel modification zone for fire prevention. Drainage facilities, including culverts, will be designed in earth-tones and landscaped/screened to minimize their visibility. A large open space buffer-area will be retained around the perimeter of the site, with the facilities placed in the center of the property along the ridgeline. This buffer-area will assist in retaining the open space character of the site while minimizing impacts to views for area residents and motorists traveling on Santa Ana Canyon Road and SR-91.

The proposed pad areas are shielded from view from the adjacent residential neighborhoods to the southeast and west, and the Senior Apartment Complex to the east due to intervening topography. As a result, views of the proposed topographic changes will be limited.

With incorporation of the mitigation measures identified in Section 3.2.5, all potential impacts to natural landforms would be reduced to a level of insignificance.

An Adverse Effect on a Scenic Vista

Exhibit 3-4 is a key map which shows the locations of various viewpoints that were selected to illustrate the anticipated changes in existing views of the proposed project site after



Photo View A
Looking southeast across the SR91 freeway towards the site



Photo View B
Looking west from Santa Ana Canyon Road towards the site



Photo View C
Looking northwest from a single – family neighborhood towards the site



Photo View D
Looking east towards the site from Eucalyptus Drive



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development. Exhibits 3-5 through 3-8 illustrate views of the site from various perspectives both before and after development of the project (the "after" views include the grading for the access road, the proposed structures and parking area). To illustrate the project's potential visual impact, computer imaging analysis was used to depict the "after" views from the selected viewpoints, including mature landscaping. Table 3-2 summarizes existing visual conditions and changes in visual quality after development for the selected viewpoints. As discussed above, the primary visual impact associated with the proposed project involves the alteration of existing landforms resulting in development of a natural open space area and the altering of the site's existing natural character. In particular, modification of one of the site's existing ridgelines would alter the physical and visual character of the site. The grading required for the access road is depicted in the exhibits.

Viewpoint A (Exhibit 3-5) represents a view from SR-91, the Santa Ana River Trail, and the Yorba Linda Regional Park Equestrian/Hike/Bike Trail located north of the proposed project site. This viewpoint offers unobstructed views of the hillside. Physical changes that would be visible from this viewpoint include lowering of the center peak and recontouring of the foreground hillside. These changes would result in a slightly flatter ridgeline and manufactured contours within the foreground hillside. The proposed wedding chapel would be slightly visible along the ridgeline within the center of this viewpoint. These changes would produce a more urbanized visual character. Use of contour grading, landscaping, natural plant materials and muted, earth-tone colors would help to reduce visual impacts associated with grading and manufactured slopes.

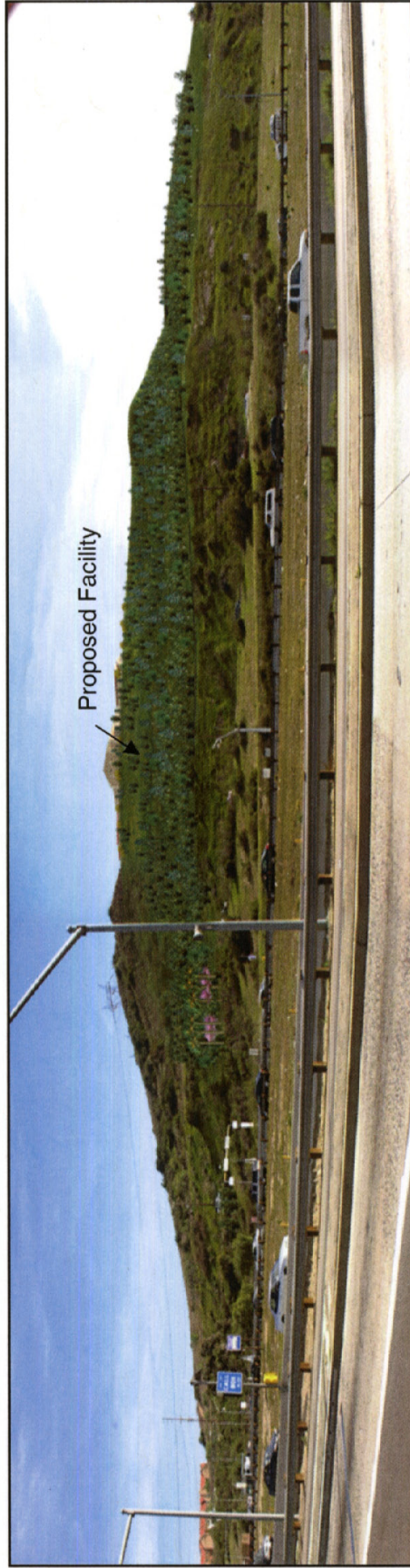
Viewpoint B (Exhibit 3-6) represents a view from Santa Ana Canyon Road looking west towards the site. Changes to existing topography, vegetation, and roadway accesses would be highly visible from this viewpoint. Recontouring of the existing hillsides and grading activities would alter the existing character of the hills within this view by lowering peaks and flattening the profile of a majority of the ridgeline to the center and right of this viewpoint. The access roadway, landscaping, and modified hillside vegetation would also change the natural character of the existing hillside, replacing it with a more urbanized appearance. A revegetation plan using native plant materials, as well as preservation of existing oak trees (where feasible), would help to soften the transition between graded and natural slopes.

Viewpoint C (Exhibit 3-7) represents a view from the single-family residences located southeast of the proposed project site, approximately 1,000 feet away from the proposed project site. The anticipated line of sight for these residents towards the proposed wedding chapel is blocked by a hill whose peak is 670 feet AMSL. The chapel is at 570 AMSL and the residents are located at 600 feet AMSL. The hill would remain undisturbed by the proposed project and would effectively block a majority of the views of the proposed improvements, retaining the natural state of this viewpoint. The senior apartment complex located east of the proposed project site is approximately 800 feet away and their views of the site would also be blocked by the remaining hill.

Viewpoint D (Exhibit 3-8) represents a view from the single-family residences located west of the proposed project site along Eucalyptus Drive. These homes are located approximately 1,210 feet away from the site and are at 450 feet AMSL. Grading associated with placement of



Existing Condition - Actual



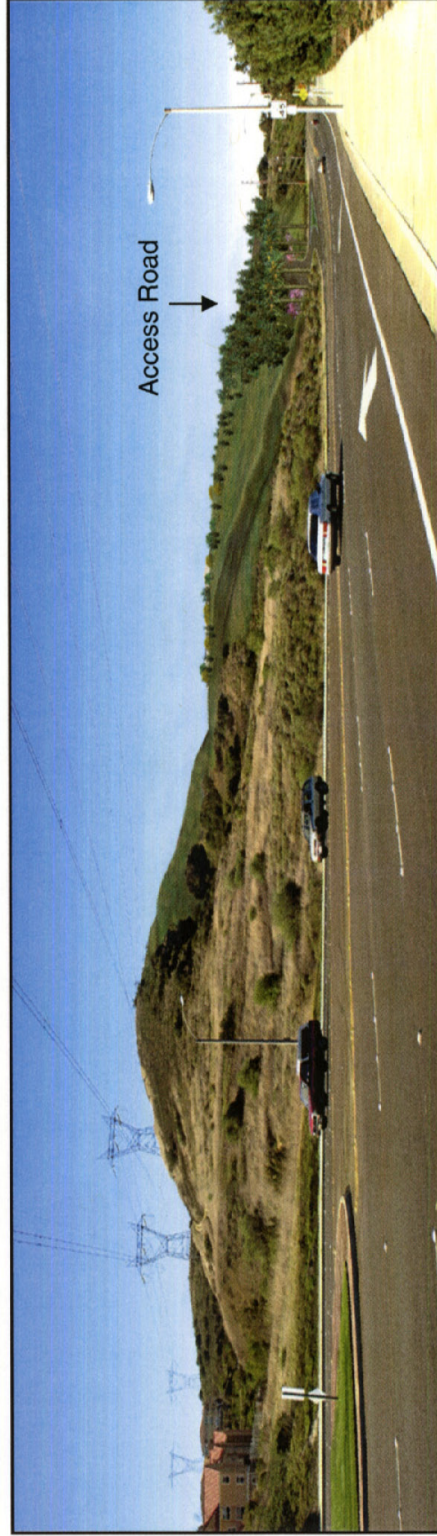
After Development with Mitigation - Simulation

***Note: This view does not depict Santa Ana Canyon Road improvements**

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Existing Condition - Actual

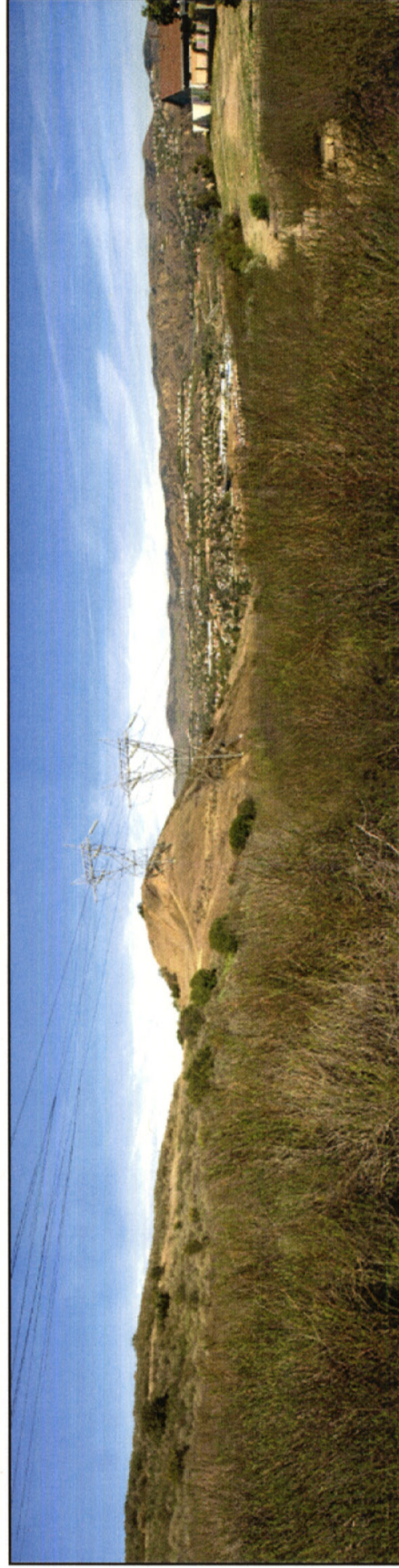


After Development With Mitigation - Simulation

***Note: This view does not depict Santa Ana Canyon Road improvements**

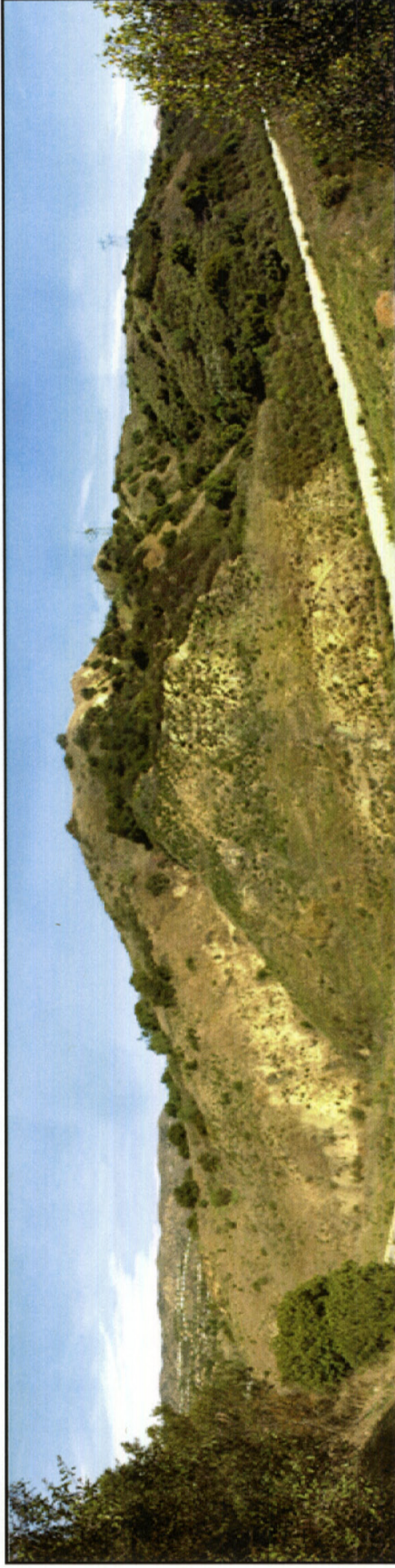


Existing Condition - Actual

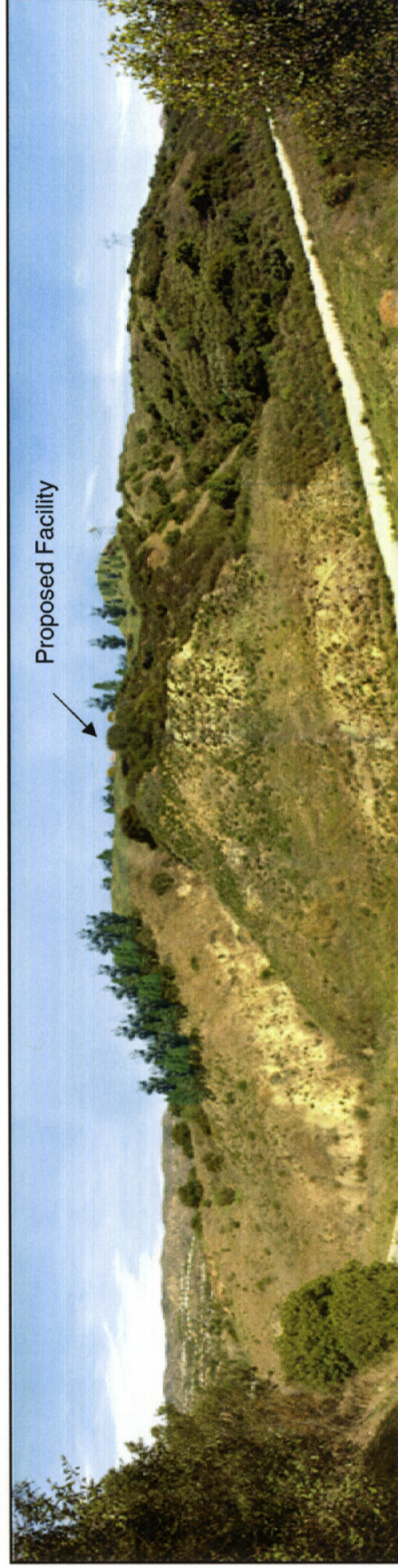


After Development with Mitigation - Simulation

City of Anaheim Draft EIR No. 327
Exhibit 3-7 – Visual Analysis (Viewpoint C)
Source: Chambers Group



Existing Condition - Actual



After Development with Mitigation - Simulation

City of Anaheim Draft EIR No. 327
Exhibit 3-8 – Visual Analysis (Viewpoint D)
Source: Chambers Group

the building pads would require flattening and recontouring of the central peak within this viewpoint. The central peak would be lowered to approximately level with adjacent hills. The proposed wedding chapel and banquet facility would be barely visible amongst the surrounding hills and vegetation. Contour grading and revegetation on the hillside to the left of this viewpoint would help conceal grading associated with the proposed access road. The natural character of this viewpoint would remain fairly intact with a moderate change to the physical appearance of the hillside's topography.

Exhibit	Before Views	After Views
Exhibit 3-5 (Viewpoint A). This view is looking across Santa Ana Canyon towards the site, towards the south.	The site's steep topography from Santa Ana Canyon Road is evident in this photograph. The proposed project site is located on the higher ridges on the right.	The entryway sign is barely visible in the left hand side of the photograph. The access road at the top of the ridge in the photograph is not visible. The alteration to the slope is visible in the photograph. The alteration of the ridge top is also evident. The structure is visible at the top of the ridge.
Exhibit 3-6 (Viewpoint B). This view is looking across Santa Ana Canyon towards the site, towards the west.	The senior housing development, approximately 800 feet away, is barely visible in the left hand corner of the photograph. Their views of the project site are blocked by the intervening undisturbed hill. The utility lines, in the foreground, are located to the east of the site. The middle ridge is the site of the proposed structures.	The grading required to accommodate the proposed development is evident in the right-hand side of the photo. The proposed entryway and access road are visible in the right-hand side of the view.
Exhibit 3-7 (Viewpoint C). This view is looking towards the site from Raspberry Lane, east of the site.	The existing views are shown in this photograph. The highest point in the photograph is located to the east of where the proposed project will be located.	The proposed project is not visible in this view. No apparent changes are visible following development.
Exhibit 3-8 (Viewpoint D). This view is looking east towards the site from Eucalyptus Drive.	The existing views are shown in this photograph. The highest point in the photograph is where the proposed structures will be located.	The bottom view illustrates how the site will look following development with the construction of a 10 percent grade access road with no widening of Santa Ana Canyon Road. The proposed project would remove and recontour the ridgeline. The proposed facility will be located at the top of the ridge in the center of the photographs
Source: Chambers Group, Inc. 2001 Parsons Brinckerhoff, 2002		

Additional considerations regarding project's visual impacts to scenic vistas include approximately 73 percent of the site's total land area will either remain in open space or be landscaped following development. Since the development pad would be lowered by approximately 82 feet, and the proposed building height would be 30 feet, project implementation would not block any existing views from the surrounding residential neighborhoods. Although the project would be partially visible from Santa Ana Canyon Road, it would not be visible from the adjacent residential neighborhoods to the southeast and west, or

the Senior Apartment Complex to the east with implementation of the project's landscaping and grading plan requirements.

