Coyote Highlands Cluster Subdivision

Draft Environmental Impact Report

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County of Santa Clara
Department of Planning and Development
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## TABLE OF CONTENTS

Executive Summary .................................................................................................................................................................................. ES-1  
ES-1  Introduction.................................................................................................................................................................................. ES-1  
ES-2  Project Objective ........................................................................................................................................................................ ES-1  
ES-3  Project Setting and Location .......................................................................................................................................................... ES-1  
ES-4  Project Description........................................................................................................................................................................ ES-1  
ES-5  Alternatives ...................................................................................................................................................................................... ES-3  
ES-6  Preferred Alternative....................................................................................................................................................................... ES-6  
ES-7  Areas of Controversy and Issues to Be Resolved .......................................................................................................................... ES-6  
ES-8  Summary of Impacts and Mitigation Measures .............................................................................................................................. ES-7  

1  Introduction ....................................................................................................................................................................................... 1-1  
1.1  Description of the Proposed Project................................................................................................................................................ 1-1  
1.2  EIR Process ..................................................................................................................................................................................... 1-1  
1.3  Key Areas of Environmental Concern ........................................................................................................................................... 1-3  
1.4  Organization of the EIR ................................................................................................................................................................. 1-3  
1.5  Incorporated References ................................................................................................................................................................. 1-4  

2  Project Description ............................................................................................................................................................................... 2-1  
2.1  Project Definition ............................................................................................................................................................................... 2-1  
2.2  Project Location ............................................................................................................................................................................... 2-3  
2.3  Land Use ............................................................................................................................................................................................ 2-7  
2.4  Project Objectives ............................................................................................................................................................................... 2-10  
2.5  Proposed Project Overview ............................................................................................................................................................ 2-10  
2.6  Construction Equipment, Materials, and Personnel ....................................................................................................................... 2-30  
2.7  Construction Schedule ................................................................................................................................................................. 2-36  

3  Environmental Impact Analyses ........................................................................................................................................................... 3.1-1  
3.1  Aesthetics and Visual Resources .................................................................................................................................................... 3.1-1  
3.2  Agriculture and Forestry Resources ............................................................................................................................................ 3.2-1  
3.3  Air Quality .......................................................................................................................................................................................... 3.3-1  
3.4  Biological Resources .......................................................................................................................................................................... 3.4-1  

Coyote Highlands Cluster Subdivision Draft EIR – November 2012  
TOC-1
# Table of Contents

3.5 Cultural Resources ................................................................. 3.5-1
3.6 Geology and Soils ................................................................. 3.6-1
3.7 Greenhouse Gas Emissions .................................................... 3.7-1
3.8 Hazards and Hazardous Materials ........................................ 3.8-1
3.9 Hydrology and Water Quality ............................................... 3.9-1
3.10 Land Use, Planning, and Recreation .................................... 3.10-1
3.11 Mineral Resources ............................................................. 3.11-1
3.12 Noise ................................................................................. 3.12-1
3.13 Population and Housing ..................................................... 3.13-1
3.14 Public Services ................................................................. 3.14-1
3.15 Transportation and Traffic .................................................. 3.15-1
3.16 Utilities and Service Systems .............................................. 3.16-1
3.17 Energy Conservation ......................................................... 3.17-1

4 Cumulative and Growth Inducing Impacts ................................. 4-1
   4.1 Introduction ........................................................................ 4-1
   4.2 Cumulative Projects .......................................................... 4-1
   4.3 Cumulative Impacts ............................................................. 4-4
   4.4 Growth Inducing Impacts ................................................. 4-10
   4.5 Significant Effects that Cannot be Avoided ....................... 4-11
   4.6 Significant Irreversible Changes ......................................... 4.11

5 Alternatives to the Project ....................................................... 5-1
   5.1 Introduction ........................................................................ 5-1
   5.2 Alternatives Considered but Rejected by the Applicant ....... 5-2
   5.3 Considered Alternatives ..................................................... 5-3

6 Report Preparation ................................................................ 6-1
   6.1 List of Preparers ............................................................... 6-1
   6.2 Agencies and Organizations Contacted ............................ 6-2

7 References ............................................................................. 7-1
# List of Figures

## 2 Project Description

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2-1</td>
<td>Location Map</td>
<td>2-4</td>
</tr>
<tr>
<td>2.2-2</td>
<td>Roadways in the Project Vicinity</td>
<td>2-5</td>
</tr>
<tr>
<td>2.2-3</td>
<td>Subdivision Map</td>
<td>2-6</td>
</tr>
<tr>
<td>2.3-1</td>
<td>Existing Agricultural Infrastructure</td>
<td>2-9</td>
</tr>
<tr>
<td>2.5-1</td>
<td>Development Zones for Each of the Residential Lots</td>
<td>2-15</td>
</tr>
<tr>
<td>2.5-2</td>
<td>Conceptual Water System Plan</td>
<td>2-20</td>
</tr>
<tr>
<td>2.5-3</td>
<td>Proposed Stormwater Drainage System</td>
<td>2-23</td>
</tr>
<tr>
<td>2.5-4</td>
<td>Conceptual Recreational Features and Trail Plan</td>
<td>2-25</td>
</tr>
<tr>
<td>2.5-5</td>
<td>Proposed Agricultural Fencing</td>
<td>2-26</td>
</tr>
<tr>
<td>2.5-6</td>
<td>Proposed Habitat Improvements</td>
<td>2-27</td>
</tr>
<tr>
<td>2.6-1</td>
<td>Staging Areas and Temporary Access Roads</td>
<td>2-33</td>
</tr>
</tbody>
</table>

## 3.1 Aesthetic and Visual Resources

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1-1</td>
<td>Photos and Key Observation Points (KOPs)</td>
<td>3.1-3</td>
</tr>
<tr>
<td>3.1-2</td>
<td>Site Visibility Analysis</td>
<td>3.1-5</td>
</tr>
<tr>
<td>3.1-3</td>
<td>Key Observation Point #1</td>
<td>3.1-6</td>
</tr>
<tr>
<td>3.1-4</td>
<td>Key Observation Point #2</td>
<td>3.1-7</td>
</tr>
<tr>
<td>3.1-5</td>
<td>Key Observation Point #3</td>
<td>3.1-8</td>
</tr>
<tr>
<td>3.1-6</td>
<td>Pattern of Subdivision Area Showing Each Residential Lot</td>
<td>3.1-23</td>
</tr>
</tbody>
</table>

## 3.2 Agriculture and Forestry Resources

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3-2</td>
<td>FMMP and Williamson Act Land Classifications</td>
<td>3.3-2</td>
</tr>
</tbody>
</table>

## 3.4 Biological Resources

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4-3</td>
<td>Habitat Map</td>
<td>3.4-3</td>
</tr>
</tbody>
</table>

## 3.5 Cultural Resources

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5-9</td>
<td>Location of Contributing Features</td>
<td>3.5-9</td>
</tr>
</tbody>
</table>

## 3.6 Geology and Soils

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6-3</td>
<td>Project Area Geology</td>
<td>3.6-3</td>
</tr>
<tr>
<td>3.6-4</td>
<td>Project Area Geology Legend</td>
<td>3.6-4</td>
</tr>
<tr>
<td>3.6-8</td>
<td>Landslide Hazard Areas</td>
<td>3.6-8</td>
</tr>
<tr>
<td>3.6-10</td>
<td>Regional Faults</td>
<td>3.6-10</td>
</tr>
</tbody>
</table>
### 3.9 Hydrology and Water Quality

- Figure 3.9-1: NRCS Soils ........................................ 3.9-3
- Figure 3.9-2: Surface Water Drainage Basins .......... 3.9-5
- Figure 3.9-3: FEMA Flood Zone Designations ......... 3.9-6
- Figure 3.9-4: Groundwater Basins ......................... 3.9-8

### 3.10 Land Use, Planning, and Recreation

- Figure 3.10-1: Santa Clara County General Plan Land Use Designations ........................................ 3.10-2
- Figure 3.10-2: Santa Clara County Zoning Ordinance Land Use Designations .......................... 3.10-3
- Figure 3.10-3: City of Morgan Hill General Plan Land Use Designations .................................. 3.10-5
- Figure 3.10-4: Parks and Recreational Facilities in the Project Vicinity ........................................ 3.10-6

### 3.12 Noise

- Figure 3.12-1: Sensitive Receptors in the Project Vicinity ................................................................. 3.12-5

### 4 Cumulative and Growth Inducing Impacts

- Figure 4.2-1: Cumulative Projects in the Project Region ................................................................. 4-2

### 5 Alternatives to the Project

- Figure 5.3-1: Conceptual Layout for Alternative B – Condensed Cluster Alternative ................. 5-8
- Figure 5.3-2: Conceptual Layout for Alternative C – Reduced Project Alternative ......................... 5-12

### List of Tables

#### ES Executive Summary

- Table ES-1: Impacts and Mitigation Measures .......................................................... ES-9
- Table ES-2: Comparison of Environmental Consequences between the Proposed Action and Alternatives .......................................................... ES-36

#### 1 Introduction

- Table 1.5-1: Reports Incorporated in EIR ........................................................................... 1-5

#### 2 Project Description

- Table 2.5-1: Secondary Access Roads ................................................................................ 2-11
- Table 2.5-2: Development Zones for the 25 Proposed Residential Lots ......................... 2-14
- Table 2.5-3: Proposed Development Regulations for the 25 Proposed Residential Lots ............. 2-17
- Table 2.5-4: Estimated Depth of Drilling for Five Potential Wells ........................................ 2-19
- Table 2.6-1: Construction Equipment Required for the Subdivision Improvements .......... 2-30
- Table 2.6-2: Estimated Deliveries During Project Construction .............................................. 2-35
3.1 Aesthetics and Visual Resources
Table 3.1-1: Project Site Visual Setting........................................................................3.1-2
Table 3.1-2: Key Observation Points (KOP) Descriptions...........................................3.1-4
Table 3.1-3: General Plan Policies Related to Viewshed Protection..............................3.1-11
Table 3.1-4: Santa Clara County Design Review Combining District Policies Related to
Related to Residential Development within the Tier 2 Category (§ 3.20.040)..............3.1-15
Table 3.1-5: Santa Clara County Design Review Guidelines..........................................3.1-17
Table 3.1-6: General Guidance for Review of Visual Impact Significance.....................3.1-20
Table 3.1-7: Visible Project Features .............................................................................3.1-21
Table 3.1-8: Description of KOPs and Impact Analysis .................................................3.1-27

3.2 Agriculture and Forestry Resources
Table 3.2-1: Definitions of Farmland Designations.......................................................3.2-3
Table 3.2-2: Impacts to Agricultural Land .................................................................3.2-5

3.3 Air Quality
Table 3.3-1: National and State Air Quality Designations for the San Francisco Bay Area Air
Quality Management District ......................................................................................3.3-3
Table 3.3-2: State and Federal Ambient Air Quality Standards......................................3.3-6
Table 3.3-3: Estimated Construction Emissions of Criteria Pollutants by Year and
Thresholds .....................................................................................................................3.3-10
Table 3.3-4: Estimated Operation Emissions of Criteria Pollutants by Year and
Thresholds .....................................................................................................................3.3-12
Table 3.3-5: Odor Screening Distances ........................................................................3.3-15

3.4 Biological Resources
Table 3.4-1: Species Found or Likely to Occur by Habitat Type.....................................3.4-4
Table 3.4-2: Special-Status Plant Species for the Mount Sizer, Gilroy, Mississippi Creek,
Gilroy Hot Springs, Mount Madonna, and Morgan Hill 7.5-Minute Quadrangle
Maps .........................................................................................................................3.4-9
Table 3.4-3: Special-Status Wildlife Species for the Mount Sizer, Gilroy, Mississippi Creek,
Gilroy Hot Springs, Mount Madonna, and Morgan Hill 7.5-Minute Quadrangle
Maps .........................................................................................................................3.4-12
Table 3.4-4: Special-Status Bird and Raptor Species for the Mount Sizer, Gilroy, Mississippi Creek,
Gilroy Hot Springs, Mount Madonna, and Morgan Hill 7.5-Minute Quadrangle
Maps .........................................................................................................................3.4-18
Table 3.4-5: Mitigation Ratios for Oak Woodland Trees..............................................3.4-50
3.5 Cultural Resources
Table 3.5-1: Paleontological Sensitivity .................................................................3.5-10

3.6 Geology and Soils
Table 3.6-1: Characteristics of Major Soil Units in the Project Area .........................3.6-5
Table 3.6-2: Estimated Ground Motion Parameters in the Project Area ....................3.6-11

3.7 Greenhouse Gas Emissions
Table 3.7-1: Greenhouse Gas Emissions Estimates from Construction of the Coyote Highlands Project .................................................................3.7-6

3.9 Hydrology and Water Quality
Table 3.9-1: Existing Peak Flow Rates, Q (cfs) .........................................................3.9-7
Table 3.9-2: Numeric Water Quality Objectives for Llagas Creek (mg/L) ...................3.9-10
Table 3.9-3: Project Increase in Impervious Surfaces ...............................................3.9-20
Table 3.9-4: Proposed Increase in Runoff (cf), Subdivision Improvements ...............3.9-21
Table 3.9-5: Proposed Increase in Runoff (cf), Future Residential Development .........3.9-21

3.10 Land Use, Planning, and Recreation
Table 3.10-1: Land Use Designations ........................................................................3.10-1
Table 3.10-2: Development and Open Space on the Hillside-Zoned Area of the Subdivision .........................................................................................3.10-16

3.12 Noise
Table 3.12-1: Definitions of Acoustical Terms ..........................................................3.12-1
Table 3.12-2: Typical Noise Levels in the Environment ..............................................3.12-3
Table 3.12-3: Santa Clara County Noise and Vibration Ordinance Table B11-192, Exterior Noise Limits ..............................................................3.12-8
Table 3.12-4 Santa Clara County Noise and Vibration Ordinance .............................3.12-9
Table 3.12-5: Construction Equipment and Typical Noise Emission Levels ..............3.12-11
Table 3.12-6: Expected Noise Levels During Construction .......................................3.12-12
Table 3.12-7: Peak Particle Velocities at Defined Distances ........................................3.12-13

3.14 Public Services
Table 3.14-1: Required Fire Protection Water Supply ..............................................3.14-1

3.15 Transportation and Traffic
Table 3.15-1: Level of Service Criteria for Roadways and Unsignalized Intersections ....3.15-2

3.17 Energy Conservation
Table 3.17-1: Source of Power for California in 2011 ..............................................3.17-2
4 Cumulative and Growth Inducing Impacts .............................................................. 4-1
   Table 4.2-1: Cumulative Projects ........................................................................... 4-3
5 Alternatives to the Project
   Table 5.3-1: Comparison of Environmental Consequences between the Proposed Action
               and Alternatives ......................................................................................... 5-15

Appendices

Appendix A: Notice of Preparation
Appendix B: Comments Received on Notice of Preparation
Appendix C: List of Acronyms and Abbreviations
Appendix D: Project Plans
Appendix E: Photo Sims
Appendix F: Technical Reports
Appendix G: Alternatives Considered but Rejected by the Applicant
EXECUTIVE SUMMARY

ES-1 INTRODUCTION
This Environmental Impact Report (EIR) is an informational document intended to disclose to the public and decision-makers the environmental consequences of implementing the Coyote Highland master-planned cluster residential subdivision (project) within Santa Clara County (County) as submitted by Coyote Highlands, LLC (applicant). Approval of the project would allow for subdivision of the property into 25 residential lots and five open space lots, construction of a roadway connecting to existing County roads, extension of utilities to the residential lots, construction of a stormwater drainage system, and construction of agricultural, private recreational, and habitat features. The County has primary discretionary authority over the project and serves as the Lead Agency responsible under the California Environmental Quality Act (CEQA).

ES-2 PROJECT OBJECTIVE
The applicant’s objective for the project is to provide for low-density residential development in the subdivision area while maintaining the majority of the existing open space, habitat, and livestock grazing uses in perpetuity.

ES-3 PROJECT SETTING AND LOCATION
The project is situated in the foothills of the Diablo Range. The Diablo Range extends nearly 100 miles from Pacheco Pass in the south to the Sacramento River to the north, and forms a topographic setting rising above Santa Clara Valley east of the cities of Gilroy, Morgan Hill, San Martin, Milpitas, and San Jose. The proposed subdivision area consists of approximately 567 acres located east of Carey Lane and Maple Avenue, within unincorporated Santa Clara County, California.

ES-4 PROJECT DESCRIPTION
ES-4.1 Overview
Chapter 5.45 of the Santa Clara County Zoning Ordinance allows for cluster developments with the approval of a Cluster Development Permit by the Planning Commission. As stated in the Zoning Ordinance, the purpose of cluster development regulations is to provide for flexibility in the location of dwelling units within a subdivision, to implement applicable policies of the General Plan, to promote efficiency of access, and to reduce the overall amount and extent of physical improvements required for residential development in order to preserve open space,
conserve natural resources and features of the land, and to avoid or mitigate potential adverse environmental impacts. The project involves the development of a residential cluster subdivision of the subdivision area, and the applicant is therefore applying for a Cluster Development Permit for the proposed project.

Although the proposed project includes rural residential development, approximately 494.80 acres, or 87.3 percent of the project site, would remain undeveloped open space upon completion of the project, including both private open space and shared open space. Approximately 363.95 acres of these 494.8 acres, or 64 percent of the subdivision area, would be placed into an open space or conservation easement held by the County of Santa Clara and deeded to a land trust to maintain the open space in perpetuity. This open space would be accessible to the 25 future residents. The remaining 131.0 acres of undeveloped open space would be deeded as private land among the 25 proposed residential lots. The majority of these 131.0 acres would be maintained as natural open space, and a portion of this area would be used for limited agricultural and recreational purposes. The other 72.05 acres, or 12.7 percent of the subdivision area, would be developed with access road rights-of-way, driveways, building envelopes, and septic leach fields for the 25 new residences.

**ES 4.2 Project Components**

The project includes the following components:

- Subdivision of the eight existing parcels into 25 residential parcels and several open space parcels
- Demolition of two existing residences within the subdivision area
- Rehabilitation of one existing barn within the subdivision area
- Construction of 2.2 miles of roadway that would connect Maple Avenue to Oak Canyon Drive, to be used for emergency access only
- Construction of a gated entry to the site off of Maple Avenue, and an emergency access “breakdown” gate at the northern terminus at the end of Oak Canyon Drive to allow for emergency vehicular access
- Construction of five minor access roads off of the new roadway, each providing access to two or more lots, and an extension of Carey Lane
- Construction of a utility trench beneath the new roadway and minor access roads
- Extension of utilities to the 25 new residential lots, including wiring and piping for electrical, natural gas, telephone, and cable television services
- Construction of a private water system, including drilling up to five new wells, constructing potable and emergency water storage tanks, and installing pipeline infrastructure to provide water to each residential lot
- Construction of a stormwater drainage system and associated on-site stormwater collection and percolation infrastructure, including piping, catchment basins, energy dissipaters, and bioswales in and adjacent to primary and secondary access road rights-of-way
- Construction of culverts and other drainage improvements where the proposed roadway would cross existing creeks, drainages, swales, and wetlands
ES EXECUTIVE SUMMARY

- Construction of recreation and habitat features, including restoration and enhancement of approximately 2,247 linear feet of Corralitos Creek riparian habitat
- Construction of 25 single-family residences on the 25 new residential parcels
- Use of existing ranch dirt roads for private on site trails

ES-5 ALTERNATIVES

Three alternatives to the proposed project, including the No Project Alternative, are considered in this EIR and summarized below.

ES-5.1 Alternative A - No Project Alternative

Section 15126.6(e) of the CEQA Guidelines requires consideration of the environmental consequences if the project is not constructed. The No Project Alternative would result if the current application is not approved, the project area is not subdivided into 25 residential lots and 5 open space lots, and the future residences are not built. Under the No Project Alternative, these activities do not occur and the impacts identified in Chapter 3 would be avoided.

Under the No Project Alternative, current land uses and management of the property would be expected to continue. Currently the subject property is used for cattle grazing and it is expected that this use would continue onsite. The existing residences located onsite on Carey Avenue would continue to be used.

The southern 100 acres of the subdivision area is a legal lot under separate ownership (Fountain Oaks LLC) from the remaining parcels in the Coyote Highlands subdivision. In February 6, 2007, the County approved a two-lot subdivision for this subject parcel (two 50-acre lots respectively) that would result in the development of two new single-family homes (Chiala Subdivision - County File # 9419). The approval of the proposed 25-lot subdivision would supersede this 2-lot subdivision. However, under the No Project Alternative, if the proposed 25-lot subdivision would not go forward, it is reasonably foreseeable that the property owner would pursue development of the approved 2-lot subdivision. Improvements associated with this two lot subdivision include construction of a new access road from the eastern terminus of Maple Avenue approximately one-third of the way onto the 100 acre parcel to provide access to two single-family homes. Per the approved subdivision plans, the new single-family homes would be located on the bottom third of the property.

The potential environmental impacts that would result from construction of the two lot subdivision were evaluated in an Initial Study and Negative Declaration, published by the County on November 3, 2006. This Initial Study disclosed that the implementation of the two lot subdivision could result in potentially significant impacts related to Aesthetics, Biological Resources, Hydrology, and Traffic.

The remainder of the Coyote Highlands property consists of eight existing legal lots owned by Coyote Highlands LLC. Seven of the parcels abut the western property line and could be accessed from Carey Lane and the existing ranch road. The eighth parcel, comprising the eastern one-third of the Coyote Highlands LLC holding, could be accessed from Oak Canyon...
Drive. Under the current zoning designation and County policy, the property owner could propose a new single-family residence on each of these eight existing legal lots. It is unknown where these residences would be located; however, the steep hillside topography and presence of geological hazards and biological resources would likely dictate construction of the residences in areas closer to existing infrastructure, including road access.

**ES-5.2 Alternative B - Condensed Cluster Alternative**

The Condensed Cluster Alternative would involve grouping 23 of the 25 proposed residential lots closer together on lots of approximately 2 acres in size. A lot size of 2 acres was selected to allow sufficient room for the construction of both a house and an onsite wastewater system. The purpose of the alternative would be to cluster the residences in locations on the property to further minimize or avoid potentially significant environmental impacts, as identified in this EIR. Thus the objective would be to re-site the proposed residences in areas onsite that avoid, to the greatest extent feasible, areas with greater environmental sensitivity, including areas visible from the Santa Clara valley viewshed and areas containing higher biological habitat values, geologic hazards, and steeper topography (slopes over 30 percent). Relocating the residential lots from these areas would ideally further reduce environmental impacts in these categories and potentially avoid several of the required mitigation measures by reducing or avoiding one or more significant impacts. Figure 5.3-1 shows a conceptual layout for Alternative B.

Under Alternative B, 23 of the 25 residential lots would be located in the northeastern corner of the project site and adjacent to the existing Jackson Oaks and Holiday Lakes Estates neighborhoods. The remaining two lots would be located in generally the same location as currently proposed, as this southernmost property is under a different zoning designation and would thus not allow allocation of lots together with the other 23 lots. Roadway and utility improvements would be similar to those for the proposed project, with a road alignment that is generally the same. Alternative B would also include the same design guidelines and height limits as the proposed project, and would involve the same square footage for development of residences and accessory structures. Alternative B would not include the separation of each residential lot into Homesite, Transition, and Natural Lands Zones, as the entirety of each lot would be considered a Homesite Zone and available for development.

The Condensed Cluster Alternative would meet the basic project objective of creating 25 rural residential lots. The size of the lots would be considerably smaller than those proposed under the proposed project and would eliminate the ability to create the Transition Zones and Natural Land Zones that are included in the proposed project; however, the average square footage of the Homesite Zones for the proposed project is approximately 1.16 acres, so the 2-acre lots under Alternative B would be larger than the proposed project lots. The allowable square footage of residential and accessory structure development under Alternative B would be unchanged from that of the proposed project. The footprint of this residential development would be larger than total acreage of the project site (28.96-acre building envelope for the proposed project compared to 50-acre building envelope for Alternative B). The residential lots under Alternative B would allow for similar landscape screening as the proposed project, but without the additional area of the Transition Zones. The lots in Alternative B would not have
additional acreage available for private recreational and agricultural activities (such as orchards and irrigated row crops) beyond those that could be located on the 2-acre lots. The open space lots would be developed with a system of private recreational trails similar to the proposed project, and existing grazing activities would continue on the open space lots.

Clustering the residential development in the eastern and northern corner of the site would more substantially avoid interface between the home sites and the identified physical site constraints of slope, visibility, riparian habitat, geologic hazards, and biological resources onsite. As the homes would be clustered much closer together (within 100 to 200 feet of each other), the cluster development would appear more like an expansion of the Jackson Oaks community. By reducing the overall size of the lots and clustering them within the northeastern corner of the site near existing neighborhoods, more lands would be preserved in common open space. The open space area under Alternative B would be more contiguous in area and only divided by the site access roadway.

Clustering of the residential lots in the northeastern location would condense the overall footprint of residential development on the property (eliminating many of the longer driveways and smaller access roads); however, more site preparation and grading would likely be required to create residential pads in one consolidated area. Although the clustering of residential lots would generally avoid the steeper areas of the property, not all of this area is topographically flat; for example, lots 10-13 and lots 20-22 under Alternative B contain steeper slopes and substantial grading would likely be required to create several of these residential pads and driveways.

**ES-5.3 Alternative C - Reduced Scale Alternative**

Alternative C would involve a reduced scale of the proposed cluster subdivision, with the development of fewer residential lots. The objective of this Alternative would be to remove those residential lots that are located in areas with greater environmental sensitivity, such as areas with high visibility from the Santa Clara Valley Floor (viewshed), areas on or adjacent to sensitive biological habitat, or areas containing geologic hazards. Lots would also be removed that require greater infrastructure for development, such as the construction of a longer single lot driveway from the main subdivision access road.

As shown in Figure 5.3-2, the Reduced Scale Alternative would entail the removal of six lots, including lots 2, 7, 9, 17, 19, and 22. The majority of these lots are located in areas of higher visibility from the Santa Clara Valley Floor. Two of the lots to be removed, Lot 2 and Lot 19, are sited in closer proximity to sensitive biological areas, such as the identified golden eagle nest (Lot 2) and the Foothill Creek riparian corridor (Lot 19). One lot to be removed under this alternative (Lot 9) contains an identified earthquake fault and serpentine soils. The removal of Lot 2 would also avoid the need to install the long driveway from the main access road to this property.
**ES-6  PREFERRED ALTERNATIVE**

Table ES-2 provides a comparison of project to the three alternatives with respect to the potential to avoid or substantially reduce environmental impacts. The CEQA Guidelines state that an EIR shall identify an environmentally superior alternative. As shown in the table, the No Project Alternative would provide the greatest reduction in environmental benefits, and thus would be the Environmentally Superior Alternative. Section 15126.6(e) (2) of the CEQA Guidelines stipulates, “If the environmentally superior alternative is the No Project alternative, the EIR shall also identify an environmentally superior alternative among the alternatives.”

As shown in Table ES-2, both the Condensed Cluster Alternative and the Reduced Scale Alternative would provide for a reduction in environmental impacts in several categories, such as Biological Resources and Aesthetics (views from the Santa Clara Valley floor). The Condensed Cluster Alternative may have new environmental impacts related to Hazards (exposure of residences to asbestos in serpentine soils) and Aesthetics (views from the Bay Area Ridge Trail). As the Reduced Scale Alternative does not entail relocation and clustering of residential lots but only removes select residential lots, this alternative would reduce environmental impacts without causing new impacts. Thus, the Reduced Scale Alternative would be the Environmentally Superior Alternative.

**ES-7  AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED**

Areas of controversy known to the lead agencies, including issues raised by agencies and the public, must be identified in the Executive Summary of an EIR (14 Cal. Code Regs. § 15123). A Notice of Preparation (NOP) was published on January 20, 2012, and was sent to local, state, and federal agencies, the State Clearinghouse, and potentially affected property owners for a 30-day review period. A public scoping meeting was held on February 16, 2012. Two comment letters were received and oral comments were provided at the public meeting. Comments were received on the following topics:

- Aesthetics and Visual Resources – visual changes to the hillside due to the loss of mature vegetation and addition of roadways; visual impact of retaining walls and future residences
- Biological Resources – loss of habitat for wildlife; loss of mature vegetation and native oak trees; effects on habits of mountain lions and boars in the area
- Geology and Soils – seismic and safety issues of constructing residences on steep slopes; erosion
- Hazards and Hazardous Materials – fire risk on hillsides
- Hydrology and Water Quality – damage to the three creeks that pass through the property
- Land Use, Planning, and Recreation – concerns about building height and other development regulations for future residences
- Noise – construction noise, particularly should either Oak Canyon Drive or Jackson Oaks Drive be used for access during construction
ES EXECUTIVE SUMMARY

- Transportation and Traffic – effects of construction and operational traffic on local roadways; traffic safety; wear and tear on local roadways; emergency vehicle access; concern regarding traffic and damage to the roadways should either Oak Canyon Drive or Jackson Oaks Drive be used for access during construction

ES-8 SUMMARY OF IMPACTS AND MITIGATION MEASURES

ES-8.1 Resource Areas Evaluated
The affected environment and the potential direct and indirect effects of the project and alternatives are described and evaluated in Chapter 3 of this EIR for the resource areas listed below. The cumulative impact analysis and other CEQA considerations are addressed in Chapter 4 and the comparative analysis of alternatives is in Chapter 5. Chapter 3 is organized into the following 17 environmental resource or issue areas:

3.1 Aesthetics and Visual Resources 3.10 Land Use, Planning, and Recreation
3.2 Agricultural and Forestry Resources 3.11 Mineral Resources
3.3 Air Quality 3.12 Noise
3.4 Biological Resources 3.13 Population and Housing
3.5 Cultural Resources 3.14 Public Services
3.6 Geology and Soils 3.15 Transportation and Traffic
3.7 Greenhouse Gas Emissions 3.16 Utilities and Service Systems
3.8 Hazards and Hazardous Materials 3.17 Energy Conservation
3.9 Hydrology and Water Quality

ES-8.2 Summary of Impacts
The potentially significant impacts of the project and associated mitigation measures for each of the resource areas assessed in this EIR are identified in Table ES-1 included at the end of this Executive Summary. Detailed analyses of impacts are contained in Chapter 3. A summary of the level of effects by parameter is as follows:

Potentially significant unmitigable impacts
None

Less than significant impacts with mitigation
Aesthetics and Visual Resources
Air Quality
Biological Resources
Cultural Resources
Geology and Soils
Hazards and Hazardous Materials
Hydrology and Water Quality
Noise
Public Services
Utilities and Service Systems
Less than significant impacts

Agricultural and Forestry Resources
Greenhouse Gas Emissions
Land Use, Planning, and Recreation
Population and Housing
Transportation and Traffic
Energy Conservation

No impacts

Mineral Resources

The conclusions of the impact analyses for alternatives and the project are summarized in Table ES-2. Not counting Alternative A (the No Project Alternative), the comparative analysis summarized in Table ES-2 shows that Alternative C was preferred with respect to Aesthetics; Agricultural and Forestry Resources; Air Quality; Biological Resources; Geology and Soils; Greenhouse Gas Emissions; Hazards and Hazardous Materials; Hydrology and Water Quality; and Transportation and Traffic.
### Table ES-1 Impacts and Mitigation Measures

<table>
<thead>
<tr>
<th>Environmental Impact</th>
<th>Mitigation Measures</th>
<th>Significance After Mitigation</th>
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</thead>
<tbody>
<tr>
<td><strong>Aesthetics and Visual Resources</strong></td>
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<tr>
<td>The proposed project would result in a significant impact if it would substantially degrade the existing visual character or quality of the site and its surroundings.</td>
<td><strong>Mitigation Measure Aesthetics-1</strong>: To reduce the visual contrast of the water tanks as seen from nearby residences, the Coyote Lake-Harvey Bear Ranch County Park, and the Santa Clara Valley floor, water tank systems, including exposed piping and tank support facilities, shall be painted with LRV of less than 45.</td>
<td>Less than significant</td>
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<td></td>
<td><strong>Mitigation Measure Aesthetics-2</strong>: To reduce the visual presence of the water tanks as seen from the Ed Wilson Trail in Coyote Lake-Harvey Bear Ranch County Park, the applicant shall develop a grading plan and landscaping plans that may include berming and or thick vegetation to obscure views from the trails. Plans shall be provided to the County of Santa Clara for review and acceptance.</td>
<td>Less than significant</td>
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<td></td>
<td><strong>Mitigation Measure Aesthetics-3</strong>: To avoid visual impacts from residential structures protruding above the perceived ridgeline, the future residence developer shall develop vegetative screening plans prepared by a licensed Landscape Architect. These plans shall include planting and irrigation plans and specifications. Plans shall be submitted to County of Santa Clara for review and acceptance prior to building permit issuance for construction. The specific visual design goals of the plans will be to:</td>
<td>Less than significant</td>
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<td></td>
<td>(a) Screen views to Homesite from adjacent residences to the project area.</td>
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<td></td>
<td>(b) Screen views to Homesite from Coyote Lake-Harvey Bear Ranch County Park through selective planting of native species along the eastern and southern boundaries of the project area.</td>
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<td></td>
<td>(c) Provide a visual backdrop (such as taller trees or hedge rows) to any building site as seen from the Santa Clara Valley floor where the allowable structure height limit would extend above existing ridgelines to avoid the skylining effect of structures.</td>
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<tr>
<td>All plants shall be watered for a minimum of 3 years from time of planting and until such time as the plants are established and can survive without additional watering. The tree species included in the applicant’s proposed Design Guidelines that could be used to provide vegetative screening include, but are not limited to, the following:</td>
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### Table ES-1 (Continued): Impacts and Mitigation Measures

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<tr>
<th>Environmental Impact</th>
<th>Mitigation Measures</th>
<th>Significance After Mitigation</th>
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<tbody>
<tr>
<td><strong>Homesite Zone</strong></td>
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<tr>
<td>- Fan-Tex Ash (Fraxinus velutina ‘Fan-Tex’)</td>
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<td>- Hinds’ Black Walnut (Juglans californica hindsii)</td>
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<td>- Chinese Pistache (Pistacia chinensis)</td>
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<tr>
<td>- London Plane Tree (Platanus x acerifolia ‘Columbia’)</td>
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<td>- California Sycamore (Platanus racemosa)</td>
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<tr>
<td>- Coast Live Oak (Quercus agrifolia)</td>
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<tr>
<td><strong>Transition Zone, Natural Lands Zone, and Open Space Lots</strong></td>
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<tr>
<td>- California Sycamore (Platanus racemosa)</td>
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<tr>
<td>- Coast Live Oak (Quercus agrifolia)</td>
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<tr>
<td>- Valley Oak (Quercus lobata)</td>
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<tr>
<td>- Ceanothus (Ceanothus spp.)</td>
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<tr>
<td>- California Buckeye (Aesculus californica)</td>
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<tr>
<td>- Coyote Brush (Baccharis pilularis)</td>
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To help ensure the backdrop effects of plantings are effective when the residential construction takes place, the planting and irrigation plans shall be implemented concurrently with construction. Planted areas shall be protected during all construction activities.