With incorporation of the mitigation measures identified in Section 3.2.5, all potential impacts to a scenic vista would be reduced to a level of insignificance.

Scenic Roadway Designation Impacts on Applicable Policy Documents

The project site is located within a Scenic Corridor Overlay Zone (Anaheim Municipal Code Chapter 18.84). As indicated previously, the purpose of this overlay is to provide for and promote orderly growth in this area and to protect, preserve, and enhance unique and natural scenic assets. Development standards for the Scenic Corridor Overlay Zone are contained within the underlying zoning designation (Residential/Agricultural RS-A-43,000) for the site.²² The following proposed discretionary approvals and permits are being requested from the City of Anaheim:

- *Conditional Use Permit.* The applicant is requesting to construct and operate a 27,910-square foot wedding chapel and banquet facility with alcoholic beverage service, and a 2,000-square foot maintenance building and installation of roof mounted equipment.
- *Structural Height and Parking Waivers.* The applicant is requesting a height waiver to permit certain structural elements to exceed the Code required 25-foot height limit. Due to the structure's architecture, slightly less than 10 percent of the main building will exceed the maximum 25-foot height limit. The building's maximum height is 29.5 feet. In addition, the applicant is requesting a waiver of the minimum number of required parking spaces (279 required, 269 proposed).
- *Santa Ana Canyon Road Access Points Study Amendment.* The applicant is requesting an amendment to the Santa Ana Canyon Road Access Points Study to allow an additional access point (the proposed project's driveway) on Santa Ana Canyon Road.
- *Santa Ana Canyon Road Improvement Waiver.* The applicant is requesting a waiver of the requirement to improve the segment of Santa Ana Canyon Road adjacent to the project site to its ultimate width.
- *Specimen Tree Removal Permit.* The applicant is requesting a Specimen Tree Removal Permit to remove mature specimen trees from the project site. Section 18.84.038 of the Municipal Code addresses tree preservation. According to this section of the Code, specimen trees meeting code criteria are to be preserved. Chambers Group biologists visited the site on October 1, 1999, to examine the trees onsite. Approximately 30 specimen trees, consisting of coast live oaks, would be removed as part of the site's development. The Code requires a replacement of specimen trees at a ratio of 2 to 1.

²² Anaheim, City of. *General Plan, Scenic Highways Element.* 1984

Onsite replacement trees will be included in the construction landscape plan to mitigate any impacts from the removal of specimen trees.

A New Source of Substantial Light and Glare that would Adversely Affect Day or Night Time Views in the Area

Following development of the site, on-site sources of lighting will include lighting installed near the main entryway, signage lighting, lighting along the access road, parking area lighting, building interior lighting, and decorative lights in and around the main building. Table 3-3 characterizes the potential light and glare impacts on nearby light-sensitive receptors.

Table 3-3 Light and Glare Impacts on Sensitive Receptors		
Receptor	Location & Distance	Nature of Impact
Open Space	Within the proposed development site.	Nocturnal animals could be adversely impacted by night-time lighting in the absence of mitigation.
Senior Housing	East of the site, approximately 800 feet. The top of the finished pad would not be visible from the units. These buildings are located approximately 420 feet AMSL. There is an intervening hill whose peak is 670 feet AMSL, and which will not be disturbed by the project. The intervening hill will act as a visual buffer between the project and the senior housing.	Site has limited visibility from the senior housing development. No headlight glare is anticipated since the access roadway is not visible.
Single-family homes	Southeast of the site, approximately 1,750 feet. Approximately nine homes along Raspberry Lane could be potentially affected. The units are located at an elevation of approximately 600 feet AMSL. The finished pad of the proposed project, at its highest elevation would be approximately 570 feet AMSL. However, there is an intervening hill whose peak is 670 feet AMSL, and which will not be disturbed by the project.	Vehicle headlights from the proposed roadway would not be visible. The roadway is located on the opposite side of the hill from this vantage point. The proposed building pad elevation is generally comparable to the residential units. The lights from the parking areas and structures may be visible reflected against the night sky in the absence of mitigation. The intervening hill will act as a visual buffer between the project and the single-family residences. The top-most portions of the single-family homes may be able to look down upon the site and see the lights. The impact is expected to be less than significant with the mitigation measures proposed.
Single-family homes	Southwest of the site, approximately 1,100 feet. The units are located at an elevation of approximately 430 feet AMSL. The finished pad of the proposed project, at its highest elevation would be approximately 570 feet AMSL.	Vehicle headlights would be visible from roadway. The proposed roadway is located approximately 800 feet from the nearest homes located along Autry Drive. The building pad and parking area lights would not be readily visible.

Receptor	Location & Distance	Nature of Impact
SR-91 Freeway/Santa Ana Canyon Road	North of, and adjacent to the site.	The lighting from vehicles, entryway signage, and parking area/structural lighting would be visible. The degree of light and potential glare would not be any different from that associated with existing development located along the SR-91 Freeway corridor.
Source: Blodgett/Baylosis Associates. 2001		

Potential light and glare impacts are minimized due to the distance of the proposed facility from nearby sensitive receptors (i.e., over 750 feet from the closest residential units) and intervening topography which shields the facility and associated parking from nearby residential neighborhoods. The project design will be required to incorporate the use of shielding and directional lighting to focus the light away from off-site receptors. Onsite parking lot lights will be directed onsite to minimize lighting spillover to offsite areas. In addition, timers will be used to shut-off the majority of the on-site lighting, not required for safety or security purposes. As a result, the potential impacts related to lighting and glare would be reduced to a level of insignificance.

Cumulative Impacts

As indicated in Section 2.6, two related projects are considered in this EIR. One of these related projects, the proposed Stonegate residential development, has the potential to result in cumulative aesthetic impacts due to its proximity to the proposed project site. This property is located adjacent to the proposed Canyon Hills Manor project, on the south side. This project proposes development of 61 single-family detached homes within the 39-acre parcel. As part of this related project, 79 building pads will be created, resulting in an overall development intensity of approximately 1.5 units per acre. In addition, an access street and other related improvements will require grading. The proposed residential development, together with the Canyon Hill Manor project, will result in the development of the last remaining undeveloped parcels within this portion of the Santa Ana Canyon Road corridor. However, these impacts are considered to be less than significant with the application of appropriate mitigation measures. Thus, no adverse cumulative impacts are anticipated.

3.2.5 Mitigation Measures

The following mitigation measures will be incorporated into the project design:

Measure 3.2-1. Prior to approval of the first grading plan or issuance of the first grading permit, whichever occurs first, the property owner/developer shall submit plans, prepared to the satisfaction of the Public Works Department and subject to the review and approval of the Public Works Department, showing that all on-site drainage systems, including culverts, terrace drains, and down drains, shall be screened from view of the adjacent properties and

public rights-of-way to the maximum extent feasible as determined by the Public Works Department and the culverts shall be earth-tone in color in conformance with Section 17.06.160 of the Anaheim Municipal Code to blend with the environment. Said grading plans shall be consistent with the conceptual grading plan contained in the Draft EIR and shall be designed to minimize slopes and recreate natural features in areas which interface between the natural and developed areas to the satisfaction of the Public Works Department. To the maximum extent feasible, views of proposed structures and access road shall be screened from the SR-91 Freeway, Santa Ana Canyon Road, and adjacent residential areas. Screening shall be achieved by either berming, landscaping, or intervening topography.

Measure 3.2-2. Prior to the issuance of the first building permit, the property owner/developer shall submit lighting plans prepared by an electrical engineer to the Planning Department, Zoning Division. The plans shall show that parking lot lights located in the surface parking areas shall be shielded and directed onsite to minimize lighting spillover to offsite areas. Lights shall utilize shields that will direct lighting downward and away from offsite receptors. Ground level lighting shall be used as much as possible. Lighting selection and placement shall be reviewed and approved by the Planning Department, Zoning Division, Police Department, and the Community Services Department.

Measure 3.2-3. On-going during project operation, parking area lighting shall utilize automatic shut-offs that shall be connected to a timer. When the facility is closed, exterior lighting for security purposes shall be kept to a minimum.

Measure 3.2-4. On-going during project operation, floodlights shall be prohibited and all facility lighting shall be directed on-site. No direct illumination of the open space or slope areas shall be permitted.

Measure 3.2-5. Prior to final building and zoning inspections, the property owner/developer shall landscape the property in conformance with the landscape plans approved in connection with Conditional Use Permit No. 2001-00431, which is on file in the Planning Department. Said landscape plans shall be designed to minimize the visibility of the structures from off-site locations (SR-91 Freeway, Santa Ana Canyon Road, and adjacent residential areas). Where drainage culverts, terrace drains and downdrains are necessary, trees and shrubs shall be grouped together and spaced to minimize the visibility of drainage facilities on graded slope banks. Said plans shall also include a replacement of specimen trees at a ratio of 2 to 1 to mitigate any impacts from the removal of specimen trees. Off-site views of proposed structures and access road shall be screened by project grading, landscaping, or intervening topography consistent with the view photo simulation in the DEIR.

Measure 3.2-6. Prior to the issuance of a building permit the property owner/developer shall submit plans to the Planning Department, Zoning Division, showing that the building and other structural improvements shall be constructed and/or painted in materials to facilitate their concealment from off-site views; and, prior to final building and zoning inspections, said improvements shall be implemented.

Measure 3.2-7. On-going during grading operations and construction, graded areas shall be landscaped as soon as possible following the cessation of grading and excavation. In addition to reducing potential fugitive dust emissions, this measure will reduce the visual impacts associated with the site's grading.

3.2.6 Significant Unavoidable Impacts

As indicated in Section 3.2.4, the project site's appearance will be largely altered through the grading of the site, including the lowering by up to 82 feet of a prominent ridgeline. The buildings and roadway will be partially visible from some vantage points evaluated as part of the visual analysis. The mitigation measures identified above will be effective in reducing the potential visual, lighting, glare and aesthetic impacts of the proposed structures to less than significant levels. The change to the ridgeline will be mitigated by landscaping and contouring. As a result, no significant unavoidable adverse impacts to scenic vistas and/or scenic highways or to the existing visual character or quality of the site and its surroundings will result from the proposed project's implementation. With the mitigation measures proposed, no significant unavoidable substantial adverse light or glare impacts would result that would adversely affect day or night-time views at the project site or surrounding area.

3.3 Air Quality Impacts

3.3.1 Scope of Analysis

The City of Anaheim, acting as Lead Agency in its review of this proposed project, directed the preparation of an Initial Study to determine the nature and scope of the analysis that would be required as part of this draft EIR's preparation. Based on the results of the preliminary environmental analysis undertaken as part of the Initial Study's preparation, the following potential air quality impacts were identified as requiring analysis in this draft EIR:

- The project's potential for obstructing the implementation of the applicable air quality plan;
- The project's potential for violating air quality standards or contributing to an existing or projected air quality violation; and,
- The project's potential for resulting in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.

The Lead Agency specifically directed the EIR's analysis examine potential short-term emissions related to the proposed project's construction. Specific emphasis was to be placed on the evaluation of fugitive dust emissions related to the site's grading.

3.3.2 Environmental Setting

The City of Anaheim is located in the South Coast Air Basin (SCAB) of California, a 6,600-square-mile area encompassing Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel Mountains, the San Bernardino Mountains, and the San Jacinto Mountains to the northwest and east. The strength and location of a semi-permanent, subtropical high-pressure cell over the Pacific Ocean primarily controls the climate of the basin by moderating the difference in seasonal temperatures. The proposed project site is presently undeveloped and there are no uses that currently generate mobile (traffic-related) or stationary emissions.

An air quality monitoring station is located in the City of Anaheim and the readings at this station (refer to Table 3-4) are used to characterize air quality in the vicinity of the project site. Air quality within the region has exhibited a gradual improvement largely due to more stringent vehicle emission controls and the use of reformulated "clean" fuels.³⁰ Nevertheless, the SCAB is considered a "non-attainment area" since Federal Clean Air Standards for precursors of ozone formation and PM₁₀ are being exceeded.

³⁰ South Coast Air Quality Management District. *Air Quality Data, 1997-1999.*

Pollutant Standards	1997	1998	1999	2000
Ozone (O₃)				
Maximum 1-hr. Concentration (ppm)	0.10	0.14	0.10	0.13
Maximum 8-hr. Concentration (ppm)	0.09	0.11	0.08	0.10
Days > Federal 1-hr. standard	1	2	0	1
Carbon Monoxide (CO)				
Maximum 1-hr. Concentration (ppm)	8	8	8	8
Maximum 8-hr. Concentration (ppm)	5.8	5.3	5.3	6.8
Days > Federal 1-hr. standard	0	0	0	0
Days > State 8-hr. standard	0	0	0	0
Nitrogen Dioxide (NO₂)				
Maximum 1-hr. Concentration (ppm)	0.13	0.13	0.12	0.13
Days > State 1-hr. standard	0	0	0	0
Source: SCAQMD Air Quality Data, 1997-2000.				

Sensitive receptors in the area include single-family homes located to the west (approximately 1,400 feet) and a senior housing development located approximately 800 feet to the east. The dominant emissions sources located in the vicinity of the proposed project site include mobile emissions from traffic on the nearby SR-91.³¹

3.3.3 Thresholds of Significance

According to the City of Anaheim, acting as Lead Agency, a project may be deemed to have a significant adverse air quality impact if it results in any of the following:

- A conflict with, or obstruction of, the implementation of the applicable air quality plan;
- A violation of an air quality standard or contributes substantially to an existing or projected air quality violation;
- A cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard; or,
- The exposure of sensitive receptors to substantial pollutant concentrations.

³¹ Blodgett/Baylosis Associates. *Site Survey*. 2001

3.3.4 Analysis of Environmental Impacts

Conformity Impacts with Applicable Air Quality Management Plan

The proposed project is not considered by the SCAQMD to be a regionally significant project due to its relatively small size. In addition, the project will not cause an exceedance in local population or housing projections that would indirectly result in a significant increase in emissions.³² As a result, the proposed project would not be in conflict with, or result in an obstruction of, the applicable air quality plan. Table 3-5 indicates the findings of conformity with respect to air quality.

Issue	Description	Findings
Criteria #1	Will the project result in an increase in the frequency or severity of an existing air quality violation or in the continuation of a violation?	The proposed project's relatively small size represents a land use that is not considered to be regionally significant. The proposed project will not result in emissions that exceed SCAQMD thresholds of significance.
Criteria #2	Will the project exceed the assumptions included in the AQMP or other regional growth projections relevant to them?	The proposed project will not result in any significant increases in employment nor will it affect housing, population, or employment projections.
Criteria Pollutants	The SCAQMD indicates the daily emissions levels that will constitute a significant adverse impact. These thresholds include the following: Carbon monoxide - 550 lbs./day Nitrogen oxide - 100 lbs./day Sulfur dioxide - 150 lbs./day PM10 - 150 lbs./day ROG - 75 lbs./day	The proposed project will not cause the generation of mobile or stationary emissions that will exceed the SCAQMD's daily thresholds for significance.
Regional Significance	According to the SCAQMD, a project is considered to be regionally significant if its floor area is 200,000 square feet or more for commercial.	The proposed project will not exceed the defined floor area requirements for a "regionally significant" project.
Source: Blodgett/Baylosis Associates. 2001.		

The conformity issues outlined in Table 3-5 indicate those criteria and significance thresholds taken from the SCAQMD's CEQA Air Quality Handbook. As indicated in the table, the proposed project does not meet the SCAQMD's significance criteria (Criteria #1 and #2), nor will the project generate operational emissions that will exceed daily thresholds of significance.