The proposed project would result in a significant impact if it would create a new source of light or glare.

**Mitigation Measure Aesthetics-1.**

The proposed project would result in a significant impact if it would not be generally in compliance with the Guidelines for Design Review Approval.

**Mitigation Measure Aesthetics-1**

**Mitigation Measure Aesthetics-3.**

Less than significant
### Table ES-1 (Continued): Impacts and Mitigation Measures

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<tr>
<th>Environmental Impact</th>
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<tr>
<td><strong>Air Quality</strong></td>
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<tr>
<td>The proposed project would result in a significant impact if it would expose sensitive receptors to substantial pollutant concentrations.</td>
<td><strong>Mitigation Measure Air Quality-1</strong>: A Dust Mitigation Plan shall be prepared pursuant to the requirements of BAAQMD. The plan shall address construction and ground disturbing activities within serpentine soils with the goal of minimizing dust generation and exposure for work in these areas.</td>
<td>Less than significant</td>
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<tr>
<td><strong>Biological Resources</strong></td>
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<td>The proposed project would result in a significant impact if it would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG or USFWS.</td>
<td><strong>Mitigation Measure Biology-1</strong>: Prior to initiating construction, the applicant shall hire a qualified botanist to conduct protocol-level surveys for special-status plants in areas of direct impact. Surveys shall be conducted on three separate dates, spanning the published blooming period for the 13 special-status species that could potentially occur within proposed impact areas. The surveys must be conducted at an intensity that will allow each impact area to be carefully and thoroughly covered. The survey results shall be provided in a report to the County prior to construction. If a special-status plant species is identified, Mitigation Measures Biology-2 or Biology-3 shall be implemented. <strong>Mitigation Measure Biology-2</strong>: To the extent feasible, construction activities shall avoid impacts to special-status plant populations on site. The applicant shall reduce indirect impacts to special-status plants to be preserved on site during construction by establishing a permanent buffer zone around the preserved plant populations, if feasible. If establishing an avoidance buffer is not feasible, Mitigation Measure Biology-3 shall be implemented. The buffer shall be determined by a qualified biologist and shall be of sufficient size to avoid potential disturbance and the width of the buffer on a consideration of site-specific characteristics including a consideration of the plant’s ecological requirements (e.g., sunlight, moisture, shade tolerance, soils physical and chemical characteristics) and adjacent uses (e.g., sprinkler irrigation or shading from buildings or other structures). The buffer zone shall be demarcated using exclusion fencing.</td>
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### Table ES-1 (Continued): Impacts and Mitigation Measures

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<td></td>
<td><strong>Mitigation Measure Biology-3.</strong> If avoidance of special-status plants, including establishment of a suitable buffer area is not feasible, mitigation shall be provided via the preservation, enhancement, and management of other existing occupied habitat for the affected species. Compensatory mitigation shall include preservation, enhancement, and management of lands that (a) already support equal or greater numbers (and health) of individuals of that species and (b) contain sufficient unoccupied habitat to allow for an increase in populations, the increase being at least equivalent to the number impacted, through habitat enhancement and management. The acreage of the mitigation lands shall be determined based on the number of individuals impacted and the characteristics of the mitigation lands with respect to the two criteria in the previous sentence. The mitigation ratio (mitigation:impact) shall be at least 1:1 on an acreage basis. The mitigation habitat shall be of equal or greater habitat quality compared to the impacted areas, as determined by a qualified botanist, in terms of soil features, extent of disturbance, vegetation structure, and dominant species composition.</td>
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<td></td>
<td><strong>Mitigation Measure Biology-4:</strong> An open space or conservation easement, or other similar instrument, shall be recorded on the property encompassing the mitigation habitat to be protected and preserved to protect special-status plant populations, CTS, CRLF native oak trees, riparian areas, and wetland habitats to protect the mitigation areas in perpetuity. The easement and an endowment for the management of the mitigation lands (or some other means of financially supporting management) shall be in place prior to initiation of impacts to the special-status plants, CTS, CRLF, riparian areas, or wetlands. The conservation easement areas shall be mapped, restricted, and recorded against each parcel affected, prior to issuance of grading permits for the roadway and driveways. The conservation area shall be clearly defined on parcel maps available to future owners. The conservation easement restrictions shall prohibit any physical alterations or ground disturbing activity within the conservation corridor. The conservation areas shall be marked with signs at the edge of the corridor that describe the area as sensitive habitat and indicate prohibition of any physical alterations or ground disturbing activity within the area, and the legal document shall allow for County enforcement, where necessary, with procedures for recovering costs of enforcement from the homeowners. Conservation area deed restrictions for individual parcels shall be approved by the County prior to recordation.</td>
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### Table ES-1 (Continued): Impacts and Mitigation Measures

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<tr>
<td><strong>Mitigation Measure Biology-5:</strong></td>
<td>An education program for construction personnel shall take place prior to construction, and a USFWS-approved biologist shall explain to workers how to avoid the accidental take of CTS and CRLF. The approved biologist shall train workers on CTS and CRLF recognition, their potential for occurrence in the impact area, measures to avoid take, and penalties for take. The program shall consist of a brief presentation by the on-site biologist to explain endangered species concerns to all personnel involved in the proposed project. The program shall include a description of the CTS and CRLF and their habitat needs, an explanation of the status of these species and their protection under the FESA; and a description of the measures being taken to reduce effects to these species during project implementation. The program shall be recorded electronically, and all future construction personnel shall be required to review the presentation prior to their initiation of work in the project area.</td>
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<td><strong>Mitigation Measure Biology-6:</strong></td>
<td>Prior to any ground disturbance (with the exception of trail construction and other activities associated with natural lands management that would result in only minor disturbance), either a qualified biological monitor will be on-site to observe ground-disturbing activities or USFWS-approved exclusion fencing that allows CTS and CRLF to leave the development area but prevents them from entering this area shall be constructed along the proposed ultimate limits of grading and disturbance. The exclusion fencing shall be at least 3 feet tall and buried at depth of at least 6 inches below the soil surface. The exclusion fencing shall be continuous between project activities and adjacent natural habitats, with openings only as needed for vehicular access. A qualified biologist shall inspect this area prior to installation of this exclusion fencing. The exclusion fencing shall remain in place for the duration of project construction activities, thus allowing CTS and CRLF to leave undisturbed portions of the subdivision area over time. This exclusion fencing shall be removed after project construction activities have ceased. During residential construction, the exclusion fencing shall be in place throughout the duration of construction at each lot.</td>
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<td><strong>Mitigation Measure Biology-7:</strong></td>
<td>A qualified biologist shall be present during all vegetation removal, grading, and other construction activities performed in suitable habitat for CTS and CRLF. The biologist shall conduct surveys of the work area during the rainy season (between October 15 and April 15), and following rain events, prior to the initiation of work each day and shall be present during construction activities to remove any CTS or CRLF that disperse into the impact area. The biologist shall also help to ensure that work is confined to predetermined construction areas through monitoring. During the dry season (roughly April 15 to October 15), dedicated construction personnel trained by the qualified biologist can perform this monitoring function after all clearing and grubbing has been performed and the construction site has been surrounded by exclusion fencing.</td>
<td>Less than significant</td>
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Table ES-1 (Continued): Impacts and Mitigation Measures

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<td><strong>Mitigation Measure Biology-8:</strong> If a CTS or CRLF (or any amphibian that personnel think may be of one of these species) is encountered during project activities, the following protocol shall be implemented:</td>
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<td>(a) All work that could result in direct injury, disturbance, or harassment of the individual animal shall immediately cease.</td>
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<td>(b) A dedicated project contact (e.g., a supervisor) shall be immediately notified.</td>
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<td>(c) The dedicated project contact shall immediately notify USFWS and CDFG.</td>
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<td>(d) A qualified biologist approved by USFWS and CDFG to handle the individual CTS or CRLF shall move the individual to a safe location nearby.</td>
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<td><strong>Mitigation Measure Biology-9:</strong> To prevent inadvertent entrapment of CTS or CRLF during project activities, all excavated, steep-walled holes or trenches more than 2 feet deep shall be thoroughly inspected for trapped animals each morning before work activity is performed, and immediately before they are filled. If at any time a trapped special-status species is discovered, the procedure described in Mitigation Measure Biology-7 shall be implemented.</td>
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<td><strong>Mitigation Measure Biology-10:</strong> Vehicles shall observe a 15-mile-per-hour speed limit during construction. Off-road traffic outside of the designated development area shall be prohibited.</td>
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<td><strong>Mitigation Measure Biology-11:</strong> The project proponent shall compensate for any permanent loss of CTS and CRLF habitat at a minimum ratio of 2:1. Mitigation must be provided prior to the commencement of impacts to these species’ habitat. Compensatory mitigation may be carried out through purchasing credits at a habitat mitigation bank (if there are any banks with CTS and CRLF habitat credits with a service area that includes the project area when construction commences), and/or one or both of the following on-site mitigation methods:</td>
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<td>(a) The preservation and management of high-quality habitat (in a ratio approved by CDFG) that is already occupied by CTS and CRLF, and that is located in a position within the landscape that would support long-term persistence of the species within the mitigation area (i.e., in an area providing connectivity to other populations)</td>
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<td>(b) The restoration or enhancement of degraded habitat (in a ratio approved by the CDFG) or habitat that is unsuitable for use by CTS and CRLF, but that (a) is in close proximity to and easily accessible by CTS occurring in nearby habitats; (b) could be made more suitable for use via construction of one or more breeding ponds, enhancement of breeding and non-breeding</td>
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Coyote Highlands Cluster Subdivision Draft EIR – November 2012
ES-14
### Table ES-1 (Continued): Impacts and Mitigation Measures

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<th>Environmental Impact</th>
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<th>Significance After Mitigation</th>
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<td>aquatic habitat via improvements to emergent vegetation or other cover, or management to improve the quality of upland habitat; and (c) is located in a position within the landscape that would support long-term persistence of the species within the restored/enhanced habitat.</td>
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<tr>
<td><strong>Mitigation Measure Biology-12:</strong> Wherever retaining walls or other vertical curbs are unnecessary, slopes on the edges of roads shall be designed to allow CTS and CRLF to move from adjacent grassland habitats over the surface of the road (i.e., vertical features shall be minimized).</td>
<td>Less than significant</td>
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<tr>
<td><strong>Mitigation Measure Biology-13:</strong> Prior to any clearing of, or work within riparian, oak woodland, or scrub habitat, a qualified biologist shall conduct a survey for San Francisco dusky-footed woodrat nests. Where feasible, an exclusion buffer of approximately 10 feet around these nests shall be established to avoid moving or bumping the nests, or logs or branches on which the nests rest. If establishing a buffer and avoiding the nests is not feasible, Mitigation Measure Biology-14 shall be implemented.</td>
<td>Less than significant</td>
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<td><strong>Mitigation Measure Biology-14:</strong> If avoidance of nests is not feasible, the nests shall be dismantled and the nesting material moved to a new location outside the project’s impact areas so that it can be used by woodrats to construct new nests. Prior to nest deconstruction, each active nest shall be disturbed by a qualified wildlife biologist to the degree that all woodrats leave the nest and seek refuge out of the impact area. Whether the nest is on the ground or in a tree, the nest shall be nudged to cause the woodrats to flee. For tree nests, a tarp shall be placed below the nest and the nest dismantled using hand tools (either from the ground or from a lift). The nest material shall then be piled at the base of a nearby hardwood tree (preferably an oak with refuge sites among the tree roots or with dense vegetation or other refugia nearby) outside of the impact area.</td>
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<td><strong>Mitigation Measure Biology-15:</strong> A qualified biologist shall conduct pre-disturbance surveys for badger dens on and within 300 feet of the proposed area of new disturbance (as access permits), within 30 days prior to ground-breaking in any given area currently occupied by grassland. This survey shall need to be repeated every time natural grassland that has not been surveyed within the prior 30 days is disturbed. If the qualified biologist identifies any dens that appear suitable for this species (based on size, shape, or other features), such “potential dens” shall be monitored via tracking media or camera for a period of at least three days to determine occupancy, and then excavated if no evidence of occupancy is detected. If the nest is found to be active, Mitigation Measure Biology-16 shall be implemented.</td>
<td>Less than significant</td>
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<td>Environmental Impact</td>
<td>Mitigation Measures</td>
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<td><strong>Mitigation Measure Biology-16:</strong> If an active maternity badger den is located, the qualified biologist shall determine the measures (e.g., buffers) that shall be taken to avoid impacts on the den during the pupping season (i.e., February 15 through July 1, or as otherwise determined through surveys and monitoring of the den), in consultation with CDFG. After the pupping season, if a den is located in an on-site impact area, the badgers shall be evicted by excavation of the den using hand tools, in consultation with CDFG and under the supervision of the qualified biologist.</td>
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<tr>
<td><strong>Recommended Measure Biology-17A:</strong> A survey for roosting bats shall be conducted by a qualified biologist prior to removal of trees, demolition of buildings, modification of the on-site barn, or ground-breaking work. Any trees or buildings within or immediately adjacent to (i.e., within 100 feet of) the work areas shall be assessed to determine whether they provide high-potential roost sites. If suitable roost sites are found and a visual survey is not adequate to determine presence or absence of bats (i.e., in tree cavities), acoustic equipment shall be used to determine occupancy. This survey may serve as the pre-construction survey described in Mitigation Measure Biology-17B, or it may be conducted prior to the breeding season (i.e., April 1) in the year(s) in which removal of trees, demolition of buildings, modification of the barn, and/or ground-breaking disturbance are scheduled to occur so that adequate measures can be implemented, if feasible, to evict the bats during the non-breeding season.</td>
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<td><strong>Mitigation Measure Biology-17B:</strong> A pre-construction survey for roosting bats, following the methods described in Mitigation Measure Biology-17A, shall be conducted within 15 days prior to the commencement of construction activities in a given area to determine whether bats have occupied a roost in or near the proposed work areas. If bats are found Mitigation Measures Biology-18 through Biology-21 shall be implemented.</td>
<td>Less than significant</td>
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<td><strong>Mitigation Measure Biology-18:</strong> If a maternity roost supporting more than twenty individuals of non-special-status bats, or a pallid bat maternity roost of any size, is detected during the pre-construction survey, the qualified biologist shall determine the exclusion zone around the active roost that shall be maintained. This exclusion zone shall be maintained from April 1 until the young are flying, typically after August 31.</td>
<td>Less than significant</td>
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<tr>
<td><strong>Mitigation Measure Biology-19:</strong> If a large day roost of common bat species or a pallid bat day roost is found in a building to be demolished or retrofitted, in a tree to be removed, or near planned work areas such that the colony could be disturbed by project activities to the point of abandoning the roost, the bats shall be safely evicted under the direction of a qualified biologist.</td>
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### Table ES-1 (Continued): Impacts and Mitigation Measures

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<tr>
<td>Eviction of bats</td>
<td>Shall occur at night to decrease the likelihood of predation (compared to eviction during the day). Eviction shall occur between September 1 and March 31, outside the maternity season, but shall not occur during long periods of inclement or cold weather (as determined by the bat biologist) when prey are not available or bats are hibernating. One-way doors shall be inserted into the crevices to allow bats to exit, but not re-enter, the crevices. These one-way doors shall be inspected regularly until work commences, and shall be removed the morning a tree is to be removed or building demolished. If a day roost is found within a building, eviction shall occur by opening the roosting area to allow airflow through the cavity. Demolition shall then follow no sooner than the following day (i.e., there shall be no less than one night between initial disturbance for airflow and the demolition). If feasible, one-way doors shall also be used to evict bats from tree roosts. If use of a one-way door is not feasible, or the exact location of the roost entrance in a tree is not known, the trees with roosts that need to be removed shall first be disturbed by removal of some of the trees’ limbs not containing the bats. Such disturbance shall occur at dusk to allow bats to escape during the darker hours. These trees would then be removed the following day. These activities shall be performed under the supervision of the qualified biologist.</td>
<td>Less than significant</td>
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**Mitigation Measure Biology-20:** If a day roost of pallid bats or of a large colony of non-special-status bats shall be impacted, an alternative bat roost structure shall be provided within the project area. One alternative roost structure shall be provided for each roost that is impacted. The design and placement of this structure shall be determined by a bat biologist, in consultation with CDFG, based on the species of bat to be displaced, the location of the original roost, and the habitat conditions in the vicinity. The roost structure shall be built to specifications as determined by a qualified biologist and CDFG, or it may be purchased from an appropriate vendor. The structure shall be placed outside the potential impact area (i.e., at least 100 feet from project impacts), but otherwise as close to the impacted roost site as feasible. This bat structure shall be erected prior to removal of the original roost structure to encourage bats to begin using the new structure. | Less than significant |

**Mitigation Measure Biology-21:** If a tree or structure within or immediately adjacent to the work area is found to contain a day roost but it is not being removed or demolished, a qualified biologist (in consultation with CDFG) shall determine whether the bats shall be evicted or whether they shall remain in place. If it is determined that the risks to bats from eviction (e.g., increased predation or exposure, or competition for roost sites) are greater than the risk of colony abandonment, then the bats shall not be evicted. | Less than significant |
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<th>Environmental Impact</th>
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<tr>
<td><strong>Mitigation Measure Biology-22:</strong> To the extent feasible, construction and demolition activities shall be scheduled to avoid the nesting season. The nesting season for most birds, including most raptors, in Santa Clara County extends from February 1 through August 31 (with the exception of golden eagle nesting). If construction must occur during the nesting season, Mitigation Measures Biology-23 and Biology-24 shall be implemented.</td>
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<td><strong>Mitigation Measure Biology-23:</strong> Pre-construction surveys for nesting birds shall be conducted by a qualified biologist prior to construction and demolition activities between. These surveys shall be conducted no more than 7 days prior to the initiation of construction and demolition activities. During this survey, the qualified biologist shall inspect all potential nesting habitats (e.g., trees, shrubs, grasslands, and buildings) within 300 feet of impact areas for raptor nests and within 100 feet of impact areas for nests of non-raptors. If an active nest (i.e., a nest with eggs or young, or any completed raptor nest attended by adults) is found sufficiently close to work areas to be disturbed by these activities, the qualified biologist shall determine the extent of a disturbance-free buffer zone to be established around the nest (typically 250 feet for raptors and 50-100 feet for other species), to ensure that no nests of species protected by the MBTA and California Fish and Game Code shall be disturbed during project implementation.</td>
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<td><strong>Mitigation Measure Biology-24:</strong> If construction and demolition activities are not initiated until after the start of the nesting season, potential nesting substrate (e.g., bushes, trees, grasses, and other vegetation) that is scheduled to be removed by the project may be removed prior to the start of the nesting season (e.g., prior to February 1) to reduce the potential for initiation of nests.</td>
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<td><strong>Mitigation Measure Biology-25:</strong> A qualified biologist shall conduct pre-construction surveys for burrowing owls on and within 300 feet of the proposed area of new disturbance prior to groundbreaking in grassland habitat. Surveys shall be conducted in conformance with the take avoidance surveys described in the current CDFG-approved protocols (CDFG 2012). The initial survey shall be conducted 2 to 4 weeks prior to the initiation of construction, and three additional surveys shall be conducted subsequently, with the final survey conducted within 24 hours prior to construction initiation. Surveys shall be conducted regardless of the time of year that work is scheduled to occur. This survey shall be repeated every time natural grassland habitat is disturbed, if the area has not been surveyed within the prior 2 weeks.</td>
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<td><strong>Mitigation Measure Biology-26:</strong> If ground-disturbing activities shall directly impact occupied burrows, the owls occupying burrows to be disturbed shall be passively relocated during the non-nesting season by a qualified biologist using one-way doors. No burrowing owls shall be evicted from burrows during the nesting season (February 1 through August 31) unless evidence indicates that nesting is not actively occurring.</td>
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<td>Environmental Impact</td>
<td>Mitigation Measures</td>
<td>Significance After Mitigation</td>
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<td><strong>Mitigation Measure Biology-27</strong>: If burrowing owls are found breeding on the site, a 300-foot exclusion buffer, within which no new construction activity shall be permissible, shall be maintained between construction activities and occupied burrows. This protected area shall remain in effect around any burrows occupied during the nesting season (February 1 through August 31) unless evidence indicates that nesting is not actively occurring.</td>
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<td><strong>Mitigation Measure Biology-28</strong>: No construction activities shall occur within a viewshed buffer zone within 0.5 mile of the nest, or within 1,000 feet (regardless of whether the construction is within the viewshed) around any eagle nest during the breeding season (January 15 to August 1, or as determined by a qualified biologist, as the breeding season may be shorter). The viewshed buffer, defined as all project areas that are within 0.5 mile of the nest and that can be seen by an eagle on the nest, shall be mapped by a qualified biologist in consultation with a civil engineer.</td>
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<td><strong>Mitigation Measure Biology-29</strong>: During construction periods for the subdivision improvements a qualified biologist shall monitor the active golden eagle nests from a suitable distance (i.e., as to not disturb nesting eagles) during the breeding season (January 15 to August 1, or as determined by a qualified biologist, as the breeding season may be shorter), at a survey frequency determined by the biologist. If the biologist determines that project activities are disturbing eagles to the point that the eagles' reproductive activities could be abandoned, the biologist, in consultation with the Planning Office, shall have the authority to stop work anywhere in the project area that he/she believes may be disturbing the eagles. Work shall not start again until the biologist determines that the work can occur without disturbing the eagles. If the Biologist determines that construction activity is not disturbing nesting eagles, the monitoring may cease, in consultation of the Planning Office.</td>
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<td><strong>Mitigation Measure Biology-30</strong>: For each year in which new construction will occur (subdivision improvements, new residences, new trail) surveys shall be conducted by a qualified biologist of areas within 1,000 feet of the area of new construction or within a viewshed buffer (areas visible from the construction area up to 0.5 mile) to determine the location of any new (currently unknown) golden eagle nests. This survey shall determine if the known eagles are using other nests elsewhere within the</td>
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<td>Environmental Impact</td>
<td>Mitigation Measures</td>
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<td>territory or whether multiple pairs of eagles are breeding on the site. This information shall inform nesting-season avoidance and minimization measures for that year. If eagles are determined to occupy any areas, Mitigation Measures Biology-28 and Biology-29 shall also be implemented during construction, and Mitigation Measure Biology-31 shall be implemented during the post-construction period.</td>
<td><strong>Mitigation Measure Biology-31:</strong> The 364-acre on-site conservation shall be maintained with ongoing grazing (or similar measures for vegetation management) to ensure maintenance of golden eagle foraging and nesting habitat.</td>
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<td><strong>Mitigation Measure Biology-32:</strong> To reduce the potential for the golden eagles to abandon their nest or territory during post-construction periods with a resulting reduced reproductive success, new (i.e., not currently ongoing) maintenance activities and/or recreational trail use shall not occur within the 0.5-mile viewshed buffer zone (as determined under Mitigation Measure Biology 28) or 1,000 feet of the golden eagle nest between January 15 and August 1, or as determined by a qualified biologist based on nesting activity. Seasonal trail closures shall be implemented within these buffers.</td>
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| | **Mitigation Measure Biology-33:** Prior to construction, the applicant shall provide a Habitat Mitigation & Monitoring Plan (HMMP) for preservation and management of special-status plant populations, CTS, CRLF, and golden eagles on the mitigation lands. Impacts to the special-status plants, CTS, CRLF, or golden eagles on the project site shall not commence until the County approves the HMMP. The HMMP shall be prepared by qualified biologists/botanists and shall provide, at a minimum, the following items:  
  (a) A summary of impacts and the proposed mitigation site/species management  
  (b) A description of the location and boundaries of the mitigation site/management area and description of existing site conditions  
  (c) A description of measures to be undertaken to enhance (e.g., through focused management) the mitigation site/management area for the focal special-status species  
  (d) A description of measures to transplant individual plants or seeds from the impact area to the mitigation site, if appropriate (which shall be determined by a qualified botanist) | Less than significant |
### Table ES-1 (Continued): Impacts and Mitigation Measures

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<td>(e) Proposed management activities to maintain high-quality habitat conditions for the focal species</td>
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<td>(f) A description of habitat/community and species monitoring measures on the mitigation site, including specific, objective final and performance criteria, monitoring methods, data analysis, reporting requirements, monitoring schedule, etc.</td>
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<td>(g) A description of the management plan’s adaptive component, including potential contingency measures for mitigation elements that do not meet performance criteria</td>
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<td>(h) A description of the preservation mechanism (e.g., a conservation easement) and the funding mechanism to ensure the long-term maintenance and monitoring of the mitigation lands</td>
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<td>The HMMP shall be submitted to the County for review and approval prior to implementation. An open space or conservation easement, or other similar instrument, shall be recorded on the mitigation lands to protect these lands. The easement and an endowment for the management of the mitigation lands (or some other means of financially supporting management) shall be in place prior to initiation of impacts to these species.</td>
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<td>Mitigation Measure Hydrology-3.</td>
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<td>Mitigation Measure Hydrology-4.</td>
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<td>Mitigation Measure Biology-33.</td>
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<td>Mitigation Measure Biology-34. Impacts to riparian habitats shall be mitigated through the purchase of mitigation credits or through creation of riparian habitats on- or off-site. The intent of this mitigation measure is to require the project proponent to replace the functions and values associated with the existing habitats to be lost through implementation of the proposed site improvements through creation of replacement riparian habitats. In consideration of the spatial and temporal losses associated with the impacted creek and drainage channels, replacement aquatic habitat will be created at a minimum ratio of 1:1, and aquatic-upland transition areas will be created at a minimum ratio of 2:1 concurrent with or prior to impacts to existing riparian habitats. Alternatively, the applicant shall supply the County with proof of purchase of credits from an approved mitigation bank with a service area that includes the Project site.</td>
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<td>Mitigation Measure Hydrology-1.</td>
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<td>Mitigation Measure Hydrology-2.</td>
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The proposed project would result in a significant impact if it would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFG or USFWS.
### Table ES-1 (Continued): Impacts and Mitigation Measures

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| The proposed project would result in a significant impact if it would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) or tributary to an already impaired water body, as defined by Section 303(d) of the CWA through direct removal, filling, hydrological interruption, or other means. | Mitigation Measure Biology-33.  
Mitigation Measure Biology-35: To the maximum extent practicable, all grading within and upslope from wetlands shall occur during the dry season. If grading is to occur during the rainy season, the primary BMPs selected shall focus on erosion control. End-of-pipe sediment control measures (e.g., basins and traps) shall be used only as secondary measures.  
Mitigation Measure Biology-36: Unavoidable fill of wetlands shall be mitigated through the purchase of wetland mitigation credits or through creation of wetlands on-site or off-site. Replacement wetlands shall be created at a minimum ratio of 2:1 concurrent with or prior to impacts to existing wetlands. Alternatively, the applicant shall supply the County with proof of purchase of credits from an approved mitigation bank with a service area that includes the project area. | Less than significant |
| The proposed project would result in a significant impact if it would have a substantial adverse effect on oak woodland habitat as defined by Oak Woodlands Conservation Law (conversion/loss of oak woodlands) – Public Resource Code 21083.4. | Mitigation Measure Biology-37: Impacted oak woodland trees shall be replaced by the planting of trees over an area at a replacement ratio of 2:1 for medium-quality oak woodland habitat, or 3:1 for high-quality oak woodland habitat, on an acreage basis and as determined by a qualified arborist. A tree planting and maintenance plan shall be prepared and submitted to the County for approval, and the County must approve the plan prior to initiation of impacts to oak woodland trees. The minimum standard mitigation ratios (Table 3.4-5) shall be used unless otherwise agreed upon by the County. | Less than significant |

<table>
<thead>
<tr>
<th>Size of Tree to be Removed (inches DBH)</th>
<th>Number of 24-Inch-box Trees for Replacement</th>
<th>Number of 15-Gallon Trees for Replacement</th>
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<tbody>
<tr>
<td>5 – 18</td>
<td>2</td>
<td>3</td>
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<tr>
<td>18 – 24</td>
<td>3</td>
<td>4</td>
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<tr>
<td>&gt;24</td>
<td>4</td>
<td>5</td>
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DBH = diameter at breast height
### Table ES-1 (Continued): Impacts and Mitigation Measures

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<tr>
<td>The proposed project would result in a significant impact if it would conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.</td>
<td>Mitigation Measure Biology-38: Mitigation measures Biology-1 through Biology-12, Biology-25 through Biology-27, Biology-34, and Biology-36, which address special status species, riparian habitat, and wetlands, may be superseded or supplemented through the permitting requirements of the Santa Clara Valley Habitat Plan or via permits issued by the Regional Water Quality Control Board, California Department of Fish and Game, U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service when those permits address the same biological resource.</td>
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| The proposed project would result in a significant impact if it would conflict with any local policies or ordinances protecting biological resources, such as (i) Tree Preservation Ordinance, (ii) Wetland Habitat, or (iii) Riparian Habitat. | Mitigation Measure Biology-35.  
Mitigation Measure Biology-36.  
Mitigation Measure Biology-38.  
Mitigation Measure Biology-39: In accordance with County requirements, the applicant shall have a qualified arborist prepare a tree protection plan describing the measures that shall be implemented to protect trees that are preserved in and near impact areas to minimize the potential for substantial long-term impairment of the health of the tree. The plan shall be submitted to the County for approval, and the County must approve the plan prior to initiation of impacts to the trees. Tree protection measures shall be implemented during construction in accordance with the plan. | Less than significant       |

### Cultural Resources

The proposed project would result in a significant impact if it would cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5 of the CEQA Guidelines including physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

Mitigation Measure Cultural Resources-1: Prior to recordation of the Final Tract Map, a survey shall be conducted by a qualified architectural historian of the rock feature identified in the HRE, and results submitted to the County of Santa Clara Planning Office. The County may require peer review of the survey by a qualified architectural historian to verify the results and location. If the rock feature is identified as a historic resource and is determined to be located within any of the residential lots, the property owner/developer shall submit to the Planning Office a deed restriction with legal description(s) for all affected parcels of real property that contain the rock feature identified in the HRE as a potential historical resource, to be recorded with the Final Tract Map. The Deed Restriction shall read: “Tract Map No. ____ (insert #) for Coyote Highlands Subdivision, Lot No. ____ (insert #), contains rock features related to Kellogg’s Natural Springs, which are considered a potentially historic resource. These rock features shall remain in place and shall not be removed, relocated, or altered without prior approval from the County of Santa Clara.” The property owner shall be responsible for all reasonable costs associated with recording said deed restriction. | Less than significant       |
### Table ES-1 (Continued): Impacts and Mitigation Measures