Short-term Air Quality Impacts

The proposed project, once operational, will not result in an exceedance of long-term emissions

³² This issue was evaluated in the Initial Study. Refer to Appendix A.

thresholds.³³ However, the proposed project will involve grading and excavation and this grading activity will involve the movement of approximately 350,000 cubic yards of earth on-site. An additional 300,000 cubic yards of earth will be disturbed (and ultimately exported) to accommodate the rough grading required for the widening of Santa Ana Canyon Road. Short-term, construction-related emissions will be associated with the following activities:

- *Grading* activities associated with land clearance, grading, and excavation will result in fugitive dust emissions. The SCAQMD indicates that, in general, 110 pounds of dust per acre may be generated on a daily basis in the absence of mitigation.
- *Equipment emissions*, associated with the use of construction equipment during site preparation and construction activities, will be generated. The construction equipment (consisting of graders, bulldozers, cranes, trucks, etc.) are generally diesel-powered, resulting in high levels of nitrogen oxide (NO_x) and particulate emissions.
- *Mobile emissions* will be generated by delivery vehicles and workers commuting to the construction site.

Sensitive receptors located in the vicinity of the project include a senior housing development located west of Festival Drive and south of Santa Ana Canyon Road. Single-family homes are located further south, along Raspberry Lane. The senior housing development and the single-family homes are located 800 feet east and 1,400 feet southeast of the project site, respectively. Other sensitive receptors include single-family homes located to the west and southwest, along Eucalyptus Drive. The homes along Eucalyptus Drive nearest to the graded areas are approximately 750 feet to the west.

The greatest potential for short-term air quality impacts on local receptors are related to fugitive dust emissions potentially impacting the aforementioned sensitive receptors. The SCAQMD published a compilation of hourly wind flow patterns within the South Coast Air Basin. In general, wind flow patterns reflect the dispersion of cooler marine air during the afternoon periods and the cooler inland air during the late night and early morning periods.

Typical summer daytime (noon to 7:00 p.m.) ocean winds are from the southwest with average wind speeds ranging from 10 to 15 miles (mph) per hour. Typical summer night (midnight to 5:00 a.m.) winds are from the northeast with an average wind speed of 3 to 4 mph. Typical winter daytime winds have average wind speeds of 6 to 9 mph from the southwest. Finally, typical winter night winds have average wind speeds of between 3 to 8 mph from the northeast. During most periods when grading is underway, the wind direction will be towards the northeast.

The grading activities will occur over a 6-month period. The characteristics of the short-term impacts will vary considerably during the construction period, and will be dependent on the nature and extent of activities being undertaken as part of the facility's construction. A

³³ This issue was evaluated in the Initial Study. The Initial Study is provided in the Appendix.

computer model developed for the South Coast Air Quality Management District and the California Air Resources Board was used to estimate short-term emissions.³⁴ Table 3-6 compares the average daily (worse-case) emissions associated with various construction activities.

The analysis indicates that the proposed project's construction will not exceed the SCAQMD's "daily thresholds" indicating the project's air quality impacts will be less than significant. It should also be emphasized that the figures shown in the table are an over-estimate since many of the activities (such as asphalt paving and grading) will not occur simultaneously. Only PM₁₀ emissions approach the SCAQMD's threshold figures. Mitigation (such as the regular watering of graded areas) will reduce fugitive dust emissions by as much as 50 percent.

Source	ROG	NOx	CO	PM ¹⁰	SOx
Site Grading	2.91	27.54	-	142.32	2.75
Construction Worker Trips	0	0	.01	0	-
Stationary Equipment	0.34	.27	-	.02	0
Mobile Equipment (gas)	23.54	15.90	-	1.22	.96
Mobile Equipment (diesel)	0	0	-	0	0
Architectural Coatings	1.61	-	-	-	-
Asphalt Coatings	.71	-	-	-	-
Total For Canyon Hills Manor	29.11	43.71	.01	143.56	3.71
Total For Related Projects (excluding Canyon Hills Manor)	35.89	71.22	.11	176.89	6.92
Emissions Thresholds/Day	75	100	550	150	150
Source: Blodgett/Baylosis Associates, 2000.					

The wind flow patterns would have their greatest impact during the summer months where the average wind velocity is the greatest. During the daytime periods, the ocean air blows inland at average velocities of between 10 to 15 mph. This would mean that any fugitive dust associated with grading or disturbed by the wind itself, would likely be transported in a northeasterly direction. A number of mitigation measures have been identified as a means to control fugitive dust. These measures will reduce the potential emissions to levels that are less than significant.

³⁴ California Air Resources Board. *Urbemis 7G for Windows*. 2000. A number of assumptions were made prior to using the model: 1. No more than 14 acres were assumed to undergo grading (this represents a theoretical worse case since only 50 percent of the site will be graded in total, 2. Grading was expected to occur over a 102 day period, 3. Up to 2.72 acres would be paved in asphalt, and 4. Heavy equipment use would consist of a roller, grader, tracked loader, and wheeled loader.

Cumulative Impacts

As indicated in Section 2.6, the following related projects were considered in this analysis.

- *Stonegate Development.* There is a proposal to construct 61 single-family residential units within a 39-acre parcel located immediately south, southwest of the proposed Canyon Hills Manor development site.
- *Maag Ranch (Tentative Tract No. 16254).* This recently approved project will involve the construction of 128 residential units within a 24.5-acre property. The project site is located northeast of the intersection of Imperial Highway and Santa Ana Canyon Road.

The two related projects combined, will involve the construction of 189 single-family dwelling units within 63.5-acres of land. Using the same methodology used in determining the short-term emissions for the proposed project, the potential construction-related emissions for the two related projects were generally found to be below thresholds considered to be significant. The collective emissions for PM¹⁰ did exceed the SCAQMD's recommended daily thresholds. However, the construction of the two projects are not anticipated to be concurrent. In addition, the use of soils binders or adherence to other SCAQMD rules, will reduce particulate dust emissions by as much as 50 percent. As a result, the potential cumulative short-term air quality impacts would be less than significant.

3.3.5 Mitigation Measures

Measure 3.3-1 Prior to issuance of a grading permit, the property owner/developer shall submit a letter from the South Coast Air Quality District confirming the project requires no permits from SCAQMD in relation to the project's grading and construction impacts, including off-site truck traffic to export soils from the project site.

Measure 3.3-2. On-going during grading and construction activities, normal wetting procedures or other dust palliative measures shall be followed to minimize fugitive dust emissions in compliance with the City of Anaheim Municipal Code and SCAQMD Rule 403.

Measure 3.3-3. On-going during grading and construction activities, soil binders shall be used on unpaved roads and/or parking areas unless an alternative method is approved by the Public Works Department.

Measure 3.3-4. On-going during grading and construction activities, Santa Ana Canyon Road shall be swept as needed to reduce fugitive dust from site activities.

Measure 3.3-5. On-going during grading activities, all grading operations shall be suspended when wind speeds (as instantaneous gusts) exceed 25 miles per hour.

Measure 3.3-6. On-going during grading and construction activities, all trucks transporting earthen materials off-site shall be covered to prevent earth from spilling from the trailers.

Measure 3.3-7. On-going during grading and construction activities, once grading operations have been completed for a specific area of the site, landscaping and irrigation shall be installed as soon as possible to reduce the likelihood of fugitive dust.

3.3.6 Significant Unavoidable Impacts

The potential grading impacts, and the attendant fugitive emissions, are short-term in nature. The emissions will cease once grading and construction has been completed. In addition, the SCAQMD's control measures will be effective in reducing fugitive dust emissions by as much as 50 percent. As a result, no significant unavoidable adverse impacts on air quality will result.

3.4 Biological Resources Impacts

3.4.1 Scope of Analysis

The City of Anaheim, acting as Lead Agency in the review of this proposed project, directed the preparation of an Initial Study to determine the nature and scope of the analysis that would be required as part of this draft EIR's preparation.³⁵ Based on the results of the preliminary environmental analysis undertaken as part of the Initial Study's preparation, the following potential impacts on biological resources were identified as requiring analysis in this draft EIR:

- The proposed project's impact on any species identified as a candidate, sensitive, or special status species by local designation or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; an adverse effect on any riparian habitat or other sensitive natural community identified by local designation or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- The proposed project's potential for creating an 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; and,
- The proposed project's potential impacts on wildlife movement corridors.

The analysis of biological resources and the evaluation of the potential environmental effects of the proposed project on these resources is based on field surveys and archival research undertaken by Chambers Group, Inc. The findings of this research are also documented in a report prepared by Chambers Group, Inc. The report is included in this draft EIR in Appendix C.

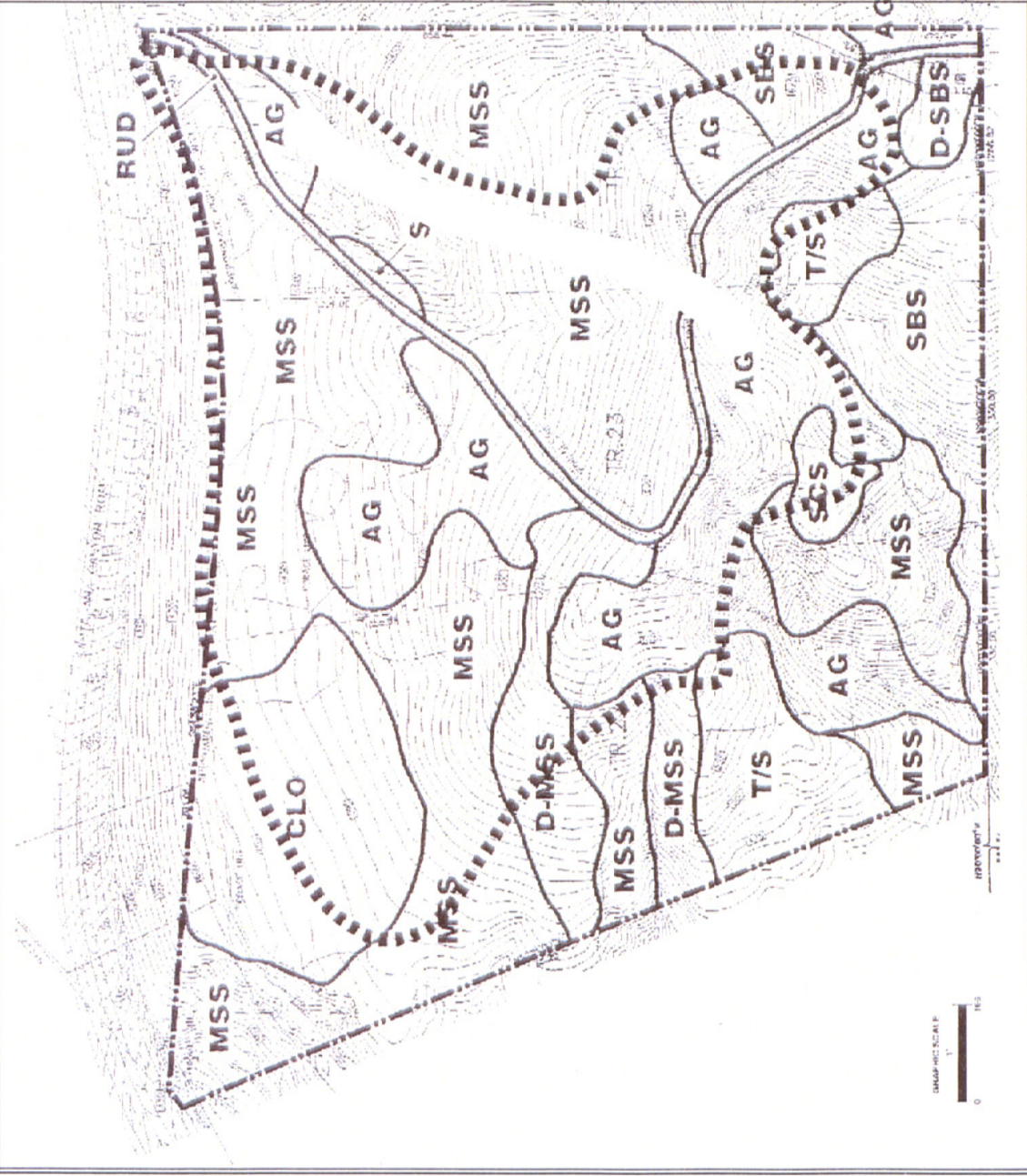
3.4.2 Environmental Setting

Survey Methodology

Two surveys were conducted by Chambers Group, Inc. biologists and botanists to identify the nature and extent of biological resources within the 29-acre development site. These surveys were undertaken in 1999 and 2001. The purpose of these surveys was to identify and map vegetation communities located within the proposed project site and to determine the presence or potential presence of sensitive plant and animal species and habitat. Prior to the survey, the most recent records of the California Natural Diversity Database (CNDDDB 1997) for the quadrangles containing and surrounding the project site were reviewed.³⁶ The California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California

³⁵ A copy of the Initial Study is provided in this draft EIR as Appendix A.

³⁶ These 7 ½ minute quadrangles included those for the Prado Dam, Black Star Canyon, Yorba Linda, and Orange.



LEGEND

-----	Property Boundary
CLO	Coast Live Oak Woodland
MSS	Mixed Sage Scrub
D-MSS	Disturbed Mixed Sage Scrub
T/S	Toyon-Sumac Chaparral
AG	Annual Grassland
SCS	Southern Cactus Scrub
SBS	Sagebrush Scrub
D-SBS	Disturbed Sagebrush Scrub
RUD	Ruderal
	Impact Area



City of Anaheim Draft EIR No. 327
Exhibit 3-9 – Biological Resources – Plant Communities
 Source: DanJon Engineering, Inc., 2001

(CNPSEI 1996) was also consulted to determine the potential occurrence of threatened, endangered, candidate, or other sensitive species in the study area.³⁷

Access to most areas of the site was possible from Santa Ana Canyon Road and field investigators surveyed the majority of the property by walking along trails leading into the parcel or off road into the vegetation. All of the plant species observed were recorded using detailed field notes. Plants of uncertain identity were collected and subsequently identified from keys, descriptions, and other illustrations.³⁸ Plant communities and sub-communities were identified, and subsequently delineated on a topographic map, in accordance with the methodology pursuant to the County of Orange requirements.³⁹

Prior to performing the surveys, documentation relevant to the project area was reviewed. The CNDDDB was accessed for information on sensitive wildlife species known to occur in the project area and its immediate vicinity. Lists from the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) were also referenced, and a list of sensitive wildlife species potentially occurring in the project area was developed. Sensitive wildlife includes all listed federal and state endangered and threatened species, and federal and state species of concern (FSC, CSC). Habitat types within the project area were investigated, concentrating on sensitive habitat areas (e.g., coastal sage scrub) in the project area and its immediate vicinity. Wildlife and wildlife signs, including tracks, fecal material, carcasses, nests, excavations, and vocalizations, were noted and recorded on standardized data sheets.⁴⁰

Existing Vegetation within the Project Site

The project site, encompassing approximately 29 acres, is primarily composed of coastal sage scrub and annual grassland communities. Portions of the property have been mechanically disturbed and this disturbance is readily evident in the coastal sage scrub communities found on-site. This community includes smaller stature scrub species, a higher percentage of bare ground, and greater frequencies of non-native plant species. Terracing of the slope was also noted in a coast live oak woodland located in the northwest portion of the property.⁴¹ A total of seven vegetation communities, along with disturbed variations of two of those communities, were identified. The location and extent of these communities are noted in Exhibit 3-9. The

³⁷ All of these database records are organized according to the United States Geological Survey's 7 ½ minute topographic quadrangles.

³⁸ Sources consulted in this identification included Abrams (1923, 1944, 1951), Abrams and Ferris (1960), Hickman (1993), and Munz (1974).

³⁹ County of Orange (1992). Plant nomenclature follows that of The Jepson Manual, Higher Plants of California (Hickman 1993).

⁴⁰ A reconnaissance-level field survey was performed throughout the site to characterize the distribution and relative abundance of wildlife, wildlife resources, and wildlife habitat within the project area. The survey was conducted by Ms. Mari Schroeder, a Chambers Group wildlife biologist, on July 23, 1999.