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<tr>
<td>Mitigation Measure Cultural Resources-2: Proposed rehabilitation of the barn shall adhere to The Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.</td>
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<tr>
<td>The proposed project would result in a significant impact if it would cause a substantial adverse change in the significance of an archaeological resources as defined in §15064.5.</td>
<td>Mitigation Measure Cultural Resources-3: The applicant shall note on any plans that require ground-disturbing excavation that there is a potential for exposing buried cultural resources. The project proponent shall retain a Professional Archaeologist to provide a preconstruction briefing to supervisory personnel of the excavation contractor to alert them to the possibility of exposing significant historical and archaeological resources within the property. The briefing shall discuss any archaeological objects that could be exposed, the need to stop excavation at the discovery, and the procedures to follow regarding discovery protection and notification of the project proponent and archaeological team.</td>
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<td>Mitigation Measure Cultural Resources-4: In the event that historic or cultural materials are exposed or discovered during subsurface construction activities, operations shall stop all work within 30 feet of the find and a qualified Professional Archaeologist shall be contacted for evaluation and further recommendations. The archaeologist shall review and evaluate any discoveries to determine if they are historic resource(s) under CEQA and/or unique archaeological resources. If the Professional Archaeologist determines that any cultural resources exposed during construction constitute a significant archaeological resource, he/she shall notify the project proponent and the Santa Clara County Planning Department of the evaluation and recommended mitigation measures to mitigate to a less-than-significant level. If a discovery is determined to be a significant archaeological resource, and if avoidance of the resource is not possible, the archaeological or cultural resource consultant shall prepare and implement a Cultural Resources Management Plan acceptable to the County of Santa Clara to treat the resource. Potential recommendations could include evaluation, collection, recordation, and analysis of any significant cultural materials. Treatment of any significant cultural resources shall be undertaken with the approval of Santa Clara County.</td>
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<td>Mitigation Measure Cultural Resources-5: In the event that paleontological resources are discovered during project construction, construction shall cease in the immediate vicinity of the find until a qualified paleontologist is consulted to determine the significance of the find, and has recommended appropriate measures to protect the resource. Further disturbance of the resource shall not be allowed until those recommendations are approved by the Santa Clara County Planning Department and the recommendations for protection of the resource have been implemented.</td>
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### Table ES-1 (Continued): Impacts and Mitigation Measures

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<tr>
<td><strong>Geology and Soils</strong></td>
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<td>The proposed project would result in a significant impact if it would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault [refer to Division of Mines and Geology Special Publication 42].</td>
<td><strong>Mitigation Measure Geology-1:</strong> A building setback of 50 feet westward from the unexplored area east of the eastern end of the exploration trench and extending north and south parallel to the mapped trace of the fault on Lot 1 shall be adopted to reduce potential hazards from the effects of distributed ground deformation that might result from instances of nearby fault rupture and to reduce potential hazards from local instances of slope failure.</td>
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<td><strong>Mitigation Measure Geology-2:</strong> Improvements that are to be constructed in the proximity of the Range Front fault, or within any zones of potential distributed ground deformation around the fault, shall incorporate a sufficient level of design to accommodate or mitigate some ground displacement or deformation. Design measures shall be developed by a licensed geotechnical engineer and may include, but not be limited to, the following:</td>
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<td>(a) Use of ductile materials</td>
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<td>(b) Use of bracing/seismic resistant components</td>
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<td>(c) Weight distribution to lower floors</td>
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<td>(d) Redundancy in the design</td>
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<td>(e) Stiffening floors</td>
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<td>(f) Use of stronger foundations (e.g., mat foundations)</td>
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| **Mitigation Measure Geology-3:** | A design-level geotechnical investigation shall be completed for each lot prior to finalization of development plans. The geotechnical investigation shall include the following:  
(a) Evaluation of the layout of proposed underground utilities, exterior hardscape, retaining walls, and septic leach fields to evaluate the presence of any soil stability issues that could impact these structures;  
(b) Detailed subsurface explorations;  
(c) Consideration of the need for extra steel reinforcement of piers and grade beams, voids beneath grade beams to mitigate uplift distress to the structures, perimeter subdrains and moisture barriers, and construction precautions for concrete over-pours at the tops of the drilled piers;  
(d) Consideration of impacts from drilling piers for foundations; and  
(e) Preparation of a geotechnical investigation report summarizing results of the investigation, including information on the items listed above, as well as recommendations to be implemented during future residential development.  
Recommendations in the geotechnical investigation report shall be implemented, as approved by Santa Clara County. The recommendations shall include the following:  
(a) Recommendations for preventing soil creep and landslides during construction, if necessary, such as temporary excavation support systems;  
(b) Recommendations for grading of engineered fill that replaces undocumented fill (i.e., fill of unknown origin that may or may not have been placed in accordance with engineering BMPs);  
(c) Recommendations to reduce impacts to utility lines related to expansive soils;  
(d) Recommendations to reduce impacts to foundations related to expansive soils;  
(e) Recommendations to reduce impacts to the planned drainage improvements related to expansive soils;  
(f) Recommendations to reduce the probability of landslide and soil creep after construction;  
(g) Recommendations for placement and compaction of any fill or replacement soils;  
(h) Recommendations for stabilizing slopes during the drilling of piers for foundations; and  
(i) Recommendations for foundation design. | Less than significant |

Coyote Highlands Cluster Subdivision Draft EIR – November 2012
ES-26
Table ES-1 (Continued): Impacts and Mitigation Measures

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<td>Mitigation Measure Geology-4: Additional mitigation recommended by licensed professionals (based on the performance of future site-specific, engineering-level geotechnical studies) shall be incorporated into the project. Any mitigation measures in this EIR that conflict with additional mitigation recommended based on the results of the engineering-level geotechnical studies shall be superseded by the new recommended measures. Conflicts shall be resolved by the County Geologist.</td>
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<tr>
<td>The proposed project would result in a significant impact if it would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.</td>
<td>Mitigation Measure Geology-3. Mitigation Measure Geology-4.</td>
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<td>Mitigation Measure Geology-5 Where the access road crosses Landslide Complex A, landslide material of Landslide Complex A shall be over-excavated to a depth of approximately 36 feet or deeper, as deemed necessary by an on-site Certified Engineering Geologist observing excavation exposures. The excavated material shall be replaced with engineered fill compacted as recommended in Mitigation Measure Geology-7. The depth of excavation required to intercept the soft soils along the potential slide plane shall be confirmed by the project engineering geologist at the time of construction. Temporary cut slopes on the uphill side of the excavation shall be maintained at a gradient of 1.5:1 (horizontal to vertical). Mitigation shall also include the installation of under-drains to collect subsurface seepage, which will discharge into the creek on the downhill side of the repair.</td>
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<td><strong>Mitigation Measure Geology-6:</strong> Final grading plans for the access road and building pads shall be reviewed by a licensed geotechnical engineer prior to construction to confirm that the intent of the recommendations presented in the 2010 geotechnical report is reflected in the plans, as well as to confirm that the recommendations properly address the proposed project in its final form. A Plan Review letter confirming compliance shall be submitted to the County Geologist. In addition, geotechnical aspects of grading and foundation construction shall be observed by a designated representative of the project geotechnical engineer, and a letter documenting those observations shall be submitted to the County prior to final inspections.</td>
<td>Less than significant</td>
<td></td>
</tr>
<tr>
<td><strong>Mitigation Measure Geology-7:</strong> Soil compaction and/or importation shall be subjected to the following requirements:</td>
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<tr>
<td>(a) Native clayey soils in the project area shall be compacted to between 88 to 92 percent of maximum dry density, as determined by ASTM Method D1557, while at a moisture content that is at least 3 percent over optimum moisture content as determined by the same test method.</td>
<td>Less than significant</td>
<td></td>
</tr>
<tr>
<td>(b) Any imported fill or backfill soils shall be non-expansive material and compacted to at least 95 percent of maximum dry density within the upper 2 feet in pavement areas and to 90 percent in all other areas, while at a moisture content that is slightly over optimum. Each lift shall be thoroughly moisture-conditioned and compacted before subsequent lifts are placed.</td>
<td>Less than significant</td>
<td></td>
</tr>
<tr>
<td>(c) In areas to receive fill and/or pavements, near-surface soil rich in organic content shall be removed. The underlying subgrade shall be scarified to a depth of 6 to 8 inches, thoroughly moisture-conditioned, and re-compacted as specified above. Any area still containing weak and/or yielding (pumping) soils, as determined in the field by the geotechnical engineer, shall be further over-excavated as necessary. Where necessary, fill can then be placed on the over-excavated surfaces and in the holes/depressions created by the above actions in uniformly moisture-conditioned and compacted lifts not exceeding 8 inches in loose thickness.</td>
<td>Less than significant</td>
<td></td>
</tr>
<tr>
<td>(d) All aspects of site grading including clearing/stripping, demolition, and placement of fills or backfills shall be performed under the observation of a geotechnical engineer.</td>
<td>Less than significant</td>
<td></td>
</tr>
<tr>
<td>(e) Imported fill soils, if required, shall be non-expansive, predominantly granular, and approved by the geotechnical engineer before importing to the site. The material shall have a plasticity index less than 15, a minimum R-value of 15, a fines content between 15 and 65 percent, and no more than 5 percent by weight of material greater than 2 inches in</td>
<td>Less than significant</td>
<td></td>
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</tbody>
</table>
## Table ES-1 (Continued): Impacts and Mitigation Measures

<table>
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<tr>
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<tbody>
<tr>
<td>Mitigation Measure Geology-8: For structures that would be constructed in a landslide area, the applicant shall retain a licensed geotechnical engineer and Certified Engineering Geologist to prepare a landslide mitigation design. The landslide mitigation design may include, but not be limited to, removal and/or rebuilding of the landslide feature, over-excavation of unstable material, installation of subdrains, replacement of material as engineered fill, or installation of below-grade stitch pier walls. The mitigation plan must include slope stability analyses (both static and pseudostatic) that comply with State guidelines (i.e., CGS Special Publication 117A). The landslide mitigation design shall be submitted to the County for review and approval prior to construction within landslide hazard areas. Plan review and construction observation letters shall be required prior to permit issuance and final inspection, respectively.</td>
<td>Less than significant</td>
<td></td>
</tr>
<tr>
<td>The proposed project would result in a significant impact if it would result in substantial soil erosion or the loss of topsoil.</td>
<td>Mitigation Measure Geology-9: Final site design shall incorporate the installation of drainage control measures on Lot 1 to mitigate potential impacts from overbank flooding of nearby Foothill Creek during times of heavy precipitation. Drainage control measures may include an earthen berm of sufficient height along the northern bank of the creek on the southern side of the project area.</td>
<td>Less than significant</td>
</tr>
<tr>
<td>Mitigation Measure Hydrology-1.</td>
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<tr>
<td>Mitigation Measure Hydrology-3.</td>
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<td><strong>Environmental Impact</strong></td>
<td><strong>Mitigation Measures</strong></td>
<td><strong>Significance After Mitigation</strong></td>
</tr>
</tbody>
</table>
| The proposed project would result in a significant impact if it would be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. | **Mitigation Measure Geology-3.**  
**Mitigation Measure Geology-4.**  
**Mitigation Measure Geology-5.**  
**Mitigation Measure Geology-6.**  
**Mitigation Measure Geology-7.**  
**Mitigation Measure Geology-8.** | Less than significant |
| The proposed project would result in a significant impact if it would be located on expansive soil, as defined in the report, Soils of Santa Clara County, creating substantial risks to life or property. | **Mitigation Measure Geology-3.**  
**Mitigation Measure Geology-4.**  
**Mitigation Measure Geology-10:** The applicant shall submit for review and approval by the County Geologist geotechnical specifications in the construction plans that provide measures to minimize impacts from expansive soil conditions. Measures shall be based on the geotechnical report recommendations and may include:  
\(a\) Treatment or replacement of expansive or soft soils encountered in project development areas with non-expansive material (plasticity index of 12 or less)  
\(b\) Design of retaining walls to resist anticipated earth pressures from expansive soil and bedrock | Less than significant |
| **Mitigation Measure Geology-11:** Final foundation design recommendations for the water tank site shall be provided for County review and approval when details of the proposed water tank (e.g., size and type) are available. It is anticipated that the perimeter ring footing should be founded at least 3 feet below adjacent final grade because of the presence of highly expansive soils. | **Mitigation Measure Geology-12:** Due to the presence of sloping site conditions and the presence of highly expansive soils at shallow depths, the proposed residential structures shall be founded on drilled, cast-in-place, reinforced concrete pier-and-grade-beam-type foundation systems. Sites with highly expansive soils require piers at least 15 feet in depth to obtain skin friction support from soils below the seasonal moisture variations, expected to be on the order of 4 to 6 feet. Skin friction would be on the order of 400 pounds per square foot, and grade beams should be underlain by a void or compressible materials. | Less than significant |
### Table ES-1 (Continued): Impacts and Mitigation Measures

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<tr>
<td><strong>Mitigation Measure Geology-13:</strong></td>
<td>Garage slabs-on-grade generally shall be structurally independent and supported on 12 inches of non-expansive soils.</td>
<td>Less than significant</td>
</tr>
<tr>
<td><strong>Mitigation Measure Geology-7:</strong></td>
<td></td>
<td>Less than significant</td>
</tr>
<tr>
<td>The proposed project would result in a significant impact if it would cause substantial compaction or over-covering of soil either on site or off site.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mitigation Measure Geology-6:</strong></td>
<td></td>
<td>Less than significant</td>
</tr>
<tr>
<td><strong>Mitigation Measure Geology-7:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hazards and Hazardous Materials</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The proposed project would result in a significant impact if it would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.</td>
<td><strong>Mitigation Measure Air Quality-1:</strong></td>
<td>Less than significant</td>
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<tr>
<td><strong>Mitigation Measure Hazards-1:</strong></td>
<td>Smoking during project construction shall be prohibited except in designated areas, shall be at least 20 feet away from any combustible chemicals or materials, and shall not occur on dry vegetation.</td>
<td>Less than significant</td>
</tr>
<tr>
<td><strong>Mitigation Measure Hazards-2:</strong></td>
<td>All heavy equipment and rubber-tired construction vehicles shall be equipped with fire extinguishers. All rubber-tired construction vehicles shall be equipped with appropriate firefighting equipment, such as shovels, axes, or pulaskis, to aid in the prevention or spread of fires. All construction equipment shall be equipped with the appropriate spark arrestors and functioning mufflers.</td>
<td>Less than significant</td>
</tr>
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<td></td>
<td><strong>Mitigation Measure Hazards-3:</strong> Soldering or welding shall not be performed within 15 feet of dry grass or other natural fuels. A fire extinguisher shall be available at the project site at all times when welding or performing other activities that can generate sparks.</td>
<td>Less than significant</td>
</tr>
<tr>
<td></td>
<td>The proposed project would result in a significant impact if it would provide breeding grounds for vectors.</td>
<td></td>
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<tr>
<td></td>
<td><strong>Mitigation Measure Hazards-4:</strong> The detention basin and bio-filter basin shall be inspected and maintained annually. Annual inspections shall include observance of sediment deposition and function of outflow pipes. Maintenance shall include removal of sediment deposition greater than 6 inches in depth and clearing of outflow pipes as necessary.</td>
<td>Less than significant</td>
</tr>
<tr>
<td>Hydrology and Water Quality</td>
<td>The proposed project would result in a significant impact if it would violate any water quality standards or waste discharge requirements.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Mitigation Measure Hydrology-1:</strong> Prior to recording the Tract Map, the applicant shall submit Erosion Control Plans with subdivision improvement plans as required by the County Grading Ordinance. Said plan shall be approved as part of the subdivision improvements. The plans shall also prescribe construction-phase BMPs to adequately contain sediment on site and prevent construction activities from degrading surface runoff and surface waters. The Erosion Control Plan shall include components for erosion control, such as phasing of grading, limiting areas of disturbance, designating restricted-entry zones, diverting runoff away from disturbed areas, implementing protective measures for sensitive areas, protecting outlets, and providing for revegetation or mulching. This Erosion Control Plan shall also include annual hydroseeding of the proposed temporary soil storage area located east of the subdivision area, with the goal of achieving both erosion control and a natural-appearing slope between October 15 and April 15 each year, or as required by the County. Hydroseeding activities shall use a native erosion control seed mix.</td>
<td>Less than significant</td>
</tr>
<tr>
<td></td>
<td><strong>Mitigation Measure Hydrology-2:</strong> Prior to the approval of the subdivision improvement plans, the applicant shall submit a SWPPP and all other required materials to SWRCB for the issuance of coverage under the SCGP. The applicant shall demonstrate the acceptance of the materials for review by SWRCB by demonstration of a copy of the Waste Discharge Identification (WDID) Number issued by SWRCB.</td>
<td>Less than significant</td>
</tr>
</tbody>
</table>
### Table ES-1 (Continued): Impacts and Mitigation Measures

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<tbody>
<tr>
<td><strong>Mitigation Measure Hydrology-3:</strong></td>
<td>Prior to the recording of the Tract Map, Final subdivision improvement plans shall include Grading and Drainage Plans that demonstrate that the flow rate and flow volume shall conform to the requirements of the 2007 Santa Clara County Drainage Manual.</td>
<td>Less than significant</td>
</tr>
<tr>
<td><strong>Mitigation Measure Hydrology-4:</strong></td>
<td>Prior to recording the Tract Map, in accordance with Regional Water Quality Control Board requirements, the applicant shall prepare a Stormwater Management Plan (SWMP) that identifies permanent water quality BMPs that control pollutant levels to pre-development levels, or to the maximum extent practicable (MEP) for both infrastructure and the future residential development for review and approval by the County. The plans shall emphasize neighborhood- and lot-level BMPs to promote infiltration or “green” treatment of storm runoff, consistent with RWQCB guidance for NPDES Phase 2 permit compliance. BMPs shall be designed in accordance with engineering criteria in the California Stormwater BMP Handbook for New and Redevelopment, or other accepted guidance.</td>
<td>Less than significant</td>
</tr>
<tr>
<td><strong>Mitigation Measure Hydrology-5:</strong></td>
<td>Prior to recording the Tract Map, the applicant shall prepare a clearly defined operations and maintenance plan for water quality control measures, including vector control measures and the identification of responsible parties with adequate funding to operate and maintain stormwater improvements.</td>
<td>Less than significant</td>
</tr>
<tr>
<td><strong>Mitigation Measure Hydrology-6:</strong></td>
<td>A dewatering plan shall be submitted to Santa Clara County and regulatory agencies (Regional Water Quality Control Board, California Department of Fish and Game) for review and approval with final subdivision improvement plans. The dewatering plan shall include contingency measures for managing dewatering structures and creek flows in the event of a storm (such as ceasing construction and applying creek protection BMPs within 48 hours of a predicted rain event with a 50 percent or greater probability of occurrence), and dewatering structures shall be designed to convey 150 percent of creek flows. BMPs shall be used during dewatering so that water quality standards are met.</td>
<td>Less than significant</td>
</tr>
</tbody>
</table>

The proposed project would result in a significant impact if it would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site.
Table ES-1 (Continued): Impacts and Mitigation Measures

<table>
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<th>Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrology-7</td>
<td>Mitigation Measure Hydrology-7: The project shall include detention basins within each creek catchment to mitigate the peak discharge to pre-project conditions, such that there is the same or less frequency of flooding of downstream culverts or floodplains. A Detention Basin Design Plan shall be submitted to the County with final subdivision improvement plans. The Detention Basins shall include sufficient storage volume to mitigate the increase in runoff within each drainage basin for both the infrastructure improvements and the future development of residences.</td>
<td>Less than significant</td>
</tr>
<tr>
<td>Noise</td>
<td>Mitigation Measure Noise-1. All construction equipment powered by internal combustion engines shall be properly maintained and muffled and shall not be idled longer than necessary. Mitigation Measure Noise-2. Stationary equipment shall be located as far away from residences as possible. Mitigation Measure Noise-3. Construction staging shall not be conducted within 100 feet of any residence.</td>
<td>Less than significant</td>
</tr>
</tbody>
</table>
### Table ES-1 (Continued): Impacts and Mitigation Measures

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</thead>
<tbody>
<tr>
<td><strong>Public Services</strong></td>
<td><strong>Mitigation Measure Hazards-1.</strong></td>
<td>Less than significant</td>
</tr>
<tr>
<td>The proposed project would result in a significant impact if it would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection, police protection, school facilities, parks, and other public facilities.</td>
<td>Mitigation Measure Hazards-2.</td>
<td></td>
</tr>
<tr>
<td><strong>Utilities and Service Systems</strong></td>
<td>Mitigation Measure Hydrology-1.</td>
<td>Less than significant</td>
</tr>
<tr>
<td>The proposed project would result in a significant impact if it would require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.</td>
<td></td>
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</tbody>
</table>
### Table ES-2: Comparison of Environmental Consequences between the Proposed Action and Alternatives

<table>
<thead>
<tr>
<th>Environmental Category</th>
<th>Level of Impact of the Proposed Project</th>
<th>Impacts of Alternatives Compared to the Proposed Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alternative A No Project</td>
<td>Alternative B Condensed Cluster Alternative</td>
</tr>
<tr>
<td>Aesthetics</td>
<td>Less than significant with incorporation of mitigation measures. <strong>No Preference.</strong></td>
<td>Reduces visual impacts by avoiding construction of new access road and 25 residences, and instead constructing up to 10 new residences and shorter access roads. <strong>Most Preferred.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduces visual impacts by avoiding construction of new access road and 25 residences, and instead constructing up to 10 new residences and shorter access roads. <strong>Most Preferred.</strong></td>
</tr>
<tr>
<td>Agriculture</td>
<td>Less than significant. <strong>No Preference.</strong></td>
<td>Avoids construction of new access road and 25 residences, and instead involves construction of up to 10 new residences and shorter access roads; allows continued grazing of a larger portion of the property. <strong>Most Preferred.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduces agricultural impacts by concentrating all residential development in one area of the site, allowing more acreage to remain in grazing use and providing a more contiguous area for grazing activities. <strong>Preferred.</strong></td>
</tr>
<tr>
<td>Air Quality</td>
<td>Less than significant. <strong>No Preference.</strong></td>
<td>Reduces air quality impacts by avoiding construction of new access road and 25 residences, and instead constructing up to 10 new residences and shorter access roads. <strong>Most Preferred.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduces air quality impacts by avoiding construction of new access road and 25 residences, and instead constructing up to 10 new residences and shorter access roads. <strong>Most Preferred.</strong></td>
</tr>
<tr>
<td>Biological Resources</td>
<td>Less than significant with incorporation of mitigation measures. <strong>No Preference.</strong></td>
<td>Reduces biological resource impacts by avoiding construction of new access road and 25 residences, and instead constructing up to 10 new residences and shorter access roads. <strong>Most Preferred.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduces biological resource impacts by concentrating all residential development on smaller lots in one area of the site, allowing more acreage to remain undeveloped. <strong>Preferred.</strong></td>
</tr>
</tbody>
</table>
### Table ES-2 (Continued): Comparison of Environmental Consequences between the Proposed Action and Alternatives

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<td></td>
<td></td>
<td><strong>Alternative A</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>No Project</strong></td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>Less than significant with incorporation of mitigation measures.</td>
<td>Reduces cultural resource impacts by avoiding construction of new access road and 25 residences, and instead constructing up to 10 new residences and shorter access roads.</td>
</tr>
<tr>
<td>Geology, Soils, and Seismicity</td>
<td>Less than significant with incorporation of mitigation measures.</td>
<td>Reduces geology, soils, and seismicity impacts by avoiding construction of new access road and 25 residences, and instead constructing up to 10 new residences and shorter access roads that are further away from geologic hazards.</td>
</tr>
<tr>
<td>Greenhouse Gases</td>
<td>Less than significant.</td>
<td>Implementation of Alternative A would reduce impacts to greenouse gas emissions.</td>
</tr>
<tr>
<td>Hazards and Hazardous Materials</td>
<td>Less than significant with incorporation of mitigation measures.</td>
<td>Fewer impacts than the proposed project.</td>
</tr>
</tbody>
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<td>Alternative A</td>
<td>Alternative B</td>
</tr>
<tr>
<td></td>
<td>No Project</td>
<td>Condensed Cluster Alternative</td>
</tr>
<tr>
<td>Hydrology and Water Quality</td>
<td>Less than significant with incorporation of mitigation measures. No Preference.</td>
<td>Fewer impacts than the proposed project. Most Preferred.</td>
</tr>
<tr>
<td>Land Use, Planning, and Recreation</td>
<td>Less than significant. No Preference.</td>
<td>Impacts less than the proposed project. Preferred.</td>
</tr>
<tr>
<td>Mineral Resources</td>
<td>Less than significant. No Preference.</td>
<td>Impacts less than the proposed project. Preferred.</td>
</tr>
<tr>
<td>Noise</td>
<td>Less than significant with incorporation of mitigation measures. No Preference.</td>
<td>Impacts less than the proposed project. Preferred.</td>
</tr>
<tr>
<td>Population and Housing</td>
<td>Less than significant. No Preference.</td>
<td>Impacts less than the proposed project. Preferred.</td>
</tr>
<tr>
<td>Public Services</td>
<td>Less than significant. No Preference.</td>
<td>Impacts less than the proposed project. Preferred.</td>
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<tr>
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<td></td>
<td>Alternative A No Project</td>
</tr>
<tr>
<td>Transportation and Traffic</td>
<td>Less than significant. No Preference.</td>
<td>Impacts less than the proposed project. Preferred.</td>
</tr>
<tr>
<td>Utilities and Service Systems</td>
<td>Less than significant. No Preference.</td>
<td>Impacts less than the proposed project. Preferred.</td>
</tr>
<tr>
<td>Energy Conservation</td>
<td>Less than significant. No Preference.</td>
<td>Impacts less than the proposed project. Preferred.</td>
</tr>
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LEGEND:
Alternative A = No Project Alternative
Alternative B = Condensed Cluster Alternative
Alternative C = Reduced Scale Alternative
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1. INTRODUCTION

1.1 DESCRIPTION OF THE PROPOSED PROJECT
Coyote Highlands, LLC, the project applicant, has submitted an application for an approximately 566.85-acre master-planned cluster residential subdivision within Santa Clara County, California. The project site is located in the foothills of the Diablo Range south and east of the City of Morgan Hill. The project includes subdivision of the property into 25 residential parcels and five open space parcels, construction of a roadway connecting to existing County roads, extension of utilities to the residential lots, construction of a stormwater drainage system, and construction of recreational and habitat features.

1.2 EIR PROCESS
The California Environmental Quality Act (CEQA) and the Guidelines for Implementation of the California Environmental Quality Act (CEQA Guidelines) require all government agencies in California to assess potential impacts to the environment prior to making a discretionary decision. The County of Santa Clara (County) has been identified as the lead agency for preparation of the environmental assessment presented in this Environmental Impact Report (EIR). As a lead agency, the County must determine if the proposed project would result in significant impacts to the environment, and whether those impacts could be avoided, eliminated, compensated for, or reduced to less-than-significant levels. This EIR will become part of a body of evidence that the County and responsible agencies will use in deciding whether or not to approve the project.

1.2.1 Notice of Preparation
In accordance with Section 15082 of the CEQA Guidelines, the County prepared a Notice of Preparation (NOP) for this EIR (see Appendix A). The NOP was published on January 20, 2012, and was sent to local, state, and federal agencies, the State clearinghouse, and potentially affected property owners for a 30-day review period. The NOP provided a general description of the proposed project and a summary of the main regulations and permit conditions applicable to the development and operation of the proposed project. Two comments were received from the public in response to the NOP, and are included in Appendix B. In addition, staff from the City of Morgan Hill contacted County staff to indicate that the City had general concerns regarding the project’s potential aesthetics impacts.
1.2.2 Public Scoping
The County conducted a public scoping meeting for the preparation of this EIR on February 16, 2012. The purpose of the meeting was to inform the public of the environmental review process and to receive public and agency comments on the scope of the EIR. Comments were received on the following broad topics:

- Aesthetics and Visual Resources – visual changes to the hillside due to the loss of mature vegetation and addition of roadway; visual impact of retaining walls and future residences.
- Biological Resources – loss of habitat for wildlife; loss of mature vegetation and native oak trees; effects on habits of mountain lions and boars in the area.
- Geology and Soils – seismic and safety issues of constructing residences on steep slopes; erosion.
- Hazards and Hazardous Materials – fire risk on hillsides.
- Hydrology and Water Quality – damage to the three creeks that pass through the property.
- Land Use, Planning, Recreation, and Agriculture – concerns about building height and other development regulations for future residences.
- Noise – construction noise, particularly should either Oak Canyon Drive or Jackson Oaks Drive be used for access during construction.
- Transportation and Traffic – effects of construction and operational traffic on local roadways; traffic safety; wear and tear on local roadways; emergency vehicle access; concern regarding traffic and damage to the roadways should either Oak Canyon Drive or Jackson Oaks Drive be used for access during construction.

1.2.3 Mitigation Monitoring and Reporting Program
CEQA and the CEQA Guidelines require lead agencies to “adopt a reporting and mitigation monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment” (CEQA Guidelines Article 7, Sections 15091(d) and 15097). A final reporting and monitoring program is not required to be included in the EIR. Mitigation measures have been clearly identified throughout the EIR, and are presented in language that will facilitate establishment of a monitoring program. The Mitigation Monitoring and Reporting Program (MMRP) for the project will be a stand-alone document separate from the Final EIR. The County will prepare the Final EIR after the close of the 45-day public review period of the Draft EIR. The Final EIR will include responses to all of the comments received on the Draft EIR. The MMRP will be prepared at the same time as the Final EIR.
1.3 KEY AREAS OF ENVIRONMENTAL CONCERN

The EIR presents an analysis of all potential environmental impacts of the proposed project and project alternatives. The key areas of environmental concern described in this document are:

- Aesthetics and Visual Resources
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use, Planning, and Recreation
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Transportation and Traffic
- Utilities and Service Systems
- Energy Conservation

1.4 ORGANIZATION OF THE EIR

The EIR has been organized into the following sections:

- **Executive Summary**: Presents a summary of the proposed project, required permits, environmental setting, impacts of the proposed project, mitigation measures identified to reduce or eliminate significant impacts, and a summary of alternatives to the proposed project.

- **Chapter 1. Introduction**: Provides an introduction and overview that describes the proposed project, summarizes the CEQA process, identifies key areas of environmental concern, and provides a list of important reference documents.

- **Chapter 2. Project Description**: Presents the project objectives, provides a detailed description of the proposed project, including facilities and construction methods, and lists the permits required for proposed project implementation.

- **Chapter 3. Environmental Impact Analyses**: Includes a description of existing conditions, analysis of potential environmental impacts of the proposed project, and identifies mitigation measures for the impacts identified in the EIR.

- **Chapter 4. Cumulative and Growth-Inducing Impacts**: Describes cumulative and growth-inducing impacts resulting from implementation of the project, together with reasonably anticipated future projects that may have related or cumulative impacts.

- **Chapter 5. Alternatives to the Project**: Describes the objectives of the proposed project and provides an evaluation of a reasonable range of project options that would reduce or avoid environmental impacts. The alternatives section describes alternative ways of meeting the project objectives and alternative locations for certain proposed facilities. In addition, the No Project Alternative is evaluated.
1 INTRODUCTION

- **Chapter 6. Report Preparation:** Lists preparers of the EIR and identifies public agencies that were consulted in its preparation.

- **Chapter 7. References:** Lists sources of information used in the preparation of the EIR.

- **Appendices:** Includes the NOP for the EIR, comments received in response to the NOP, project plans submitted by the applicant\(^1\), and background technical documents.

1.5 **INCORPORATED REFERENCES**

The project plans are included in this Draft EIR as Appendix D and photo simulations of the project prepared by the applicant are included in Appendix E. In addition, the documents identified in Table 1.5-1 are incorporated by reference into this EIR and, where appropriate, are included in Appendix F.

\(^1\) The applicant for this project is Coyote Highlands, LLC.
## Table 1.5-1: Reports Incorporated in EIR

<table>
<thead>
<tr>
<th>Report Title</th>
<th>Preparer</th>
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<tr>
<td>Coyote Highlands Design Guidelines, May 2, 2012</td>
<td>Hart/Howerton</td>
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<tr>
<td>Air Emissions Support Data, 2012</td>
<td>BAGG Engineers</td>
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<tr>
<td>URBEMIS Air Emissions Modeling Data, June 13, 2012</td>
<td>County of Santa Clara</td>
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<td>Olberding Environmental, Inc.</td>
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<td>Letter regarding Jurisdictional Delineation, May 20, 2011</td>
<td>U.S. Army Corps of Engineers</td>
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<tr>
<td>Biological Assessment for the Coyote Highlands Residential Development Project, June 2011</td>
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<td>Biological Resources Peer Review Report, July 17, 2012</td>
<td>H.T. Harvey &amp; Associates</td>
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<td>Summary of telephone conversation with Dave Johnston, California Department of Fish and Game, regarding Golden Eagle Mitigation, November 5, 2012</td>
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<td>Historic Resource Evaluation, August 2012</td>
<td>Archives &amp; Architecture, LLC</td>
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<td>Geologic Fault Investigation, December 2009</td>
<td>BAGG Engineers</td>
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<td>Preliminary Geologic, Geotechnical Investigation and Slope Stability Analyses, June 2010</td>
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<td>County Geologist peer review</td>
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<td>Hydrology and Water Quality Review, May 8, 2012</td>
<td>Schaaf &amp; Wheeler, Consulting Civil Engineers</td>
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<td>Traffic Study Memorandum, August 20, 2010</td>
<td>Hexagon Transportation Consultants, Inc.</td>
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<td>Plan for Minimizing Traffic and Parking Impacts During Construction, undated</td>
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2 PROJECT DESCRIPTION

2.1 PROJECT DEFINITION

2.1.1 Project Overview
Section 15278 of the CEQA Guidelines defines a project as follows:

“Project” means the whole of an action, which has the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.