⁴¹ Chambers Group, Inc. *Biological Sections for the Canyon Hills Manor Environmental Impact Report*. June 2001, December 2002.

principal characteristics of the various vegetation communities found within the project site are described below:

- *Venturan-Diegan Coastal Sage Scrub.* The Venturan-Diegan transitional coastal sage scrub vegetation consists primarily of low, drought-deciduous and evergreen shrubs. It is common in Orange County and is considered a transitional association that contains elements of two geographical associations, the Venturan and Diegan coastal sage scrubs. Twelve sub-communities, which are more specific plant associations, have been described within the Venturan-Diegan transitional coastal sage scrub category (County of Orange, 1992). Two of these sub-communities, mixed sage scrub and California sagebrush scrub, occur within the project site. Disturbed versions of these sub-communities also occur on the property.⁴² Disturbed portions of these communities have a greater presence of exotic species and are, therefore, differentiated as “disturbed” on the vegetation map (refer to Exhibit 3-9).
- *Mixed Sage Scrub.* According to the County of Orange classification system, a mixed sage scrub sub-community consists of a mix of four or more dominant scrub species. This category applies at the Canyon Hills Manor site in a community that is dominated by California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), black sage (*Salvia melilifera*), and California sagebrush (*Artemisia californica*). Other species that occur in this sub-community include coyote bush (*Baccharis pilularis*) and Mexican elderberry (*Sambucus mexicana*). The mixed sage scrub sub-community is the dominant vegetation community on the project site and accounts for approximately 13.8 acres. Disturbed mixed sage scrub occurs in the western portion of the property and comprises approximately 0.4 acres. This community is characterized by the shrubs commonly found in mixed sage scrub communities, but with a high percentage of invasive, non-native species present (more than 20 percent). Fennel (*Foeniculum vulgare*) is the most common non-native component in this community. Other exotic species include the star thistle (*Centaurea melitensis*) and the wild oat (*Avena fatua*).⁴³
- *California Sage Brush Scrub.* This sub-community is found within two locations in the southeast corner of the proposed project site. This community accounts for approximately 2.3 acres. It differs from other coastal sage scrub sub-communities in that it is composed of a nearly monotypic stand of California sagebrush. Vegetation is dense with little penetration from exotic species. Disturbed California sagebrush scrub occurs in the extreme southeast corner of the property and totals about 0.3 acres. Star thistle and nonnative grasses including red brome (*Bromus madritensis ssp. rubens*) and wild oats are common in this area, altering the composition of the sub-community.⁴⁴

⁴² Ibid.

⁴³ Ibid

⁴⁴ Ibid.

- *Southern Cactus Scrub*. The southern cactus scrub community is found along a trail in the northeastern portion of the project site and in a small area in the southern portion of the property. Coastal prickly pear (*Opuntia littoralis*) contributes greater than 50 percent cover in these areas. Other species occurring in this community include California sagebrush and California buckwheat. Southern cactus scrub comprises 0.5 acres on the site.⁴⁵
- *Annual Grassland*. Annual grassland is also a common component of the 29-acre parcel, totaling approximately 5.5 acres. This community is composed primarily of annual grasses of Mediterranean origin with the most commonly occurring species being wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), and red brome. Nonnative forbs found in this community include black mustard (*Brassica nigra*) and star thistle. Some areas of the grassland on the site also contain scattered elements of coastal sage scrub, primarily laurel sumac, California sagebrush, and California buckwheat. The coastal sage scrub elements provide less than 10 percent cover within the grassland.⁴⁶
- *Ruderal*. A graded trail ascends to the hill top near the center of the property from Santa Ana Canyon Road, and continuing along the ridge top in a southeasterly direction. The plant community on and immediately adjacent to the trail is composed almost exclusively of ruderal species including black mustard, star thistle, non-native grasses, and telegraph weed (*Heterotheca grandiflora*). Ruderal areas comprise approximately 1.1 acres of the site.⁴⁷
- *Toyon-Sumac Chaparral*. Toyon-sumac chaparral occurs in two stands on west-facing slopes in the southwest and southeast portions of the property. This community is characterized by large, evergreen shrubs that are adapted to occasional wildfires. Toyon (*Heteromeles arbutifolia*), laurel sumac, and lemonadeberry (*Rhus integrifolia*) are the dominant shrubs in this community. California sagebrush and California buckwheat occur in the understory of the larger shrubs. Toyon-sumac chaparral comprises approximately 1.6 acres of the site.
- *Coast Live Oak Woodland*. A small coast live oak woodland is located in the northwest corner of the property. This plant community appears to have been planted because the trees are even-aged and occur in rows along a terraced portion of the slope. The dominant species in this community is coast live oak (*Quercus agrifolia*). The oaks form an open canopy over a sparsely vegetated under-story composed of non-native grasses and occasional poison oak (*Toxicodendron diversilobum*). The woodland comprises approximately 2.6 acres.⁴⁸

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Ibid.

Table 3-7 provides the acreage and proportions of the site occupied by the various vegetation communities.

Table 3-7 Plant Communities Within the Canyon Hills Manor Property		
Plant Community	Description	Area
<i>Venturan-Diegan Coastal Sage Scrub.</i>	The Venturan-Diegan transitional coastal sage scrub vegetation consists primarily of low, drought-deciduous and evergreen shrubs. Disturbed versions of these sub-communities also occur on the property.	Two of these sub-communities, mixed sage scrub and California sagebrush scrub, occur on the project site.
<i>Mixed Sage Scrub.</i>	This category applies at the Canyon Hills Manor site in a community that is dominated by California buckwheat (<i>Eriogonum fasciculatum</i>), laurel sumac (<i>Malosma laurina</i>), black sage (<i>Salvia melilifera</i>), and California sagebrush (<i>Artemisia californica</i>). Other species which occur in this sub-community include coyote bush (<i>Baccharis pilularis</i>) and Mexican elderberry (<i>Sambucus mexicana</i>).	The mixed sage scrub sub-community is the dominant vegetation community on the project site and covers approximately 13.8 acres. Disturbed mixed sage scrub occurs in the western portion of the property and comprises approximately 0.4 acres.
<i>California Sage Brush Scrub.</i>	This sub-community differs from other coastal sage scrub sub-communities in that it is composed of a nearly monotypic stand of California sagebrush. Vegetation is dense with little penetration from exotic species.	This sub-community is found at two locations on the southeast corner of the property, totaling approximately 2.3 acres. Disturbed California sagebrush scrub occurs in the extreme southeast corner of the property and totals about 0.3 acres.
<i>Annual Grassland.</i>	This community is composed primarily of annual grasses of Mediterranean origin. The most common species found were wild oat (<i>Avena fatua</i>), ripgut brome (<i>Bromus diandrus</i>), and red brome. Nonnative forbs found in this community include black mustard (<i>Brassica nigra</i>) and star thistle.	Annual grassland is also a common component of the site, totaling approximately 5.5 acres.
<i>Ruderal.</i>	The plant community is composed almost exclusively of ruderal species including black mustard, star thistle, non-native grasses, and telegraph weed (<i>Heterotheca grandiflora</i>).	Ruderal areas comprise approximately 1.1 acres of the site.
<i>Toyon-Sumac Chaparral.</i>	This community is characterized by large, evergreen shrubs that are adapted to occasional wildfires. Toyon (<i>Heteromeles arbutifolia</i>), laural sumac, and lemonadeberry (<i>Rhus integrifolia</i>) are the dominant shrubs in this community. California sagebrush and California buckwheat occur in the under-story of the larger shrubs.	Toyon-sumac chaparral occurs in two stands on west-facing slopes in the southwest and southeast portions of the property. Toyon-sumac chaparral comprises approximately 1.6 acres of the site.
<i>Coast Live Oak Woodland.</i>	This plant community appears to have been planted because the trees are even-aged and occur in rows along a terraced portion of the slope. The dominant species in this community is coast live oak (<i>Quercus agrifolia</i>). The oaks form an open canopy over a sparsely vegetated understory composed of non-native grasses and occasional poison oak (<i>Toxicodendron diversilobum</i>).	A small coast live oak woodland occurs in the northwest corner of the property. The woodland comprises approximately 2.6 acres.
Source: Chambers Group, Inc. <i>Biological Sections for the Canyon Hills Manor Environmental Impact Report</i> . June 2001, December 2002		

Existing Sensitive Plant Species within the Project Site

No special status plant species were observed during the reconnaissance survey. However, those designated "threatened", "endangered", and "sensitive" plant species that could potentially occur within the project site are listed in Table 3-8. These potentially occurring plant species are described below and on the following pages:

- *Braunton's Milkvetch (Astragalus brauntonii)*. Braunton's milkvetch is a federal-listed endangered species (FE). It occurs in gravelly clay soils overlying granite or limestone in chaparral, coastal sage scrub, native grasslands, and coniferous forests. This species generally remains dormant until openings in the under-story are formed, typically from human-related disturbance or fires. Known occurrences in the vicinity of the project site include a 1994 sighting in the Coal Canyon area approximately 3 miles east of the site.⁴⁹ A focused survey for this species was not conducted, however, the potential for Braunton's milkvetch to occur on the project site is considered low to moderate. Most of the disturbed areas on the project site were surveyed and this species was not observed.⁵⁰
- *Coulter's Saltbush (Atriplex coulteri)*. Coulter's saltbush is a California Native Plant Society (CNPS) list 1B species that occurs in coastal scrub and grasslands, especially on ridge tops, ocean bluffs, and alkaline low places. The nearest reported location is 7 miles northeast of the proposed project site. A limited amount of suitable grassland habitat occurs in the central portion of the property. Due to the close proximity and limited suitable habitat for Coulter's saltbush, this species has a moderate potential of occurring on the property.⁵¹
- *Plummer's Mariposa Lily (Calochortus plummerae)*. Plummer's Mariposa lily is a spring-blooming (May-July) perennial herb and is considered a FSC and is included on the CNPS 1B list. It occurs in granitic soils in chaparral, coastal scrub, cismontane woodlands, and foothill grasslands. The nearest recorded occurrence is south of the project site near Oak Flat along the main divide road. Plummer's Mariposa lily has a high potential to occur because suitable habitat is present on the site, and it is known to occur in the vicinity.⁵²
- *Intermediate Mariposa Lily (Calochortus weedli var. intermedius)*. The intermediate mariposa lily is a spring blooming (May-July) perennial herb. It is considered a FSC and

⁴⁹ Ibid.

⁵⁰ It is unlikely that it would have been overlooked because the plant is large and conspicuous, and the surveyors had recently observed a population of Braunton's milkvetch in Ventura County. The Ventura County population was visited on July 16, 1999, just prior to conducting the survey on the subject property.

⁵¹ Chambers Group, Inc. *Biological Sections for the Canyon Hills Manor Environmental Impact Report*. June 2001, December 2002

⁵² Ibid.

is included on the CNPS 1B list. This plant typically occurs on dry, rocky, open slopes in chaparral, coastal scrub, or grassland habitats. The closest reported occurrence of this species is located in Gypsum Canyon approximately 2 miles east of the site. Potential for occurrence of intermediate mariposa lily within the project site is considered high because suitable habitat exists and the species has been reported locally.⁵³

- *Tecate Cypress (Cupressus forbesii)*. The tecate cypress is one of two species of cypress native to Southern California and is a FSC and is included on the CNPS 1B list and it occurs on dry slopes in closed-cone coniferous forest and chaparral. A grove of tecate cypress occurs on the north-facing slopes in a drainage extending southeast from Coal Canyon towards Sierra Peak approximately 4 miles east of the site. This species was not observed during the survey and has a low potential to occur because suitable habitat is not present on the site.⁵⁴
- *Many-Stemmed Dudleya (Dudleya multicaulis)*. The many-stemmed dudleya is a FSC and is included on the CNPS 1B list. This plant species is a spring-blooming (May-July) perennial herb. It has been recorded from a variety of habitats including chaparral, coastal scrub, and valley and foothill grassland. It most often occurs in heavy, clayey soils or on grassy slopes in chaparral and coastal scrub communities. Reported occurrences include Gypsum Canyon approximately 2.5 miles southeast of the site and Coal Canyon approximately 3 miles east of the site where a pipeline crosses Ridge Road. This species has a high potential for occurrence within the project site because suitable habitat is present and the species occurs in the vicinity.⁵⁵
- *Santa Ana River Woollystar (Eriastrum densifolium ssp. sanctorum)*. The Santa Ana River woollystar is a federal and state-listed endangered species (FE, SE). This species occurs in sandy soils in river floodplain (alluvial) habitats and known range is the Santa Ana River in Riverside and San Bernardino Counties below 500 meters elevation. Santa Ana River woollystar has historically occurred in the region, but has not been observed locally since 1927 (near Weir Canyon). This species has a low potential to occur on the site because no suitable habitat exists on the site.⁵⁶
- *Heart-Leaved Pitcher Sage (Lepechinia cardiophylla)*. The heart-leaf pitcher sage, a FSC and a CNPS list 1B species, is a shrub found in dry areas and slopes in chaparral and closed-cone coniferous forests. Its known range is the Santa Ana Mountains at elevations above 1,800 feet. Known occurrences include the headwaters of Coal Canyon just west of the Cleveland National Forest boundary in a tecate cypress grove,

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ Ibid.

⁵⁶ Ibid.

approximately 4 miles east of the site. The heart-leaved pitcher sage has a low potential to occur on the site because no suitable habitat is present.⁵⁷

Plant Community	Description	Listing
Braunton's Milkvetch (<i>Astragalus brauntonii</i>).	Known occurrences in the vicinity of the project site include a 1994 sighting in Coal Canyon approximately 3 miles east of the site.	Federal-listed endangered species.
Coulter's Saltbush (<i>Atriplex coulteri</i>).	The nearest reported location is 7 miles northeast of the property. A limited amount of suitable grassland habitat occurs in the central portion of the property.	California Native Plant Society list 1B species
Plummer's Mariposa Lily (<i>Calochortus plummerae</i>).	Due to the close proximity and limited suitable habitat for Coulter's saltbush, this species has a moderate potential of occurring on the property.	Federal Species of Concern and California Native Plant Society list 1B species.
Plummer's Mariposa Lily (<i>Calochortus plummerae</i>)	The nearest recorded occurrence is south of the project site near Oak Flat. Plummer's Mariposa lily has a high potential because suitable habitat is present on the site.	Federal Species of Concern and California Native Plant Society 1B list.
Intermediate Mariposa Lily (<i>Calochortus weedii</i> var. <i>intermedius</i>).	Potential for occurrence of intermediate mariposa lily is considered high at the project site because suitable habitat exists and the species has been reported locally.	Federal Species of Concern and California Native Plant Society 1B list.
Tecate Cypress (<i>Cupressus forbesii</i>).	This species was not observed during the survey and has a low potential to occur because suitable habitat is not present on the site.	Federal Species of Concern and California Native Plant Society 1B list.
Many-Stemmed Dudleya (<i>Dudleya multicaulis</i>).	This species has a high potential to occur on the project site because suitable habitat is present and the species occurs in the vicinity.	Federal Species of Concern and California Native Plant Society 1B list.
Santa Ana River Woollystar (<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>).	This species has a low potential to occur on the site because no suitable habitat exists on the site.	Federal- and State-listed endangered species.
Heart-Leaved Pitcher Sage (<i>Lepechinia cardiophylla</i>).	Heart-leaved pitcher sage has a low potential to occur on the site because no suitable habitat is present.	Federal Species of Concern and a California Native Plant Society list 1B species
Source: Chambers Group, Inc. <i>Biological Sections for the Canyon Hills Manor Environmental Impact Report</i> . June 2001, December 2002		

Existing Wildlife within the Project Site

As indicated previously, the project site's ground-cover is characterized by coastal sage scrub and non-native annual grassland. Wildlife species occurring within the project site are characteristic of these communities. All wildlife species and wildlife signs (scat, tracks, etc.) encountered during the survey were recorded. No amphibians were observed during the surveys. One reptile species, the western fence lizard (*Sceloporus occidentalis*), was observed onsite.