The proposed Coyote Highlands project identified in this EIR consists of an approximately 566.85-acre master-planned cluster residential subdivision within Santa Clara County, California. The project includes subdivision of the property into 25 residential parcels and five open space parcels, construction of a roadway connecting to existing County roads, extension of utilities to the residential lots, construction of a stormwater drainage system, and construction of recreational and habitat features.

The following nomenclature will be used throughout the document to refer to the project and its environs:

- Subdivision Area – The “subdivision area” consists of the eight parcels that comprise the 566.85-acre project, and that would be subdivided into 25 residential lots and five open space lots
- Project Area – The “project area” includes the eight parcels of the subdivision area plus two parcels east of the subdivision area that would contain additional project elements, including two wells, two water storage tanks, and a temporary soil storage and staging area during construction
- Project Vicinity – The “project vicinity” includes the project area and the immediately surrounding parcels
- Project Region – The “project region” includes areas extending beyond the project vicinity, and may include portions of the City of Morgan Hill, San Martin, and Santa Clara County

Chapter 5.45 of the Santa Clara County Zoning Ordinance allows for cluster developments with the approval of a Cluster Development by the Planning Commission. As stated in the Zoning Ordinance, the purpose of cluster development regulations is to provide for flexibility in the location of dwelling units within a subdivision, to implement applicable policies of the general plan, to promote efficiency of access, and to reduce the overall amount and extent of physical improvements required for residential development in order to preserve open space, conserve
natural resources and features of the land, and to avoid or mitigate potential adverse environmental impacts. The project involves the development of a residential cluster subdivision of the subdivision area, and the applicant is therefore applying for a Cluster Permit for the proposed project.

Although the proposed project includes rural residential development, approximately 494.80 acres, or 87.3 percent of the project site, would remain undeveloped open space upon completion of the project, and would include both private open space and shared open space. Approximately 363.95 acres of these 494.8 acres, or 64 percent of the subdivision area, would be placed into an open space or conservation easement held by the County of Santa Clara and deeded to a land trust to maintain the open space in perpetuity. This open space would be accessible to the 25 future residents. The remaining 131.0 acres of undeveloped open space would be deeded as private land among the 25 proposed residential lots. The majority of these 131.0 acres would be maintained as natural open space, and a portion of this area would be used for limited agricultural and recreational purposes. The other 72.05 acres, or 12.7 percent of the subdivision area, would be developed with access road rights-of-way, driveways, and building envelopes and septic leach fields for the 25 new residences.

Specific elements of the project are as follows:

- Subdivision of the eight existing parcels into 25 residential parcels and several open space parcels¹
- Demolition of two existing residences within the subdivision area
- Rehabilitation of one existing barn within the subdivision area
- Construction of 2.2 miles of roadway that would connect Maple Avenue to Oak Canyon Drive, to be used for emergency access only
- Construction of a gated entry to the site off of Maple Avenue, and an emergency access “breakdown” gate at the northern terminus at the end of Oak Canyon Drive to allow for emergency vehicular access
- Construction of five minor access roads off of the new roadway, each providing access to two or more lots, and an extension of Carey Lane
- Construction of a utility trench beneath the new roadway and minor access roads
- Extension of utilities to the 25 new residential lots, including wiring and piping for electrical, natural gas, telephone, and cable television services
- Construction of a private water system, including drilling up to five new wells, constructing potable and emergency water storage tanks, and installing pipeline infrastructure to provide water to each residential lot
- Construction of a stormwater drainage system and associated on-site stormwater collection and percolation infrastructure, including piping, catchment basins,

¹ Although the proposed project includes the creation of five separate open space parcels, the development rights of all five open space parcels would be dedicated to the County of Santa Clara, and as such the open space parcels would not be able to be developed in the future.
energy dissipaters, and bioswales in and adjacent to primary and secondary access road rights-of-way

- Construction of culverts and other drainage improvements where the proposed roadway would cross existing creeks, drainages, swales, and wetlands
- Construction of recreation and habitat features, including restoration and enhancement of approximately 2,247 linear feet of Corralitos Creek riparian habitat
- Construction of 25 single-family residences on the 25 new residential parcels
- Use of existing ranch dirt roads for private on site trails

This section of the EIR presents information that provides the reader with a basic understanding of the project for the purpose of evaluating implementation of the proposed Coyote Highlands project in accordance with CEQA and CEQA Guidelines. The project description presents the following relevant information about the proposed subdivision:

- Project Location
- Land Use
- Project Objectives
- Proposed Project Overview
- Construction Equipment, Materials, and Personnel
- Construction Schedule
- Permits and Approvals

2.2 PROJECT LOCATION

2.2.1 Regional Setting
The project is located at the southern end of Santa Clara County, just south and east of the City of Morgan Hill (Figure 2.2-1). The project area is situated in the foothills of the Diablo Range, within the Monterey Bay watershed. The Diablo Range extends nearly 100 miles from Pacheco Pass in the south to the Sacramento River to the north, and forms a topographic setting rising above Santa Clara Valley east of the cities of Gilroy, Morgan Hill, San Martin, Milpitas, and San Jose.

2.2.2 Project Area
The proposed subdivision area consists of approximately 566.85 acres located east of Carey Lane and Maple Avenue, within unincorporated Santa Clara County, California. The project area is located northeast of the community of San Martin, approximately 3 miles northeast of central San Martin, and consists of ten legal parcels. Eight parcels are owned by Coyote Highlands LLC and two parcels are owned by Fountain Oaks Ranch LLC. The Fountain Oaks Ranch property was approved by the County for subdivision into two parcels in 2006, but this subdivision was never recorded. Figure 2.2-2 shows the roadways in the project vicinity, and Figure 2.2-3 depicts the proposed project area.
Figure 2.2-2: Roadways in the Project Vicinity
2 PROJECT DESCRIPTION

The project region is characterized by rolling hills with several natural rock outcrops, including basalt, sandstone, and serpentinite. Elevations within the subdivision area range from 426 feet above mean sea level (AMSL) at the southern corner of the site to 1,332 feet AMSL at the peak of the ridgeline.

The subdivision area includes three natural creeks: Fischer Creek along the northern boundary, Foothill Creek in the center, and Corralitos Creek along the southern boundary (see Figure 2.2-3). Other water features in the area include four wetlands (three seeps and one seasonal wetland near Corralitos Creek), three primary watersheds, and several secondary, intermittent, and ephemeral tributary drainages that are associated with the three creeks. All three creeks drain into Llagas Creek, less than 1 mile southwest of the subdivision area. A large canyon formed by Foothill Creek is located in the central portion of the subdivision area.

The majority of the subdivision area is composed of nonnative annual grasslands that are currently used for livestock grazing. Natural vegetation communities within the subdivision area include oak savannah woodland, riparian woodland, and chaparral cover.

2.3 LAND USE

2.3.1 Existing Land Use within the Subdivision Area

The area is zoned for rural residential development and hillside development, and is currently used for livestock grazing. The majority of the subdivision area is undeveloped and contains scattered improvements for livestock grazing. These existing agricultural improvements include:

- Approximately 4 miles of unimproved dirt access roads used for ranching activities
- Five developed springs\(^{2}\)
- Three water storage tanks
- Five livestock watering troughs
- One permanent pond
- Two seasonal ponds
- One water impoundment\(^{3}\) less than 100 square feet in size
- One approximately 2,000-square-foot barn
- Two corrals for handling livestock

The existing agricultural improvements are shown on Figure 2.3-1. All existing agricultural infrastructure is proposed to be maintained, modified, or improved as part of the project,

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\(^{2}\) The developed springs are locations where a naturally occurring upwelling of groundwater has been captured by piping infrastructure and either stored in a water tank or redirected to a water trough or into an existing drainage channel.

\(^{3}\) A water impoundment is a body of water created or stored by impoundment structures, such as dams, dikes, and levees. Water impoundments were created on the property by rock levees.
including the restoration of the existing barn. None of the existing springs, ponds, or water storage tanks would be used to supply water for the future residential uses. Water for the future residential uses would be supplied by a separate system of wells, storage tanks, and water pipelines, as described in Section 2.5.3 below.

In addition to the existing agricultural infrastructure, there are two 1,500-square-foot, single-family residences in the subdivision area, located at the end of Carey Lane. Both of these residences are currently occupied. One of the five developed springs is connected to a 10,000-gallon water storage tank that currently provides water to four residences; the two onsite residences located at the end of Carey Lane, and two residences located on an adjacent property to the west. The project includes disconnecting the two residences in the subdivision area from the water storage tank and demolishing both units, and maintaining the water storage tank and its existing pipeline infrastructure pursuant to a water right and easement in favor of the two adjacent residences to the west.

### 2.3.2 Existing Land Uses in the Project Vicinity

The project is bordered on three sides by residential development: the Jackson Oaks and Holiday Lakes Estates neighborhoods to the north in the City of Morgan Hill, the 33-unit Rancho Robles subdivision southeast of Maple Avenue in unincorporated Santa Clara County, and 14 single-family residences east of Carey Lane in unincorporated Santa Clara County. The property west of Carey Lane is currently agricultural land planted as row-crops and hay. This property is undergoing environmental review for incorporation into the City of Morgan Hill, and the development of 38 residential lots and three recreational facilities. As currently proposed, this future development would include a substantial agricultural preserve to be used for orchards, vineyards, row crops, and hayfields.

The Hill Country Golf and Country Club, an 18-hole private golf course, is located less than 0.25 mile southwest of the subdivision area. This golf course is also known as The Institute Course, as the owner and founder of Fry’s Institute and the Fry’s Electronics chain of stores is also the owner of this golf course.

The land use north of the subdivision area is urban residential (with a residential density of approximately four dwelling units per acre), while the land use south and west of the subdivision area is rural residential (with a range of between 3 and 10 acres per dwelling unit). Existing residential development in the project area includes large single-family residences ranging from 2,500 to 10,000 square feet and up to three stories high. These existing residences have a variety of architectural styles.

The land east of the subdivision area is largely undeveloped. Approximately 90 percent of the eastern project boundary borders Coyote Valley Ranch, a privately-owned ranch used for cattle grazing. The remaining 8 percent of the eastern project boundary borders Bear Ranch County Park in unincorporated Santa Clara County. The remaining 2 percent of the eastern project boundary is shared with the City of Morgan Hill. The Coyote Valley Ranch is used for livestock grazing.
Figure 2.3-1: Existing Agricultural Infrastructure
2.4 PROJECT OBJECTIVES

CEQA requires that an EIR include:

...a statement of objectives sought by the proposed project. A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.

The objective of the project is to provide for low-density residential development in the subdivision area while maintaining the existing open space, habitat, and livestock grazing uses in perpetuity.

2.5 PROPOSED PROJECT OVERVIEW

2.5.1 Roadways

The project includes the construction of a primary roadway and several secondary roadways. The primary roadway would extend Maple Avenue from its current terminus at the intersection with Paseo Robles Avenue to the terminus of Oak Canyon Drive. The five secondary roadways would extend off of the primary roadway, and would each provide access to two or more of the proposed residential lots. The project would also include an extension of Carey Lane, a County-owned road, to provide access to one of the proposed residential lots and an existing residence on a neighboring parcel. The development of the primary and secondary access roads would cover approximately 21.3 acres of the subdivision area.

The new primary roadway would have one lane in each direction, and would be approximately 2.2 miles long. The entry to the subdivision area would be at the intersection of Maple Avenue and Paseo Robles Avenue. The entry would include an electronic gate for access to the 25 proposed residential lots and a turnout for the staging of inbound traffic to minimize congestion and traffic hazards. The entry at the intersection of Maple Avenue and Paseo Robles Avenue would also have a turnaround of sufficient radius for a class 7 semi-truck. The County’s cluster subdivision regulations would also require that a streetlight be installed at the intersection of the new private roadway with the public road.

The terminus of the new primary roadway at Oak Canyon Drive would not allow for regular through traffic, but would provide emergency vehicle access and emergency ingress and egress of residents of both the proposed subdivision and the existing approximately 1,500 residences on the East Dunne Avenue corridor to the north. East Dunne Avenue is currently the sole access road for the residents of the Jackson Oaks and Holiday Lakes Estates neighborhoods, as well as for visitors to Coe State Park. The new roadway would allow an alternate route for emergency ingress/egress in the event that East Dunne Avenue is closed in a fire, earthquake, or other event. An emergency access breakdown gate would prevent regular traffic to pass between Oak Canyon Drive and the new primary roadway.
A previous subdivision and cluster permit application was approved by the Board of Supervisors on December 4, 1990. This application involved the approximately 460-acre portion of the project area currently owned by Coyote Highlands, LLC. The approved application would have created 23 residential lots and associated roadway access. The applicant for this previous project never completed the subdivision process; therefore, the December 4, 1990 subdivision and cluster permit approval, and the site access included in this earlier approval, would be superseded by the current application.

Five secondary access roadways plus an extension of Carey Lane (a County road) would also be constructed, each providing access to two or more of the proposed residential lots as shown in Table 2.5-1. The secondary access roads would have one lane in each direction. The total length of the six secondary access roads would be approximately 3,832 linear feet.

Most of the primary and secondary access roadways would be constructed on slopes of 15 percent or less. Two exceptions would exist where these roadways would have a slope approaching, but less than 20 percent, including an approximately 300-foot-long section of the primary roadway through the Fountain Oaks property, and another approximately 300-foot-long section of the primary roadway elsewhere on the property. Retaining walls up to 8.1 feet in height would be used as necessary for the construction of the roadways. Neither the primary access road nor any of the secondary access roads would have street light, sidewalk, or curb and gutter improvements (beyond the gutter improvements required as part of the new storm drainage system described in Section 2.5.4 below). No new street trees are proposed as part of the project. No on-street parking spaces are proposed on either the primary or the secondary access roads. Standard street signs would be installed as per the requirements for County roadways.

<table>
<thead>
<tr>
<th>Secondary Access Road</th>
<th>Length (feet)</th>
<th>Residential Lots Accessed by Secondary Access Road</th>
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<tr>
<td>A</td>
<td>370</td>
<td>2, 7</td>
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<tr>
<td>B</td>
<td>736</td>
<td>12, 13</td>
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<tr>
<td>C</td>
<td>776</td>
<td>3, 4, 6</td>
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<tr>
<td>D</td>
<td>430</td>
<td>19, 20</td>
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<tr>
<td>E</td>
<td>1,220</td>
<td>16, 24 (C-1), 25 (C-2) plus water tank site access</td>
</tr>
<tr>
<td>Carey Lane Extension</td>
<td>300</td>
<td>1 plus residence on adjacent property</td>
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<td>Total Length of Secondary Access Roads</td>
<td>3,832</td>
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</table>
2.5.2 Lots

Residential Lots

The 25 proposed residential lots would comprise approximately 182 acres of the 566.85-acre project site. The applicant’s selection of lands within each lot for residential development was based on the following factors:

- Topography
- Geologic hazards
- Viewshed
- Riparian zones
- Woodlands
- Sensitive wildlife habitat

No building envelopes, including leach fields, would be located on slopes greater than 30 percent.

The residential lots would range in size from 3.45 acres to 10.76 acres, with an average of approximately 7.41 acres per lot. The developer has designated three zones on each of the lots as follows:

- Homesite Zone: This zone would contain all residential development and built structures, including primary and secondary dwellings, parking, recreational amenities such as tennis courts and swimming pools, and auxiliary structures such as garages, workshops, and barns. The average acreage for the homesite zone would be approximately 2 acres per lot. Ornamental planting would be permitted but native landscaping would be strongly encouraged in the homesite zone.

- Transition Zone: The transition zone would contain the private agricultural space for specific permitted uses, including grazing, agriculture, riding arenas, and trails. Built structures and impervious surface improvements would not be permitted in the transition zone. Septic system leach fields and bioswales would be allowed in the transition zone. Enclosure of the transition zone with approved, low-visibility agricultural fencing, such as barbed wire, unpainted welded pipe, split rail, or natural stone, would be permitted. The Conditions, Covenants, and Restrictions (CC&Rs) would establish the permissible grazing practices, agricultural activities, and tree maintenance and reforestation requirements on a lot-by-lot basis. Also, County grading and drainage permits would be required prior to commencing agricultural activities on previously undeveloped land.

- Natural Lands Zone: The portion of each deeded lot not included in the homesite or transition zones would be considered private open space. This private open space would be held in a conservation easement by the County of Santa Clara. Lot owners would not be permitted to fence the boundaries of the natural lands zone, nor conduct any agricultural, recreational, or other improvement or development activities in this zone.
Table 2.5-2 provides a breakdown of the three zones by lot, and also provides some development parameters for future residential construction on these lots. Figure 2.5-1 shows the three zones for each of the 25 proposed residential lots. Of the 181.60 acres mapped for residential lots, 50.6 acres are designated for homesites (including all dwellings, secondary structures, driveways, parking, and septic leach fields), and 131 acres are designated for open space to be split between transition zones (46 acres) and natural lands zones (85 acres). In addition to the deeded residential lots, access road and utility rights-of-way (21 acres) would be deeded to a service corporation to be owned and operated by residential landowners.