The grassland community found within the site provides suitable foraging habitat for a variety of granivorous bird species as well as raptor species. Birds observed in the grassland

⁵⁷ Ibid.

community included the mourning dove (*Zenaida macroura*), house finch (*Carpodacus mexicanus*), and bushtit (*Psaltriparus minimus*). Raptor species, including the Cooper's hawk (*Accipiter cooperii*) and red-tailed hawk (*Buteo jamaicensis*), were observed during the surveys. Many avian species commonly associated with coastal sage scrub habitat were also observed. Those observed include the greater roadrunner (*Geococcyx californianus*), northern mockingbird (*Mimus polyglottos*), California thrasher (*Toxostoma redivivum*), common raven (*Corvus corax*), spotted towhee (*Pipilo maculatus*), and California towhee (*Pipilo crissalis*).⁵⁸

Two mammal species, the California ground squirrel (*Spermophilus beecheyi*) and desert cottontail (*Sylvilagus audubonii*), were observed during the surveys. The burrows, scat, tracks, and carcasses, of several mammal species were also detected during the survey. Tracks were observed along the dirt access road for the mule deer (*Odocoileus hemionus*), coyote (*Canis latrans*), and gray fox (*Urocyon cinereoargenteus*). Several pocket gopher (*Thomomys bottae*) and ground squirrel burrows were also observed.⁵⁹

Sensitive Wildlife Species Potentially Occurring Within the Project Site

Three sensitive wildlife species, the coastal California gnatcatcher (*Poliophila californica californica*), coastal cactus wren (*Campylorhynchus brunneicapillus*), and Cooper's hawk (*Accipiter cooperii*), were observed onsite. Thirteen additional species have the potential to occur onsite. The western spadefoot toad (*Scaphiopus hammondi*), San Diego horned lizard (*Phrynosoma coronatum blainvillei*), orange-throated whiptail (*Cnemidophorus hyperythrus*), and white-tailed kite (*Elanus leucurus*) all have a high potential to occur within the project site. The sharp-shinned hawk (*Accipiter striatus*), golden eagle (*Aquila chrysaetos*), pallid bat (*Antrozous pallidus*), and California mastiff bat (*Eumops perotis*) have a moderate potential for occurrence within the project site. The Quino checkerspot butterfly (*Euphydryas editha quino*), coast range newt (*Taricha torosa torosa*), least Bell's vireo (*Vireo bellii pusillus*), and southwestern pond turtle (*Clemmys marmorata pallida*) have a low potential to occur onsite.⁶⁰ Table 3-9 summarizes those sensitive wildlife species that are known to inhabit the proposed project site and those that could potentially inhabit the site.⁶¹

- *Quino Checkerspot Butterfly*. The site does not fall within the survey area for the Quino checkerspot butterfly (*Euphydryas editha quino*). The Quino checkerspot was federal-listed as an endangered species in January 1997 and is a California Species of Concern (CSC). It prefers open areas near rocky outcrops that have clay soils, native vegetation, and the presence of its larval host plant, western plantain (*Plantago erecta*). The biological reconnaissance survey was conducted after the blooming period of the host plant, so a focused habitat assessment could not be conducted. Because the site does

⁵⁸ Ibid.

⁵⁹ Ibid.

⁶⁰ Ibid.

⁶¹ These sensitive species includes those appearing on the list of Federal- and State-listed endangered or threatened, special concern species, FSC species.

not fall within the potential habitat area for the butterfly, a focused habitat assessment and focused surveys for adult butterflies are not required by the USFWS. This species has a low potential to occur onsite because the site does not fall within the known range of this species.⁶²

- *Santa Ana Sucker.* The Santa Ana sucker (*Catostomus santaanae*) is a federal listed threatened species and a State species of special concern. This species is endemic to the Los Angeles basin and south coastal streams. It prefers sand-rubble-boulder bottom streams with clear water and algae. No perennial streams occur at the Canyon Hills Manor property and due to the lack of suitable habitat, the Santa Ana sucker is not expected to occur.⁶³
- *Santa Ana Speckled Dace.* The Santa Ana speckled dace (*Rhinichthys osculus ssp 3*) is a FSC and a CSC. The Santa Ana speckled dace is limited to the headwaters of the Santa Ana and San Gabriel Rivers. This fish species is often found in riffle areas of perennial streams with cobble and gravel bottoms. Due to lack of suitable habitat, this species is not expected to occur.
- *Coast Range Newt.* The coast range newt (*Taricha torosa torosa*) is a California Species of Concern (CSC). This amphibian species occurs in coastal California from San Diego to Mendocino County. It prefers quiet streams, ponds, lakes, and surrounding evergreen and oak forests along the coast. No permanent water source occurs onsite and, therefore, this species has a low potential for occurrence.⁶⁴
- *Western Spadefoot Toad.* The western spadefoot toad (*Scaphiopus hammondi*) is designated as a species of concern by both the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG). The western spadefoot typically occurs in grassland habitats, but can be found in valley-foothill hardwood woodlands. It requires a water source, such as vernal pools or ephemeral ponds, for breeding and egg-laying. No western spadefoot toads were observed during the biological surveys. The closest known occurrence is approximately 5 miles south of the site near the Santiago Canyon Landfill. Suitable grassland habitat is limited to the northwestern portion of the site. In addition, there are no areas that could support vernal pools or ephemeral ponds located within the proposed project site. Therefore, this species has a low potential of occurrence.⁶⁵
- *California Red-Legged Frog.* The California red-legged frog (*Rana aurora draytonii*) is a FT and a CSC. This species is typically found in lowlands and foothills. It requires

⁶² Chambers Group, Inc. *Biological Sections for the Canyon Hills Manor Environmental Impact Report*. December 2002

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Ibid.

permanent sources of relatively deep water, and is typically found along shorelines with dense riparian or wetland vegetation, which serves as adequate cover. This species is most active at night, and will disperse distances of over one mile during and following rain events. Upland habitat for this species includes landscape features that provide cover and moisture within 300 feet of a riparian area. Due to lack of suitable habitat, this species is not expected to occur.

- *Southwestern Pond Turtle.* The southwestern pond turtle (*Clemmys marmorata pallida*), a FSC and a CSC, was not observed during the surveys. This species typically occurs in a variety of habitat types including woodland, grassland, and open forest. They are thoroughly aquatic, existing in good quality ponds, marshes, rivers, streams, and irrigation ditches that typically have rocky or muddy bottoms with watercress, cattails, water lilies, or other aquatic vegetation. No permanent water source occurs onsite, therefore, this species has a low potential for occurrence onsite.⁶⁶
- *Orange-Throated Whiptail.* The orange-throated whiptail (*Cnemidophorus hyperythrus*) is a FSC and a CSC. The orange-throated whiptail is found from San Bernardino County to Baja California and frequents sandy washes, rocky hillsides, and scrub communities that provide both open territory and adequate shading. Their diet is comprised of insects and spiders, both of which are abundant onsite. Due to similar habitat requirements, it typically occurs in association with the San Diego horned lizard. Suitable coastal sage scrub occurs throughout the site. The orange-throated whiptail is known to occur within 1.5 mile east and south of the site. Therefore, this species has a high potential for occurrence.⁶⁷
- *San Diego Horned Lizard.* The San Diego horned lizard (*Phrynosoma coronatum blainvillei*), a FSC and a CSC, was not observed during the surveys. This species prefers open areas of sandy soil and low vegetation. They are frequently found in areas where ant colonies (its primary food source) occur and it ranges from Southern California to northern Baja California. This species is known to occur in a variety of habitats including coastal sage scrub, open chaparral, riparian woodland, and annual grassland. The closest known occurrence is approximately 1.5 miles east of the site within the Santa Ana Mountain range. Due to the presence of suitable coastal sage scrub and the close proximity of a known occurrence, this species has a high potential to occur onsite.⁶⁸
- *California Legless Lizard.* The California legless lizard (*Anniella pulchra*) is a FSC and a CSC. The California legless lizard is common in coastal dune, valley-foothill, chaparral and coastal scrub type habitats. This species is often found in leaf litter and commonly burrow near the surface through loose soil. Prey species include insect larvae, small

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ Ibid.

adult insects and spiders. This species was not observed on the site, but it has a moderate potential to occur because the diagnostic habitats are present.

- *San Diego Banded Gecko*. The San Diego banded gecko (*Coleonyx variegatus abbotti*) is a FSC. This species occurs in coastal and cismontane southern California, from interior Ventura County south. It is absent from extreme outer coast areas. Geckos are nocturnal and usually stay under rocks, boards, or other cover during the day. They are opportunistic foragers on insects and other arthropods. This species was not observed but it has a moderate potential to occur on the site.
- *Coronado Skink*. The Coronado skink (*Eumeces skiltonianus interparietalis*) is a FSC and a CSC. This species prefers early successional stages of chaparral, pinon-juniper, and juniper sage woodlands or open areas. This species is usually found in rocky areas close to streams and on dry hillsides. This species was not observed, but it has a moderate potential to occur.
- *Rosy Boa*. The rosy boa (*Charina trivirgata*) is a FSC. The rosy boa occurs in desert and chaparral habitats from the coast to the Mojave and Colorado deserts. It prefers moderate to dense vegetation and rocky cover in coastal canyons, hillsides, desert canyons, washes and mountains. This species has been found in similar habitat in Yorba Linda and thus, it has a high potential to occur on the site.
- *Coast Patch-Nosed Snake*. The coast patch-nosed snake (*Salvadora hexalepis*) is a CSC. The coast patch-nosed snake occurs in brush or shrubby vegetation in coastal southern California. It requires small mammal burrows for refuge and overwintering sites. This species was not observed, but it has a moderate potential to occur.
- *San Bernardino Ringneck Snake*. The San Bernardino ringneck snake (*Diadophis punctatus modestus*) is a FSC and a CSC. This species is found in open, relatively rocky areas, often in somewhat moist microhabitats near intermittent streams. This species avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous vegetation. This species has a low potential to occur on the site due to the lack of intermittent stream habitat.
- *San Diego Ringneck Snake*. The San Diego ringneck snake (*Diadophis punctatus simillus*) is a FSC and a CSC. This species is common in open, relatively rocky areas with valley-foothill, mixed chaparral and annual grass habitats. This species has a moderate potential to occur on the site.
- *Two-Striped Garter Snake*. The two-striped garter snake (*Thamnophis hammondi*) is a CSC. The two-striped garter snake is limited to California coastal streams south of Salinas. This highly aquatic species is associated with perennial streams with rocky bottoms and riparian growth. Due to lack of suitable habitat, this species is not expected to occur.

- *Northern Red-Diamond Rattlesnake.* The northern red-diamond rattlesnake (*Crotalus ruber ruber*) is a CSC. This species occurs in chaparral, woodland, grassland and desert areas from coastal San Diego County to the eastern slopes of the mountains. It requires rocky areas with dense vegetation and rodent burrows for overwintering. This species has been found in Yorba Linda and thus, it has a high potential to occur.
- *Cooper's Hawk.* The Cooper's hawk was observed during the surveys. This species is also considered a CSC. It typically occurs near riparian vegetation and near patchy, wooded areas. Suitable foraging habitat is present throughout the site. Suitable nesting habitat is limited to the oak woodland in the northwest portion of the site. No raptor nests were observed onsite.⁶⁹
- *Sharp-Shinned Hawk.* The sharp-shinned hawk (*Accipiter striatus*) is a CSC. It is similar in appearance to the Cooper's hawk, but is a slightly smaller raptor. This species prefers woodlands and riparian areas for nesting and often occurs in conjunction with the Cooper's hawk. Suitable foraging habitat is present throughout the site. Suitable nesting habitat is limited to the oak woodland in the northwest portion of the site. As a result, this species has a moderate potential for occurrence.⁷⁰
- *Golden Eagle.* The golden eagle, a CSC, was not observed during the surveys. This species prefers mountainous or hilly terrain, hunting over open country for small mammals, snakes, birds, or carrion. The golden eagle prefers to nest on cliffs, walled canyons, or in large trees. The site does not contain suitable nesting habitat for the golden eagle. This species has been observed flying over Coal Canyon approximately 3 miles east of the site. Because suitable nesting habitat is not present onsite, the golden eagle has a moderate potential to occur.⁷¹
- *Ferruginous Hawk.* The Ferruginous hawk (*Buteo regalis*) is a FSC and a CSC. The Ferruginous hawk occurs in timber belts in barren, treeless plains and grassy prairies. It can also be found in along cliffs and rocky outcrops. This species nests in large dead or live trees of various kinds. It can also nest on the ground on hillsides, buttes, cliffs or rocky pinnacles. This species winters in portions of southern California, but is not expected to nest on the site. Thus, the potential for it to occur is low.
- *Northern Harrier.* The northern harrier (*Circus cyaneus*) is a CSC. The northern harrier frequents fresh water and saltwater emergent wetlands, grasslands and meadows. Grassland, coastal sage scrub ecotones, fresh water marshes, and estuarine habitats are most frequently used for both hunting and nesting in coastal southern California. Dominant prey include rodents, small birds, small reptiles, and amphibians. This species

⁶⁹ Ibid.

⁷⁰ Ibid.

⁷¹ Ibid.

may forage on the site and adjacent open space areas thus it has a moderate potential to occur.

- *White-Tailed Kite.* The white-tailed kite (*Elanus leucurus*) is a species that is fully protected by the State of California. Nesting and foraging habitat of the white-tailed kite includes riparian woodland, emergent wetland and open grassland. Suitable foraging habitat occurs on portions of the site. Suitable nesting habitat occurs in the oak woodland and larger trees within the mixed sage scrub in the northern half of the site. Due to the presence of suitable habitat, this species has a high potential to occur onsite.⁷²
- *Merlin.* The merlin (*Falco colimbarius*) is a CSC. The merlin's nesting and foraging habitats include open woods, heavy timberlands, and cliffs. This species nests 35 to 65 feet above the ground in trees, on cliff ledges; in natural cavities of trees and on old nests of other birds. This species may occasionally forage over the site but it would not be expected to nest on the site. Thus, it has a low potential to occur.
- *Prairie Falcon.* The prairie falcon (*Falco mexicanus*) is a CSC. The prairie falcon inhabits dry, open terrain with breeding sites located on cliffs. This species utilizes dry, open fields for foraging. The prairie falcon usually nests on cliffs, perpendicular, approximately 20 feet to over 400 feet high. When these resources are unavailable, it will utilize abandoned nests of red-tailed hawks or common ravens. The prairie falcon is a rare breeder in Orange County. This species may occasionally forage over the site but it would not be expected to nest on the site. Thus, it has a moderate potential to occur. This species has been reported periodically throughout the years since 1991 in Gypsum Canyon.
- *Peregrine Falcon.* The peregrine falcon (*Falco peregrinus anatum*) is a SE and a FSC. The peregrine falcon nests on inaccessible mountain cliffs, prairie escarpments, and canyon walls, almost never in trees. This species doesn't build a nest, instead the eggs are laid in a scrape in the ground or occasionally in the abandoned nests of other raptors. This species may occasionally forage over the site but it would not be expected to nest on the site. Thus, it has a low potential to occur.
- *Long-Eared Owl.* The long-eared owl (*Asio otus*) is a CSC. The long-eared owl primarily inhabits deciduous and evergreen forest. It can also be found in wooded parks, orchards and farm woodlands. Long-eared owls in coastal southern California prefer southern oak woodland as nesting habitat with young to middle-aged trees and closed canopies. Long-eared owls in southwestern California most frequently utilize the abandoned nests of Cooper's hawks and American crows (*Corvus brachyrhynchos*). Small rodents such as California voles and western harvest mice are common prey species. This species was not observed during the surveys. This species may occasionally forage over the site. The oak trees on the site may have a potential to

⁷² Ibid.

provide nesting habitat but the close proximity to urban areas and the 91 Freeway may discourage this species from utilizing the trees.

- *Burrowing Owl*. The burrowing owl (*Athene cunicularia*) is a CSC. This species occurs in open, dry annual or perennial grasslands, deserts and scrublands with low growing vegetation. It depends upon ground squirrel burrows for nesting habitat. A large portion of this species diet consists of insects. This species was not observed on the site and the dense habitat and steep topography are not characteristic of where this species is typically found. Thus it has a low potential to occur.
- *Costa's Hummingbird*. The Costa's hummingbird (*Calypte costae*) is a FSC. This species occurs in dry deserts of yuccas and cacti, often far from water. In southern California, the Costa's hummingbird is a common summer resident and can be found in dry washes and chaparral. This species was not observed but it does have a moderate potential to occur on the site.
- *Allen's Hummingbird*. The Allen's hummingbird (*Selasphorus sasin*) is a FSC. The Allen's hummingbird primarily occurs in coastal chaparral. This species can also be found in woody or bushy ravines, canyons, forest edges, eucalyptus stands, and parks. This species is a rare breeder in Orange County. The Allen's hummingbird nests in various types of trees, shrubs, and hedges. This species was not observed on the site but it may utilize the habitats on the site during migration. This species has a moderate potential to occur. One subspecies of Allen's humming bird is a locally common resident in and around large eucalyptus near the coast.
- *Black Swift*. The black swift (*Cypseloides niger*) is a CSC. This species is an uncommon summer resident of California mountain foothill canyons. This bird's nests are often found on cliff faces over rivers or pools. Where there is suitable habitat, this species nests in colonies. This species was not observed and the potential for it to occur on the site is low.
- *Red-Breasted Sapsucker*. The red-breasted sapsucker (*Sphyrapicus ruber*) is a FSC. The red-breasted sapsucker inhabits aspen groves, edges of coniferous forests, mountain gulches and sheltered hillsides. This species is an uncommon migrant and winter visitor to woodlands and landscaped areas countywide. It has a low potential to occur on the site.
- *Coastal California Gnatcatcher*. The coastal California gnatcatcher (*Poliophila californica californica*) is a federal-listed threatened bird species and a CSC. This non-migratory, insectivorous bird nests and forages in moderately dense stands of coastal sage scrub occurring on arid hillsides and mesas, and in washes. Coastal sage scrub communities dominated by California sagebrush, California buckwheat, white sage, and black sage are preferred by this species. This site is located within federally designated critical habitat for the gnatcatcher. Suitable coastal sage scrub occurs throughout the site. Four pairs of coastal California gnatcatcher were observed within the coastal sage scrub

during focused surveys. Three pairs were observed on the site and one was observed just south of the site.

- *Pacific-Slope Flycatcher.* The pacific-slope flycatcher (*Empidonax difficillis*) is a FSC. The pacific-slope flycatcher occurs in warm, moist woodlands, specifically in riparian vegetation, oak woodlands, wooded parks, and eucalyptus rows. It breeds uncommonly to fairly commonly in the lowlands and foothills. This species is known to nest in Santiago Oaks Park, located approximately 3 miles south of the site. This species was not observed during the surveys and has a high potential to occur on the site.
- *Southwestern Willow Flycatcher.* The southwestern willow flycatcher (*Empidonax traillii extimus*) is a FE and SE. Dense willow thickets are required by this species for nesting and roosting. The southwestern willow flycatcher forages by making short flights for flying insects from exposed perches through adjacent meadows. Due to lack of suitable habitat, this species is not expected to occur.
- *Lawrence's Goldfinch.* The Lawrence's goldfinch (*Carduelis lawrencei*) is a FSC. This species inhabits chaparral, open woodlands, foothills and mountain valleys. It is usually found close to water. Although this species generally nests in single pairs, it may occasionally colonize. This species is most common and widespread in March and April. It is known to nest regularly in the Turtle Rock Nature Center in Irvine and it nests irregularly elsewhere in Orange County. This species was not observed but it has a low potential to occur.
- *Loggerhead Shrike.* The loggerhead shrike (*Lanius ludovicianus*) is a FSC and CSC. This species prefers open habitats with scattered shrubs, trees, posts, fences, and/or utility poles for perching. It is associated with open-canopied valley foothill hardwood, grasslands, open areas. This species is fairly common where suitable habitat remains in the coastal lowlands but is generally uncommon in the interior portions of Orange County. It has been reported as breeding in the Yorba Regional Park area. This species was not observed but it has a high potential to occur.
- *Least Bell's Vireo.* The least Bell's vireo is a federal-listed and state-listed endangered species. This species typically occurs in moist thickets and riparian areas comprised of willows and mule fat. Recent sightings of the least Bell's vireo have been recorded within one-mile of the site along the Santa Ana River. Suitable willow riparian habitat does not occur on the project site. Because no suitable habitat occurs onsite, this species has a low potential to occur onsite.⁷³
- *Purple Martin.* The purple martin (*Progne subis*) is a CSC. The purple martin occurs in open or lumbered forests, towns, farms and some deserts. In the West, this cavity dweller has been known to nest at scattered locales in Orange County, including Irvine

⁷³ Ibid.

Lake, Irvine Park, and Oso Reservoir. This species has a low potential to occur on the site.

- *Coastal Cactus Wren*. The coastal cactus wren (*Campylorhynchus brunneicapillus*), a CSC, was observed during the surveys. This species typically occurs in coastal sage scrub and cactus scrub habitats where it nests, roosts, and forages in the cactus and adjacent scrub. Cactus wrens were heard and observed in the southern cactus scrub on the southeast-facing slope along the southern property boundary.⁷⁴
- *California Horned Lark*. The California horned lark (*Eremophila alpestris actia*) is a CSC. The California horned lark is found in open grasslands, farmlands, prairies, tundras and parks. This species nest in hollows in the ground, typically beside or partially under a grass tuft or clod of dry manure. This species nests fairly commonly but in localized areas in Orange County's remaining shortgrass grasslands, rangelands, and agricultural fields. The lack of habitat on the site supports the low potential for the species to occur.
- *California Thrasher*. The California thrasher (*Toxostoma redivivum*) is a FSC. The California thrasher inhabits dense shrubs, chaparral and riparian woodland thickets. This species nests in dense foliage within a few feet of the ground. This species was observed during the surveys of the site.
- *Yellow-Breasted Chat*. The yellow-breasted chat (*Icteria virens*) is a CSC. This species prefers dense thickets near watercourses and willow-riparian areas with a dense understory. The nest is usually 2 – 6 feet above the ground in bushes, briar tangles, vines or low trees. This species was not observed and due to lack of suitable habitat, this species is not expected to occur.
- *Hermit Warbler*. The hermit warbler (*Dendroica occidentalis*) is a FSC. The hermit warbler can be found in tall trees in deciduous forests with little understory. This species is an uncommon spring migrant in Orange County. Due to lack of suitable habitat, this species is not expected to occur.
- *Yellow Warbler*. The yellow warbler (*Dendroica petechia*) is a CSC. The yellow warbler requires riparian growth for nesting. This species is a fairly common, localized breeder in alder and willow riparian woodlands in the mountains and foothills. This species would not be expected to occur on the site because of a lack of suitable breeding habitat.
- *Lark Sparrow*. The lark sparrow (*Chondestes grammacus*) is a FSC. The lark sparrow inhabits prairies, weedy fields, pastures and grasslands with scattered bushes and trees. This species is a fairly common resident in open coastal sage scrub, grasslands and rangelands. Wintering birds are locally common at Irvine Regional Park and are fairly

⁷⁴ Ibid.

common in other inland parks with oaks and open turf. This species was not observed at the project site but it has a moderate potential to occur.

- *Black-Chinned Sparrow.* The black-chinned sparrow (*Spizella atrogularis*) is a FSC. The black-chinned sparrow is found in arid chaparral, sage brushlands and bushy mountain edges. This species is a fairly common breeder in the mountains and foothills. Historically it has been observed in Santiago Oaks Park, located approximately 3 miles from the site. This species was not observed but it has a high potential to occur on the site.
- *Bell's Sage Sparrow.* The Bell's sage sparrow (*Amphispiza belli belli*) is a FSC and a CSC. The Bell's sage sparrow frequents low, fairly dense stands of shrubs within coastal sage scrub or chaparral habitats. This species is an uncommon local resident that is rare in chaparral and coastal sage scrub of the interior foothills. This species has been reported north of the City of Brea, which is approximately 9 miles north of the site. This species was not observed but has a moderate potential to occur.
- *Southern California Rufous-Crowned Sparrow.* The southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) is a FSC and a CSC. This species occurs in coastal southern California from Santa Barbara County south into Baja California, Mexico. It generally occurs on steep, rocky areas within coastal sage scrub and chaparral, often with scattered bunches of grass. This species is often found in recently burned areas. It is an uncommon to fairly common localized resident of coastal southern California. This species was not observed during the surveys but it has a moderate potential to occur on the site because the diagnostic habitats are present.
- *California Pocket Mouse.* The California pocket mouse (*Chaetodipus californicus*) is a CSC. This species inhabits a variety of habitats including coastal scrub, chamise-redshank, and montane chaparral, sagebrush, and annual grasslands. This species occurs from sea level to 7,900 feet above mean sea level. There are no records in the CNDDDB of this species occurring in the project vicinity. The habitat on the site could support this species. Thus, it has a moderate potential to occur.
- *San Diego Pocket Mouse.* The San Diego pocket mouse (*Chaetodipus fallax fallax*) is a FSC and a CSC. It occurs in coastal scrub, chaparral, grasslands and sagebrush in western San Diego County. It is found in sandy, herbaceous areas, usually in association with rocks or coarse gravel. The characteristic habitats of this species are present, thus it has a moderate potential to occur.
- *Los Angeles Pocket Mouse.* The Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) is a FSC and a CSC. This species occurs in lower elevation grasslands and coastal sage communities in the Los Angeles basin. It is found in open ground with fine sandy soils. It may not dig extensive burrows, hiding under weeds and dead leaves instead. This species is known to occur in the vicinity of the site and the characteristic habitats are present. Thus, it has a high potential to occur.

- *Southern Grasshopper Mouse*. The southern grasshopper mouse (*Onychomys torridus*) is a FSC and a CSC. This species prefers alkali desert scrub and desert scrub habitats. It can also be found in coastal scrub, mixed chaparral, sagebrush, low sage and bitterbrush habitats. This species was not observed, but because the diagnostic habitats are present, this species has a moderate potential to occur.
- *Pallid Bat*. The pallid bat (*Antrozous pallidus*) is a CDFG species of concern. This species is typically found in grassland, shrub lands, woodlands, and forests. The pallid bat requires rocky outcrops, cliffs, and crevices with access to open habitats for foraging. No suitable rocky outcrops or cliff for the bat occurs onsite. The closest known record for this species is in Blind Canyon, approximately 3 miles southeast of the site. Due to the close proximity to a known occurrence, this species has a moderate potential for occurrence.⁷⁵
- *Spotted Bat*. The spotted bat (*Euderma maculatum*) is a CSC. The spotted bat occurs in habitats ranging from arid deserts grasslands to mixed conifer forests. This species prefers to roost in rock crevices. It typically feeds in flight, over water, and near the ground, using echolocation to find its prey. Moths are the primary food of this species. This species was not observed and probably has a low potential to occur.
- *Long-Legged Myotis*. The long-legged myotis (*Myotis volans*) is a FSC and a CSC. This species typically occurs in woodland and forest habitats above 4,000 feet. The long-legged myotis also forages in chaparral and coastal shrub habitats. This species feeds at low heights of 10-15 feet over water, close to trees and cliffs, and in openings in woodlands and forests. This species has a low potential to occur because the site is below the elevation where this species is typically found.
- *Yuma Myotis*. The Yuma myotis (*Myotis yumanensis*) is a FSC and a CSC. This species is found in a variety of habitats ranging from sea level to 11,000 feet, but is uncommon above 8,000 feet. Optimal habitats are open forests and woodlands with sources of water over which to feed. Prey of this species includes moths, midges, flies, termites, ants, homopterans and caddisflies. This species may casually forage over the site and may roost under bridges in the vicinity. This species has a moderate potential to occur.
- *Small-Footed Myotis*. The small-footed myotis (*Myotis ciliolabrum*) is a FSC. The small-footed myotis can be found in a variety of habitats, primarily in relatively arid wooded and brushy uplands near water. This species feeds on a variety of small, flying insects. Prey includes moths, flies, beetles and bugs. This species has a low potential to occur because there is no open water on the site or in the immediate vicinity.
- *Townsend's Western Big-Eared Bat*. The Townsend's western big-eared bat (*Corynorhinus townsendii townsendii*) is a FSC and a CSC. This species can be found in all but subalpine and alpine habitats. It is most abundant in mesic habitats. Small

⁷⁵ Ibid.

moths are the primary food of this species. Beetles and a variety of soft-bodied insects are also eaten. This species was not observed, thus it has a low potential to occur.

- *California Mastiff Bat.* The California mastiff bat (*Eumops perotis*) is designated as a species of concern by the USFWS and CDFG. This species occurs in many open, arid habitats, including conifer and deciduous woodlands, coastal sage scrub, grasslands, and chaparral. It requires crevices in cliff faces, high buildings, trees, and tunnels for roosting. A few trees onsite may provide suitable roosting habitat, but is limited to the northern portion of the site. The closest known occurrence is in the Fremont and Blind Canyon vicinity, approximately 3.5 miles southeast of the site. Due to the limited amount of suitable habitat yet close proximity to a known occurrence, the California mastiff bat has a moderate potential of occurrence.
- *San Diego black-tailed jackrabbit.* The San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) is a CSC. This species occurs in shrub habitats and coastal sage scrub habitats. The steep topography and the dense vegetation on the site are not characteristic of the typical habitats where this species is found. Thus, it has a low potential to occur.⁷⁶

Those sensitive wildlife species known to inhabit the proposed project site, as well as those that may potentially inhabit the site, are indicated in Table 3-9.

Scientific Name	Common Name	Status Listing	Habitat	Potential for Occurrence and Comments
CLASS INSECTA				
NYMPHALIDAE				
BRUSH-FOOTED BUTTERFLIES				
<i>Euphydryas editha quino</i>	Quino checkerspot butterfly	FE, CSC	Occurs in open areas. Closely associated with its larval host plant, dwarf plantain (<i>Plantago erecta</i>). Currently isolated colonies in southwestern Riverside County, southern San Diego County, and northern Baja California.	Low – Site does not fall within the known range of this species.
CLASS OSTEICHTHYES				
BONY FISH				
CATOSTOMIDAE				
SUCKERS				
<i>catostomus santaanae</i>	Santa Ana sucker	FT, CSC	Endemic to Los Angeles basin south coastal streams. Usually found in fresh water with sand-rubble or boulder bottoms.	Low – Suitable aquatic habitat not present on the site.
CYPRINIDAE				
CARPS AND MINNOWS				
<i>Rhinichthys osculus</i>	Santa Ana speckled dace	FSC, CSC	Found only in permanent flowing streams with summer water temperatures of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	Low – Suitable aquatic habitat not present on the site.

⁷⁶ Ibid.

**Table 3-9
 Sensitive Wildlife Species**

Scientific Name	Common Name	Status Listing	Habitat	Potential for Occurrence and Comments
CLASS AMPHIBIA	AMPHIBIANS			
SALAMANDRIDAE	NEWT			
<i>taricha torosa torosa</i>	coast range newt	CSC	Occurs in the coast ranges from central Mendocino County south to northern San Diego County. Found primarily in valley-foothill hardwood, coastal scrub and mixed chaparral.	Low – Suitable aquatic habitat not present on the site.
PELOBATIDAE	SPADEFOOT TOADS			
<i>Scaphiopus hammondi</i>	western spadefoot toad	FSC, CSC	Occurs in grassland habitats, but can be found in valley-foothill hardwood woodlands.	Low – Suitable breeding habitat not present and only minimal grassland present on the site.
RANIDAE	TRUE FROGS			
<i>rana aurora draytonii</i>	California red-legged frog	FT, CSC	Found in lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development and must have access to aestivation habitat.	Low – Suitable aquatic habitat not present on the site.
CLASS REPTILIA	REPTILES			
EMYDIDAE	BOX AND WATER TURTLES			
<i>Clemmys marmorata pallida</i>	Southwestern pond turtle	FSC, CSC	Occurs in a variety of habitats including woodland, grassland, and open forest. They are thoroughly aquatic, existing in good quality ponds, marshes, rivers, streams, and irrigation ditches that have rocky or muddy bottoms. They require basking sites such as partially submerged logs, vegetation mats, or open mud banks.	Low – Suitable aquatic habitat not present on the site.
TEIIDAE	WHIPTAIL LIZARDS			
<i>Cnemidophorus hyperythrus</i>	Orange-throated whiptail	FSC, CSC	Inhabits low-elevation coastal scrub, chaparral, and valley hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food-termites.	High – Diagnostic habitats are present and the species reported within 1.5 miles east and south of the site.
PHRYNOSOMATIDAE				
<i>Phrynosoma coronatum blainvillei</i>	San Diego horned lizard	FSC, CSC	Occurs in coastal sage scrub, open chaparral, riparian woodland, and annual grassland habitats that support adequate prey species.	High – Diagnostic habitats are present and the species reported within 1.5 miles east and south of the site.
ANNIELLIDAE	LEGLASS LIZARDS			
<i>Anniella pulchra</i>	California legless lizard	FSC, CSC	Common in coastal dune, valley-foothill, chaparral and coastal scrub type habitats.	Moderate – Diagnostic habitats are present on the site.
GEKKONIDAE	GECKOS			
<i>Coleonyx variegatus abbotti</i>	San Diego banded gecko	FSC	Occurs in coastal and cismontane southern California from interior Ventura County south, although it is absent from extreme outer coast.	Moderate – Diagnostic habitats are present on the site.

**Table 3-9
 Sensitive Wildlife Species**

Scientific Name	Common Name	Status Listing	Habitat	Potential for Occurrence and Comments
SCINCIDAE	SKINKS			
<i>Eumeces skiltonianus interparietalis</i>	Coronado skink	FSC, CSC	Occurs in early successional stages of chaparral, pinon-juniper sage woodlands or open areas. It can be found in rocky areas near streams and on dry hillsides.	Moderate – Diagnostic habitats are present in the vicinity.
BOIDAE	BOAS			
<i>Charina trivirgata</i>	Rosy boa	FSC	Prefers moderate to dense vegetation and rocky cover. Habitats with a mix of brushy cover and rocky soil such as coastal canyons and hillsides, desert canyons, washes, and mountains	High – Diagnostic habitats are present and has been found in the vicinity of the site.
COLUBRIDAE	COLUBRID SNAKES			
<i>Salvadora hexalepis</i>	Coast patch-nosed snake	FSC, CSC	Found in coastal chaparral, desert scrub, washes, sandy flats and rocky areas.	Moderate – Diagnostic habitats present on the site
<i>Diadophis punctatus modestus</i>	San Bernardino ringneck snake	FSC, CSC	Most common in open, relatively rocky areas. Often in somewhat moist microhabitats near intermittent streams. Restricts movements to areas of surface litter or herbaceous vegetation.	Low – Lack of moisture or moist habitats would not be suitable for this species.
<i>Diadophis punctatus similis</i>	San Diego ringneck snake	FSC, CSC	Common in open, relatively rocky areas with valley-foothill, mixed chaparral and annual grass habitats.	Moderate – Diagnostic habitats are present on the site.
<i>Thamnophis hammondi</i>	Two-striped garter snake	CSC	Highly aquatic. Found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	Low – Diagnostic habitats are not present on the site.
VIPERIDAE	VIPERS			
<i>Crotalus ruber ruber</i>	Northern red diamond rattlesnake	FSC, CSC	Occurs in desert areas, chaparral, woodland, grassland and chaparral with rocky areas and dense vegetation.	High – Diagnostic habitats present and the species has been observed in the vicinity.
CLASS AVES	BIRDS			
ACCIPITRIDAE	HAWKS			
<i>Accipiter cooperii</i>	Cooper's hawk (nesting)	CSC	Nests and forages in broken woodlands or streamside groves, especially deciduous.	Moderate – Oak Woodland on the site may be suitable but no raptor nests observed on the site.
<i>Accipiter striatus</i>	Sharp-shinned hawk (nesting)	CSC	Nests and forages in mixed woodlands.	Moderate – Oak Woodland on the site may be suitable but no raptor nests observed on the site.
<i>Aquila chrysaetos</i>	Golden eagle (nesting and wintering)	CSC	Found along rolling foothills or coast-range terrain with large trees (scattered oaks, sycamores, digger pines) in open areas with cliff-walled canyons.	Moderate – Suitable foraging habitat present but no raptor nests observed on the site.

**Table 3-9
 Sensitive Wildlife Species**

Scientific Name	Common Name	Status Listing	Habitat	Potential for Occurrence and Comments
<i>Buteo regalis</i>	Ferruginous hawk (wintering)	FSC, CSC	Occurs in timber belts in barren, treeless plains and grassy prairies; cliffs and rocky outcrops.	Low – May be observed migrating in the area but diagnostic foraging habitat not present.
<i>Circus cyaneus</i>	Northern harrier (nesting)	CSC	Frequents fresh water and saltwater emergent wetlands, coastal sage scrub, grasslands, and meadows.	Moderate – Diagnostic foraging habitats are present on the site but the species probably would not nest on the site.
<i>Elanus leucurus</i>	White-tailed kite (nesting)	FSC Fully-Protected	Nests and forages in open areas with scattered trees usually near water.	High – Diagnostic nesting habitat present and has been observed in the vicinity.
FALCONIDAE	FALCONS			
<i>Falco columbarius</i>	Merlin (wintering)	CSC	Nests and forages in open woods, heavy timberlands and cliffs.	Low – May occasionally forage over the site but breeding habitat not present on the site.
<i>Falco mexicanus</i>	Prairie falcon (nesting)	CSC	Occurs in open desert scrub, grasslands, and open terrain adjacent to cliffs or rocky outcrops for nesting.	Moderate - May occasionally forage over the site but breeding habitat not present on the site.
<i>Falcon peregrinus anatum</i>	American peregrine falcon (nesting)	SE, FSC	Nests on inaccessible mountain cliffs, prairie escarpments and canyon walls.	Low – May occasionally forage over the site but not expected to nest there.
STRIGIDAE	TRUE OWLS			
<i>Asio otus</i>	Long-eared owl (nesting)	CSC	Occurs in deciduous and evergreen forests; wooded parks, orchards, and farm woodlands.	Low – Oak trees on site may provide roosting habitat but the species is not expected to nest there.
<i>Athene cunicularia</i>	Burrowing owl (burrow sites)	FSC, CSC	Burrows in open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Low – Steep topography and dense vegetation not typical of where this species is usually found.
TROCHILIDAE	HUMMINGBIRDS			
<i>Calypte costae</i>	Costa's Hummingbird (nesting)	FSC	In southern California this species usually inhabits dry washes and chaparral. It is a common summer resident	Moderate – Suitable habitat is present on the site.

**Table 3-9
Sensitive Wildlife Species**

Scientific Name	Common Name	Status Listing	Habitat	Potential for Occurrence and Comments
<i>Selasphorus sasin</i>	Allen's Hummingbird (nesting)	FSC	Occurs in coastal chaparral; woody or brushy ravines, canyons, forest edges and parks.	Moderate – Diagnostic habitats present and it has been observed in the vicinity during migration.
APODIDAE	SWIFTS			
<i>Cypseloides niger (nesting)</i>	Black swift	CSC	Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs.	Low – Diagnostic habitats not present on the site.
PICIDAE	WOODPECKERS			
<i>Sphyrapicus ruber</i>	Red-breasted sapsucker (nesting)	FSC	Inhabits aspen groves, edges of coniferous forests, mountain gulches and sheltered hillsides.	Low – Uncommon migrant and winter visitor in Orange County woodlands.
SYLVIIDAE	OLD WORLD WARBLERS, GNATCATCHERS			
<i>Polioptila californica californica</i>	Coastal California gnatcatcher	FT , CSC	Obligate, permanent resident of coastal sage scrub below 2500 ft. in southern California.	Present – Four pairs of gnatcatchers observed using habitat on the site.
TYRANNIDAE	TYRANT FLYCATCHERS			
<i>Empidonax difficilis</i>	Pacific slope flycatcher	FSC	Occurs in warm, moist woodlands, including valley foothill and montane riparian, hardwood, and hardwood-conifer habitats.	High – Diagnostic habitats present and this species known to nest in the vicinity.
<i>Empidonax traillii extimus</i>	Southwestern willow flycatcher	FE, SE	Nests in riparian woodlands in southern California.	Low – Diagnostic habitats not present on the site.
FRINGILLIDAE	FINCHES & RELATIVES			
<i>Carduelis lawrencei</i>	Lawrence's goldfinch	FSC	Inhabits chaparral, open woodlands, foothills and mountain valleys; usually close to water.	Low – Irregular nester in Orange County. May occasionally frequent the site.
LANIIDAE	SHRIKES			
<i>Lanius ludovicianus</i>	Loggerhead shrike	CSC, FSC	Occurs in open country with lookout perches; thickets, roadside trees, parks, low scrub, deserts and orchards.	High – Diagnostic habitats present and has been reported in the vicinity.
VIREONIDAE	VIREOS			
<i>Vireo bellii pusillus</i>	Least bell's vireo	FE, SE	Occurs in moist thickets and riparian areas that are predominantly composed of willow and mulefat	Low – Diagnostic habitats not present on the site.
ALAUDIDAE	LARKS			
<i>Progne subis</i>	Purple martin	CSC	Occurs in open or lumbered forests, towns, farms and some deserts.	Low – Diagnostic habitats not present on the site.
<i>Eremophila alpestris actia</i>	California horned lark	CSC	Occurs in open grasslands, farmlands, prairies, tundras, airports, beaches, golf courses, cemeteries and parks.	Low – Diagnostic habitats not present on the site.

**Table 3-9
 Sensitive Wildlife Species**

Scientific Name	Common Name	Status Listing	Habitat	Potential for Occurrence and Comments
TROGLODYTIDAE	WRENS			
<i>Camplorhynchus brunneicapillus</i>	Coastal cactus wren	CSC	Requires coastal sage scrub habitat with tall cactus for nesting and roosting.	Present – Observed in the cactus near the southern boundary of the site.
MIMIDAE	MOCKINGBIRDS & THRASHERS			
<i>Toxostoma redivivum</i>	California thrasher	FSC	Inhabits dense shrubs, chaparral, and riparian woodland thickets.	Present – Observed in the coastal sage scrub on the site.
PARULIDAE	WOOD-WARBLERS			
<i>Icteria virens</i>	Yellow-breasted chat	CSC	Occurs in woodland edges, neglected pastures, thick shrubbery, briar thickets, willow thickets and shrubby wet meadows.	Low – Diagnostic habitats not present on the site.
<i>Dendroica occidentalis</i>	Hermit warbler (nesting)	FSC	Occurs in tall trees in deciduous forests with little understory.	Low – Uncommon spring migrant in Orange County. Diagnostic habitats not present on the site.
<i>Dendroica petechia</i>	Yellow warbler (nesting)	CSC	This species requires riparian growth for nesting.	Low – Diagnostic nesting habitat not present on the site.
EMBERIZIDAE	SPARROWS, WARBLERS, BUNTINGS, AND RELATIVES			
<i>Chondestes grammacus</i>	Lark sparrow	FSC	Inhabits prairies, weedy fields, pastures and grasslands with scattered bushes and trees.	Moderate – Somewhat suitable habitat present and species has been observed in the vicinity
<i>Spizella atrogularis</i>	Black-chinned sparrow	FSC	Occurs in arid chaparral, sage brushlands and bushy mountain ridges.	High– Diagnostic habitats present, species was not observed on the site; however, it was observed in Santiago Oaks Park, approximately 3 miles from the site.
<i>Amphispiza belli belli</i>	Bell's sage sparrow	CSC, FSC	Frequents low, fairly dense stands of shrubs within coastal sage scrub or chaparral habitat.	Moderate - Diagnostic habitats present, species was not observed on the site; however, it was observed north of the City of Brea, approximately 9 miles north of the site.
<i>Aimophila ruficeps canescens</i>	Southern California rufous-crowned sparrow	FSC, CSC	Occurs in coastal sage scrub habitat. It generally occurs on steep, rocky areas within coastal sage scrub and chaparral, often with scattered bunches of grass.	Moderate - Diagnostic habitats are present on the site
CLASS MAMMALIA	MAMMALS			

**Table 3-9
Sensitive Wildlife Species**

Scientific Name	Common Name	Status Listing	Habitat	Potential for Occurrence and Comments
HETEROMYIDAE				
POCKET MICE & KANGAROO RATS				
<i>Chaetodipus californicus</i>	California pocket mouse	FSC, CSC	Inhabits a variety of habitats including coastal scrub, chamise-redshank and montane chaparral, sagebrush and annual grasslands. Ranges in elevation from sea level to 7,900 feet about mean sea level.	Moderate - Diagnostic habitats are present on the site
<i>Chaetodipus fallax fallax</i>	San Diego pocket mouse	FSC, CSC	Occurs in coastal scrub, chaparral, grasslands, sagebrush, in western San Diego county. Requires sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Moderate - Diagnostic habitats are present on the site
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	FSC, CSC	Occurs in lower elevation grasslands and coastal sage communities in the Los Angeles basin. Requires open ground with fine sandy soils. May not dig extensive burrows, hiding under weeds and leaves instead.	High - Diagnostic habitats are present and this species has been reported in the vicinity.
CRICETIDAE				
<i>Onychomys torridus</i>	Southern grasshopper mouse	FSC, CSC	Prefers alkali desert scrub and desert scrub habitats. Also occurs in coastal scrub, mixed chaparral, sagebrush, low sage, and bitterbrush habitats.	Moderate - Diagnostic habitats are present on the site.
VESPERTILIONIDAE				
MOUSE-EARED BATS				
<i>Antrozous pallidus</i>	Pallid bat	CSC	Occurs in grassland, shrublands, woodlands, and forests, requires rocky outcrops, cliffs, and crevices with access to open habitats for foraging.	Moderate - May forage casually over the site. Has been reported in the vicinity in Blind Canyon, approximately 3 miles southeast of the site.
<i>Euderma maculatum</i>	Spotted bat	FSC, CSC	Habitats range from arid deserts and grasslands to mixed conifer forests. Prefers to roost in rock crevices.	Low - May forage casually over the site. Has been reported in the vicinity.
<i>Myotis volans</i>	Long-legged myotis	FSC, CSC	Occurs in woodland and forest habitats above 4,000 feet. Also forages in chaparral, coastal shrub, Great Basin shrub habitats and in early successional stages of woodlands and forests.	Low - Site is below the elevation range where this species is usually found.
<i>Myotis yumanensis</i>	Yuma myotis	FSC, CSC	Found in a variety of habitats ranging from sea level to 11,000 feet but is uncommon above 8000 feet. Optimal habitats are open forests and woodlands with sources of water over which to feed.	Moderate - May casually forage over the site and roost under bridges in the vicinity.
<i>Myotis ciliolabrum</i>	Small-footed myotis	FSC	Occurs in a wide variety of habitats, primarily in relatively arid wooded and brushy uplands near water.	Low - May casually forage over the site.
<i>Corynorhinus townsendii townsendii</i>	Townsend's western big-eared bat	FSC, CSC	Found in all but subalpine and alpine habitats. It is most abundant in mesic habitats.	Low - May casually forage over the site.
MOLOSSIDAE				
FREE-TAILED BATS				
<i>Eumops perotis</i>	Western mastiff bat	CSC	Inhabits semi-arid habitats including coastal sage scrub, grassland, and chaparral communities with rocky crevices and hollow trees.	Moderate - May casually forage over the site.
LEPORIDAE				
RABBITS AND HARES				

**Table 3-9
 Sensitive Wildlife Species**

Scientific Name	Common Name	Status Listing	Habitat	Potential for Occurrence and Comments
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	FSC, CSC	Occurs in areas with intermediate canopy stages of shrub habitats and open shrub/herbaceous edges.	Low – Topography and heavy brush on the site are not suitable for this species.

**Table 3-9
 Sensitive Wildlife Species**

Status Codes	Definitions of Occurrence Probability:
<p>Federal (FED) FE = Federally listed; Endangered FT = Federally listed; Threatened FSC = Federal Species of Concern; not an active term, and is provided for informational purposes only. FPE = Federally Proposed for Listing as Endangered FPT = Federally Proposed for Listing as Threatened</p> <p>State ST = State listed; Threatened SE = State listed; Endangered CSC = California Species of Special Concern</p> <p>* -- Taxa that are biologically rare, very restricted in distribution, declining throughout their range, or at a critical stage in their life cycle when residing in California. -- Population(s) in California that may be peripheral to the major portion of a taxon's range, but which are threatened with extirpation within California. -- Taxa closely associated with a habitat that is declining in California. (e.g. wetland, riparian, old growth forest).</p>	<p>> Absent from Site -- Species is concluded to be absent from the project area based on failure to detect the species during focused surveys.</p> <p>> Low Potential for Occurrence - There is no recent or historical records of the species occurring within the project site or its immediate vicinity (within approximately 5 miles) and the diagnostic habitat requirements strongly associated with the species do not occur within the project site or its immediate vicinity.</p> <p>> Moderate Potential for Occurrence - There is either a recent historical record of the species occurring within the project site or its immediate vicinity (within approximately 5 miles) or a limited amount of suitable habitat associated with the species occurs within the project site or its immediate vicinity.</p> <p>> High Potential for Occurrence - There is both a recent historical record of the species occurring within the project site or its immediate vicinity (within approximately 5 miles) and the diagnostic habitat requirements strongly associated with the species occur within the project site or its immediate vicinity.</p> <p>> Species Present - The species was observed in the project area at the time of the survey.</p> <p>Sources: California Natural Diversity Data Base (CNDDDB), Beaumont, Yucaipa, Forest Falls and El Casco USGS quads. Chambers Group, Inc. December 2002</p>

3.4.3 Thresholds of Significance

According to the City of Anaheim, acting as Lead Agency, a project may be deemed to have a significant adverse impact on biological resources if it results in any of the following:

- A substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service;
- A substantial adverse effect on any riparian habitat or other sensitive natural plant community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- A substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means;
- A substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory life corridors, or impede the use of native wildlife nursery sites;
- A conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or,
- A conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.4.4 Analysis of Environmental Impacts

Impacts on General Vegetation

A total of approximately 18.9 acres of on-site vegetation will be affected by the proposed project. Approximately 11.1 acres of Venturan-Diegan coastal sage scrub communities (disturbed and undisturbed) will be affected by the project (including the impacts resulting from fuel modification zones). Approximately 0.5 acre of southern cactus scrub, 0.8 acre of toyon-sumac chaparral and 0.4 acre of coast live oak woodland will also be affected by the project. In addition, approximately 5.3 acres of annual grassland and 0.8 acre of ruderal vegetation will also be affected. There will also be 0.3 acre of offsite impacts to mixed sage scrub due to grading and construction of the entrance road.⁷⁷ The loss of the 11.1 acres of coastal sage scrub vegetation would be considered a significant impact resulting from the project.

⁷⁷ Chambers Group, Inc. Draft Biological Assessment for Canyon Hills Manor, June 2002.

Implementation of the mitigation measures for the impacts to the California gnatcatcher (described in Section 3.4.5) will reduce the level of impact resulting from the loss of native vegetation to less than significant. Construction activities may indirectly affect the remaining vegetation on the site as a result of dust being deposited on the leaves of the plants. This may result in some reduction in the photosynthetic capabilities of the plants. With the incorporation of mitigation measures to minimize the dust impacts on the plants described in Section 3.4-5, this adverse impact is considered less than significant.

Impacts on Sensitive Plant Species

No sensitive plant species were observed on the site during the general biological surveys. Focused surveys for sensitive plant species were not conducted on the site. The habitats on the site have a high potential to support three sensitive plant species, including the Plummer's mariposa lily, intermediate mariposa lily, and many-stemmed dudleya. In addition, the site has a moderate potential to support the Braunton's milkvetch, a federal-listed endangered species, and Coulter's saltbush, a sensitive species. Implementation of focused surveys for these species would determine if these species are present, and if so, then the implementation of Mitigation Measure 3.4-5, for the California gnatcatcher would reduce the level of these impacts to non-significant (see below).⁷⁸

Impacts on Other (Non-sensitive) Wildlife Species

The habitats on the site support the foraging and breeding activities of numerous wildlife species. The habitats on the site function as a small part of the larger, contiguous areas of non-native grassland, coastal sage scrub, and riparian habitats that occur in adjacent areas. With the development of the site, the less mobile species of small mammals, reptiles, and amphibians that reside on the site will be lost and the more mobile species may be forced into surrounding areas. These wildlife species rely on the existing vegetation for cover and foraging and thus, removal of the vegetation will result in loss of habitat for these species. With approximately 73 percent of the total land area being left in open space or in landscaped area and the incorporation of the proposed mitigation measures, the loss of the wildlife habitat on the site is considered a less than significant impact because the site is basically surrounded by disturbed and/or developed areas within the City of Anaheim.⁷⁹

Impacts on Sensitive Wildlife Species

The proposed project will eliminate approximately 11.1 acres of coastal sage scrub that is occupied by the coastal California gnatcatcher, a federally-listed threatened bird species and a CSC. The three pairs of gnatcatchers observed during the 1999 surveys were located in the eastern half of the site. Even though most of the mixed sage scrub in this area will remain intact, construction of the proposed project will affect a portion of each pairs' territory as they

⁷⁸ Ibid.

⁷⁹ Ibid.

existed in 1999. This will result in the direct loss of nesting and foraging habitat for the gnatcatcher and possibly displacement from their established territories.⁸⁰

Increased noise and dust, as well as disturbances associated with human presence and lighting will indirectly affect the three resident gnatcatcher pairs as well as the one pair of gnatcatchers that was observed just south of the site. Development adjacent to these areas may result in increased susceptibility to predation due to the presence of roads and development located adjacent to occupied habitats (edge effects). The development will also force the resident gnatcatchers into the remaining coastal sage scrub habitats, and thus will increase the competition between the pairs. As a result, one or more of the pairs may have to alter their territory locations to areas offsite. The impacts of the proposed project would result in significant impacts to the California gnatcatcher because of the loss of habitat occupied by this species. Implementation of mitigation measures would reduce the impacts to a less than significant impact. The entirety of the mitigation measures required to offset the impacts of the project on California gnatcatchers (and any other listed species that potentially occur on the site) will be determined through the Section 10(a)(1)(A) or Section 7 processes of the Federal Endangered Species Act. Mitigation will include revegetation of coastal sage scrub habitat and enhancement of disturbed coastal sage scrub habitat on the site. The revegetation will be implemented onsite in areas disturbed by remedial grading activities and the enhancement will occur onsite in the remaining disturbed coastal sage scrub habitat areas located outside of the graded areas in accordance with the landscape plan submitted in connection with the Conditional Use Permit application. At this time, it is uncertain whether or not additional offsite coastal sage scrub preservation or revegetation will be required by the U.S. Fish and Wildlife Service. The actual number of acres of revegetation required will be determined as part of the Section 10(a)(1)(A) or Section 7 processes.

The proposed project will also impact approximately 0.5 acre of southern cactus scrub that is occupied by coastal cactus wrens, a CSC. This loss of southern cactus scrub will result in the displacement of the coastal cactus wrens, which have been identified in the southern portion of the site. Removal of this habitat will force the cactus wrens to move to surrounding areas where they may have to compete with other cactus wrens in the vicinity. The impacts of the project will only result in the loss of 0.5 acre of habitat for the cactus wren, and because the cactus wren is not a species listed under the federal or state endangered species acts, these impacts are considered less than significant. Mitigation measures are not required for adverse impacts, but the implementation of mitigation measures for the California gnatcatcher will also address impacts to the cactus wren.⁸¹

The proposed project will impact 5.3 acres of annual grassland. Annual grassland provides foraging habitat for a number of raptor species, including Cooper's and red-tailed hawks that were observed during the survey. Loss of foraging habitat in this region does not appear to be contributing to the decline of raptor populations due to the abundance of foraging habitat in the

⁸⁰ Ibid.

⁸¹ Chambers Group, Inc. Biological Sections for the Canyon Hills Manor Environmental Impact Report. June 2001, December 2002.

vicinity of the project site. The loss of the non-native grassland is considered an adverse impact rather than a significant impact of the project.⁸² Finally, the proposed project will also affect 0.4 acre of coast live oak woodland. The coast live oak woodland appears to have been planted on the site and did not occur there naturally. The coast live oak woodland may be utilized by raptor species for perching, and possibly nesting, but no nests were observed during the surveys. Because the oak trees were planted on the site, the loss of these oak trees would be considered an adverse impact rather than a significant impact resulting from the project.⁸³ The project's impact on the various vegetation communities found within the proposed project site are summarized below in Table 3-10.

Vegetation Community	Existing Plant Communities (Acres)	Proposed Project (Acres)
Venturan-Diegan Coastal Sage Scrub Communities	18.0	11.1
Southern Cactus Scrub	0.5	0.5
Toyon-Sumac Chaparral	1.6	0.8
Coast Live Oak Woodland	2.6	0.4
Annual Grassland	5.5	5.3
Ruderal	0.8	0.8
Total	29.0	18.9

Source: Chambers Group, Inc. Draft Biological Assessment for Canyon Hills Manor. June 2002.

Fuel Modification Requirements

The City of Anaheim Fire Department requested that fuel modification plans be prepared for the project. In addition to meeting the minimum standards of the Fire Department, the fuel modification plan needs to incorporate the following concepts:

- Plant material in the "wet zones" should be compatible in color and character with surrounding native vegetation, yet must still meet the Fire Department's requirements;
- The transition between native and fuel modified slopes should be "feathered" to create a more natural appearance as opposed to an engineered line; and,
- The "dry zone" should use selective thinning. This process removes the more flammable plant species while preserving the more environmentally sensitive native plants.

82 Ibid.

83 Ibid.

Any fuel modification proposed on adjacent properties will require a notarized letter from the affected property owner(s) authorizing both access and long-term maintenance of the fuel on their property.

Wildlife Corridor Impacts

The 29-acre project site, together with the adjacent parcels to the south, west and east represent the last remaining undeveloped parcels within that segment of the SR-91 Freeway corridor between Weir Canyon Road and Imperial Highway. The Santa Ana River, located north of the site, north of the Freeway, does not cross the project site.

The existing development in the vicinity of the site limits the site's effectiveness as a wildlife movement corridor. The Freeway and Santa Ana Canyon Road serve as major barriers to wildlife movement from the project site to the Santa Ana River. In addition, residential subdivisions are found to the west; further south, south of the Stonegate property; and to the east. The only remaining open space in the area following the site's development and the Stonegate Development, will be the area located under the existing transmission line utility right-of-way.

Cumulative Impacts

As indicated in Section 2.6, two related projects are considered in this EIR. Impacts on biological resources are site specific though a "cumulative loss" of sensitive habitat may result in a significant adverse impact. The Maag Ranch property, due to its proximity to existing development, the 91 Freeway, and Santa Ana Canyon Road has limited habitat value. The Stonegate development site, as indicated previously, is located adjacent to the proposed Canyon Hills Manor project, on the south side. This project is proposed to involve the development of 61-single-family detached homes within the 39-acre parcel.

As part of the Stonegate project, 61 building pads are proposed. The habitat value of this site is comparable to that of the Canyon Hills Manor project. Detailed field surveys have been completed and mitigation measures have been recommended as a means to reduce the level of impact. Neither site serves as a wildlife movement corridor or as a linkage to nearby known corridors, therefore the proposed project will not affect any wildlife movement corridors.

3.4.5 Mitigation Measures

The significant impacts resulting from the implementation of the proposed project require mitigation measures. The following mitigation measures shall be implemented to ensure that there will be no significant impacts to nesting birds and no violation of the Migratory Bird Treaty Act. The following mitigation measures are designed to offset the level of impacts of the project.

The City of Anaheim is a participant in the Central and Coastal Orange County Natural Community Conservation Plan/Habitat Conservation Program (NCCP/HCP) and the NCCP/HCP

Implementation Agreement. The NCCP/HCP describes minimization/avoidance measures for properties covered under the NCCP/HCP. The NCCP/HCP designates the subject property as an "Existing Use Area." The United States Fish and Wildlife Service (USFWS) has determined that a Section 10(a)(1)(A) or Section 7, Incidental Take Permit is required for this project. Unless determined otherwise by the USFWS through the Section 10(a)(1)(A) or Section 7, Incidental Take Permit process, the property owner/developer shall comply with the following mitigation measures (these mitigation measures include minimization/avoidance measures in the NCCP/HCP which have been modified to include more current information regarding gnatcatcher breeding activities and potential effects of development):

Measure 3.4-1. Prior to the approval of the first grading plan, issuance of the first grading permit or building permit (including foundation only permits) or the commencement of grading or clearing activities on the subject property, whichever occurs first, the property owner/developer shall request and receive approval of an Endangered Species Act Section 10(a)(1)(A) or Section 7, Incidental Take Permit from the USFWS. Further, a copy of the permit shall be submitted to the Planning Department, Advanced Planning Division.

Measure 3.4-2. Vegetation clearing shall be conducted during the non-breeding season for (August 1 to through January 31) to limit impacts to nesting birds.

Measure 3.4-3. Prior to the commencement of grading operations or other activities involving significant soil disturbance, all areas of coastal sage scrub (CSS) habitat to be avoided under the provisions of the NCCP/HCP, shall be identified with temporary fencing or other markers clearly visible to construction personnel. Additionally, prior to the commencement of grading operations or other activities involving disturbance of CSS, a survey shall be conducted to locate gnatcatchers and cactus wrens within 250 feet of the outer extent of projected soil disturbance activities and the locations of any such species shall be clearly marked and identified on the construction/grading plans.

Measure 3.4-4. A monitoring biologist, acceptable to USFWS and the California Department of Fish and Game (CDFG), shall be on site during any clearing of CSS. The property owner/developer shall advise USFWS/CDFG at least seven (7) calendar days (and preferably fourteen (14) calendar days) prior to the clearing of any habitat occupied by Identified Species to allow USFWS/CDFG to work with the monitoring biologist in connection with bird flushing/capture activities. The monitoring biologist shall flush Identified Species (avian or other mobile Identified Species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities. If birds cannot be flushed, they will be captured in mist nets, if feasible, and relocated to areas of the site to be protected on the NCCP/HCP Reserve System. It shall be the responsibility of the monitoring biologist to assure that Identified Bird Species shall not be directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities on a timely basis.

Measure 3.4-5. Following the completion of initial grading/earth movement activities, ongoing during construction, all areas of CSS habitat to be avoided by construction equipment and personnel shall be marked with temporary fencing or other appropriate markers clearly visible

to construction personnel. No construction access, parking or storage of equipment or materials will be permitted within such marked areas.

Measure 3.4-6. In areas bordering the NCCP reserve system or Special Linkage/Special Management areas containing significant CSS identified in the NCCP/HCP for protection, vehicle transportation routes between cut-and-fill locations shall be restricted to a minimum number during construction consistent with project construction requirements. Waste dirt or rubble shall not be deposited on adjacent CSS identified in the NCCP/HCP for protection. Preconstruction meetings involving the monitoring biologist, construction supervisors and equipment operators shall be conducted and documented to ensure maximum practicable adherence to these measures.

Measure 3.4-7. CSS identified in the NCCP/HCP for protection and located within the likely dust drift radius of construction areas shall be periodically sprayed with water to reduce accumulated dust on the leaves as recommended by the monitoring biologist.

Measure 3.4-8. Ongoing during grading operations, if a biologist, acceptable to the United States Fish and Wildlife Service and the California Department of Fish and Game, finds an active raptor nest within or adjacent to the areas requiring clearing, then the biologist shall delineate a 500-foot wide buffer zone around the nest. This zone shall be marked with flagging and construction or clearing shall not be conducted within this buffer zone until the biologist determines that the nest is no longer active.

Measure 3.4-9. Ongoing during grading operations, if a biologist, acceptable to the United States Fish and Wildlife Service and the California Department of Fish and Game, identifies active nests of other bird species within or adjacent to the areas requiring clearing, then the biologist shall delineate a 250-foot wide buffer zone around the nest. This zone shall be marked with flagging and construction or clearing shall not be conducted within this buffer zone until the biologist determines that the nest is no longer active.

Measure 3.4-10. Prior to approval of the first grading plan, issuance of the first grading permit or building permit, or commencement of any grading activities or clearing of any vegetation on the subject property, whichever occurs first, the property owner/developer shall provide for a focused survey for sensitive and/or listed species of plants to be conducted during the appropriate flowering season to determine if any listed or sensitive species will be affected by the proposed project. The survey shall be conducted by a botanist or biologist, acceptable to the USFWS and the CDFG, who is qualified to identify the sensitive and listed plant species. If listed species are found, then mitigation of impacts to these species shall be determined during the Section 10(a)(1)(A) or Section 7, Incidental Take Permit process that will be undertaken for the California gnatcatcher. The NCCP/HCP includes the listed and sensitive plant species that could potentially occur on the site as "covered species" and thus, the mitigation required for the California gnatcatcher shall also address the listed and/or sensitive plant species if they occur on the subject property.

Measure 3.4-11. Ongoing during project operations, all outside lighting fixtures shall use low intensity bulbs and the light fixtures shall be directed away from the natural areas. Prior to

issuance of a building permit, subject fixtures/light bulbs and the orientation of the fixtures shall be shown on a lighting plan which shall be reviewed and approved by the Planning Department, Zoning Division, the Police Department and the Community Services Department.

Measure 3.4-12. Prior to the approval of a grading plan or issuance of a grading permit, whichever occurs first, grading plans shall indicate that a temporary fence shall be provided along the east and west project boundaries of sufficient distance to prevent the migration of rodents and animals to urban areas located off-site during grading. The fence shall be installed prior to the commencement of any grading activities or any other activities which would clear vegetation on the property.

Measure 3.4-13. Prior to the approval of a grading plan, issuance of a grading permit or issuance of the first building permit (including a foundation only permit), whichever occurs first, the property owner/ developer shall submit a detailed Fuel Modification Plan, which has been prepared in conformance with the conceptual Fuel Modification Plan exhibit of the Conditional Use Permit application on file in the Planning Department, to the City of Anaheim Fire Department for review and approval. The Plan must be prepared in conformance with the Section 10(a)(1)(A) or Section 7, Incidental Take Permit approved by the USFWS. The Plan must identify plant material that will be used in the "wet zones" and this plant material must be compatible in color and character with surrounding native vegetation and meet the Fire Department's requirements. The transition between native and fuel modified slopes shall be "feathered" to create a more natural appearance as opposed to an engineered line. The "dry zone" should use selective thinning. This process removes the more flammable plant species while preserving the more environmentally sensitive native plants. Prior to final building and zoning inspections, the landscaping shall be installed and the native slopes shall be thinned in accordance with the approved Fuel Modification Plan.

3.4.6 Significant Unavoidable Impacts

With incorporation of the mitigation measures proposed in Section 3.4.5, the project's impacts on Federal, State, or regionally designated endangered, threatened, or rare species or their habitats will be reduced to levels that are less than significant. The proposed project will not significantly impact the movement of any native, migratory life corridors or wildlife nursery sites; or conflict with local, regional, State or Federal policies that protect biological resources or conflict with adopted Habitat Conservation Plans or Natural Community Conservation Plans. The proposed development's impact on non-wetland waters will be mitigated pursuant to responsible and trustee agency requirements. As discussed in Section 3.2.4 of the DEIR, all impacts regarding the removal of specimen trees will also be reduced to a level of insignificance with the mitigation measures proposed.