Development rights for the approximately 131 acres of residential lots designated as either transition zone or natural lands zone would be permanently dedicated as open space to the County of Santa Clara. The parcel map would designate these areas as subject to an “Open Space Easement”. Final drafts of instruments for the dedication of development rights on these lands would be reviewed by the Planning Office and the Office of the County Counsel, and a copy of the final recorded document would be submitted to the Planning Office.

**Homesite Zone**

All buildings and structures on the residential lots would be limited to the homesite zone. The permissible activities in the homesite zone include primary and secondary dwellings, parking, recreational amenities such as tennis courts and swimming pools, and auxiliary structures such as garages, workshops, and barns.

Final site layout and designs would be developed as homes are proposed for individual lots. Details of grading, final septic field locations and sizes, final driveway alignments, accessory structures and uses, home design, and landscaping for the future 25 residences are not currently proposed, though the applicant has submitted preliminary Design Guidelines that provide conceptual parameters for these topics. Tree removal for individual site development would not be permitted under proposed CC&Rs. Approval of each site development plan by the Coyote Highlands Design Review Board would be mandatory prior to submission to the County of Santa Clara. The Coyote Highlands Design Review Board would be a body established by the new Homeowners Association to review development applications for their adherence to the development’s design guidelines.

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4 For the purpose of calculating impacts, septic leaching fields are included with the homesite area. In practice, mapped leaching fields may only be used for leaching fields or for bioswales and no other purpose; even ornamental planting would be prohibited within the mapped leach fields. Under the Coyote Highlands Resource Management Plan, leach fields would be considered to be part of the transition zone and subject to the restrictions imposed upon transition zone lands. Of the 51.25 acres designated as homesites, 28.96 acres are designated for building envelopes and driveways, and the remaining 22.29 acres are designated for septic fields and bioswales.
### Table 2.5-2: Development Zones for the 25 Proposed Residential Lots

<table>
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<th>Residential Lot</th>
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<td>Total</td>
<td>181.60</td>
<td>51.25</td>
<td>46.15</td>
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Figure 2.5-1: Development Zones for Each of the Residential Lots
Subsequent design review of future residential development by Santa Clara County would follow the County’s standard residential design review process, which is outlined in Sections 3.20.040 and 5.50 of the Santa Clara County Zoning Ordinance. Under the County’s standard design review procedures, approval authority varies depending on the size of the proposed residence. The County’s three-tiered design review process is explained in greater detail in Section 3.10: Land Use, Planning, and Recreation.

For purposes of the EIR, the potential home sites are considered in the analysis of the project, but at a less specific level than for the elements included as part of the project. Table 2.5-3 lists some of the development regulations proposed for future residential development within the homesite zones.

**Transition Zone**
Permissible activities in the transition zone would vary per lot depending on site conditions, and may include riding arenas and agricultural uses such as pastures and small-scale orchards and vineyards. The following criteria would be used to regulate the permissible activities per lot:

- **Water**: The independent land trust would retain all surface, subsurface, and riparian water rights. Lot owners would not be allowed to drill any wells or improve any springs for personal use.
- **Size**: No transition zone would be sufficiently large to support commercial agricultural activities. Grazing would be restricted by plant condition requirements, restraining the keeping of large animals. Small-scale orchards and vineyards would be permissible provided they are not constrained by slope conditions or sensitive habitat and the owner can afford the water to pursue such uses.

Both the transition zones and the natural lands zones would be subject to easements as follows:

- An open space easement in favor of Santa Clara County for all undeveloped lands, including all transitional zones and natural lands zones
- An easement in favor of the independent land trust (subordinate to the governmental easement) over all natural lands zones

**Natural Lands Zone**
The uses and restrictions in the natural lands zone are described below in Section 2.5.7: Agricultural Features.
### Table 2.5-3: Proposed Development Regulations for the 25 Proposed Residential Lots

<table>
<thead>
<tr>
<th>Lot #</th>
<th>Maximum Building Height (feet)</th>
<th>Average Slope(^1) (%)</th>
<th>Maximum Lot Coverage(^2) (% of homesite zone)</th>
<th>Maximum Lot Coverage (square feet)</th>
<th>Maximum Lot Coverage (% of total lot area)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>35</td>
<td>4</td>
<td>50</td>
<td>44,446</td>
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<td>7</td>
<td>45</td>
<td>20,974</td>
<td>7</td>
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<td>25 (C-2)</td>
<td>30</td>
<td>11</td>
<td>55</td>
<td>20,536</td>
<td>6</td>
</tr>
</tbody>
</table>

1  The average slope figure is for the homesite zone of each residential lot minus the area for the driveway.

2  The maximum lot coverage represents the maximum allowable footprint of all impervious surfaces, including buildings, driveways, and other paved surfaces.
Open Space Lots
The project would include the creation of five open space lots, which would comprise approximately 363.95 acres of the 566.85-acre site. All of the riparian resources, including perennial and seasonal streams and ponds, would be located within the open space lots, as would the majority of the wetlands, woodlands, and other critical habitat.

The independent land trust would manage the open space lots for the following uses:

- Appropriate, compatible recreational activities for subdivision residents and guests, including hiking, horseback riding, off-street bicycling, and wildlife observation
- Livestock grazing
- Mitigation banking\(^5\) for the project and for third parties
- Conservation banking\(^6\) for the project and for third parties

As described in Section 2.5.8 below, the applicant has prepared a habitat mitigation and restoration plan for the Corralitos Creek watershed to mitigate for wetland impacts and compensate for habitat losses incurred by the project. Where feasible, the land trust will improve and develop additional habitat reserves for third parties, which typically would include public and private entities engaged in the development of infrastructure and commercial real estate.

Mitigation and conservation banking are subject to strict regulation by a variety of federal, state, and local entities including the U.S. Army Corps of Engineers (ACOE), the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), and the County of Santa Clara.

Preliminary areas have been identified in the open space lots for the preservation, restoration, and creation of habitat. These areas would be further defined in specific chapters of the proposed Coyote Highlands Resource Management Plan that would be submitted to the appropriate governmental agencies as part of the permitting process. All open space lots would be subject to easements as follows:

- Habitat easements in favor of the United States and the State of California, as appropriate, pursuant to permits granted to the applicant under federal and state laws

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\(^5\) Mitigation banking is defined by the State of California as lands set aside for wetland creation, restoration, and enhancement undertaken to compensate for unavoidable wetland losses in another location.

\(^6\) Conservation banking is defined by the State of California as lands set aside to protect threatened and endangered species habitat. Banking credits are established for the specific sensitive species that occur on the conservation site.
• Conservation easements in favor of the appropriate governmental entity, as appropriate, pursuant to conservation or mitigation offsets created on behalf of one or more third parties
• An open space easement in favor of Santa Clara County pursuant to the cluster subdivision

### 2.5.3 Utilities

**Electricity, Gas, Telephone, and Cable Television**

The project includes the provision of utilities to the 25 residential lots. A utility trench for utilities such as electrical, gas, and cable lines would be constructed within the right-of-way of the primary and secondary access roads, and this dry trench would contain conduits and piping for electricity, natural gas, telephone, and cable television services. Existing utilities would be extended from Maple Avenue and/or Oak Canyon Drive into these conduits and piping, and each of these utilities would be extended to the edge of each of the residential lots. Future residential development would extend these utilities onto each lot and connect them to the new residences.

**Water**

Potable and fire suppression water for the project would be provided by groundwater obtained on and off site. State law prohibits the use of spring water for potable residential water, and the existing improved springs on the site would continue to be used solely for agricultural and habitat purposes. The project would involve the drilling and construction of up to five wells to access groundwater. One well would be drilled on residential lot 1 and would be used only by that lot. The other 24 residential lots would obtain water from up to four other wells. Two of these wells (ETS-11 and ETS-18) would be drilled east of the subdivision area (i.e., within the project area), on lands that are also owned by the property owner. The applicant intends to grant water rights and access easements between the subdivision area and the neighboring property to secure the proposed mutual water system. The remaining two wells would be drilled near the eastern boundary of residential lot 12 (ETS-5), and near the eastern boundary of residential lot 18 (ETS-7). The proposed drilling depths of the five wells are listed in Table 2.5-4. The locations of all five wells are shown in Figure 2.5-2.

<table>
<thead>
<tr>
<th>Potential Well Location</th>
<th>Estimated Drilling Depth (feet below ground surface)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot 1</td>
<td>400</td>
</tr>
<tr>
<td>ETS-5</td>
<td>650</td>
</tr>
<tr>
<td>ETS-7</td>
<td>500</td>
</tr>
<tr>
<td>ETS-11</td>
<td>700</td>
</tr>
<tr>
<td>ETS-18</td>
<td>550</td>
</tr>
</tbody>
</table>
Figure 2.5-2: Conceptual Water System Plan
Dual shared water storage tanks would be built at a location east of the subdivision area, within the larger project area. The applicant intends to grant access easements between the subdivision area and the neighboring property to secure the proposed mutual water system. The two tanks would be sized to meet the water requirements for the development, and are currently proposed to be approximately 150,000 gallons for emergency water storage and 150,000 gallons for potable water storage and additional emergency water. Each of the tanks would be approximately 25 feet high and 32 feet in diameter. The tanks would be constructed of either bolted or welded steel, and would be painted to specifications provided by the applicant’s landscape architects with the goal of having the tanks blend into the natural background to the greatest extent possible. The site for the two water storage tanks is relatively flat and would require minimal grading. As with the off-site wells described above, the applicant intends to grant easements between the subdivision area and the neighboring property for the dual water storage tanks and associated pipeline infrastructure.

The project also would involve the construction of dual wet trenches within the right-of-way of the primary and secondary access roads for the collection and distribution of water. The wet trenches would contain piping for potable water and emergency water. The well supply line would be 2 inches in diameter, and the domestic and fire distribution line would be 8 inches in diameter. Municipal-sized fire hydrants would be placed along the primary access road from residential lot 22 to the roadway terminus at Oak Canyon Drive. As with the electricity, gas, telephone, and cable television utilities, potable and emergency water piping would be extended to the edge of each of the residential lots. Future residential development would extend potable and emergency water infrastructure onto each lot and connect them to the new residences. All residences and habitable structures would be required to install fire sprinklers.

Figure 2.5-2 shows the proposed locations of the five potential wells, the dual water storage tanks, the wet trench for the water collection and supply lines, and fire hydrants.

**Wastewater**

Future residential development would involve the construction of septic systems to address the treatment and disposal of wastewater at each residential lot. Each residence would have its own septic system and associate leach field. The leach fields would be restricted to areas within mapped septic zones for each residential lot.

**2.5.4 Drainage and Erosion Control**

No untreated water flow would be allowed to be released into natural waterways during or after construction. All development would conform to the Best Management Practices (BMPs) established under the National Pollutant Discharge Elimination System (NPDES) permit that would be issued by the State of California with oversight from Santa Clara County.

Temporary BMPs would be installed to prevent sediment erosion during construction activities. Sediment would be captured by using BMPs such as straw wattles, silt fences, straw bales, earthen dams, and straw mulch.
Stormwater captured from graded slopes and paved access roads and roadside swales would be collected in a new stormwater drainage system along the primary and secondary roadways, and discharged into the nearest natural waterway or into a new detention basin after treatment for contaminants and sediments at each discharge point. If a new detention basin is constructed, it would be located to the east of Maple Avenue approximately 0.25 mile north of the main entrance to the subdivision area. Treatment would involve the use of permanent bio-filter swales. Other permanent BMPs would include the installation of filters at selected catch basins and the planting of vegetation on all graded slopes. A permanent bio-filter basin would be constructed in the southern portion of the property immediately east of the main entrance to the subdivision area. The bio-filter basin would provide additional water quality treatment for runoff captured from the proposed roadway. The proposed stormwater drainage system, detention basin, and bio-filter basin are shown on Figure 2.5-3.

Permits for construction of the new roadway and access roads and for any modifications to Corralitos Creek would require permits from ACOE, USFWS, CDFG, and the Central Coast Regional Water Quality Control Board (CCRWQCB). The project would conform to all requirements and conditions of these permits that pertain to drainage.

2.5.5 Landscaping/Tree Removal
The access road alignment was selected, in part, on the avoidance of existing trees, particularly oak trees. Nevertheless, construction of the new roadway would require the removal of 37 mature trees, plus the removal of an additional 38 mature trees to repair a landslide adjacent to the access road right-of-way. Of the 75 trees proposed for removal, 71 trees are located in the vicinity of Corralitos Creek. The remaining four trees are located on Carey Lane. According to the arborist report prepared for the project, the majority of these 75 trees are in poor condition. The majority of the trees to be removed are live oak trees, with the remaining trees consisting of four valley oak trees, two blue oak trees, three black walnut trees, and three blue gum eucalyptus trees. Any trees removed for roadway construction and landslide repair would be replaced on a 3:1 basis in accordance with the proposed Woodlands Management Chapter of the Coyote Highlands Resource Management Plan. The replacement trees would be planted as part of the Corralitos Creek habitat improvements discussed in Section 2.5.8 below.

No trees are proposed for removal from any of the proposed residential lots except for trees that may be diseased or damaged. CC&Rs would be prepared and recorded with the final map, and would have several protective restrictions regarding trees and tree removal in deeded residential lots. No trees are proposed for removal within the five proposed open space parcels except for any trees that would be removed for construction of the new roadway. A Woodlands Management Chapter of the Coyote Highlands Resource Management Plan would be prepared and filed with the final map, and would include mitigation measures for any trees that are removed for the purpose of roadway construction. The independent land trust would have the authority to establish, monitor, manage, and enforce the Woodlands Management Chapter of the Coyote Highlands Resource Management Plan, including the access road right-of-way.
Figure 2.5-3: Proposed Stormwater Drainage System
2 PROJECT DESCRIPTION

2.5.6 Recreational Features
An independent land trust would have the authority and responsibility to establish, monitor, manage, and enforce the Coyote Highlands Resource Management Plan that would specify appropriate, compatible recreation for deeded lot owners and their guests, including off-street bicycling, horseback riding, hiking, and wildlife observation. Recreational features would be for the sole use of lot owners and their guests, and would not be accessible by the public.

Planned recreational amenities include approximately 3 miles of dirt trails for hiking, horseback riding, and bicycling, as well as three small picnic areas with picnic tables. Approximately half of the trail network would incorporate existing ranch roads that would require little to no improvement or modification. New trail segments would be constructed on open space lots and within the natural lands zone of several of the residential lots. Recreational trails would consist of a 4-foot-wide single track with a natural surface. A portion of the trail network would be constructed within the primary access road right-of-way. Except for authorized maintenance vehicles, no motorized traffic would be permitted on the trail network. Dogs would be allowed on the recreational trails, and would be required to be leashed at all times. Figure 2.5-4 shows the proposed recreational features.

2.5.7 Agricultural Features
A Prescriptive Grazing Chapter of the Coyote Highlands Resource Management Plan would be prepared and recorded with the final map. The management plan would describe the allowable and sustainable grazing operations that would be allowed within the subdivision area, based on compatibility with the residential uses and the project’s goals of environmental protection. Proposed agricultural fencing for the subdivision area is shown in Figure 2.5-5.

2.5.8 Habitat Features
Pursuant to the ACOE Section 404 Nationwide Permit, USFWS Section 7 Consultation, the CDFG Streambed Alteration Permit, and the CCRWQCB 401 Permit, the applicant would create a 99.3-acre habitat preserve, as outlined in a Monitoring and Adaptive Chapter of the Coyote Highlands Resource Management Plan, that would be prepared as part of the project. This habitat preserve would be intended to mitigate the habitat impacts of the proposed subdivision. Figure 2.5-6 shows the locations of the proposed habitat improvement features.

Within the habitat preserve, the applicant would create a wetland/pond feature to provide approximately 0.68 acre of jurisdictional wetland habitat. This new wetland habitat would be created in part to replace the approximately 0.1 acre of wetlands that would be eliminated by construction of the primary access roadway. The new wetland/pond feature would consist of approximately 0.65 acre of wetlands and approximately 0.03 acre of open water. An additional 0.13 acre of wetland habitat would be created with a French drain channel connecting the wetland to the pond.
Figure 2.5-4: Conceptual Recreational Features and Trail Plan

Legend:
- Red: Proposed Subdivision Area Boundary
- Yellow: Existing Dirt Road to be Converted to Private Trail
- Picnic Table Location
- Blue: Proposed Private Trail
Figure 2.5-5: Proposed Agricultural Fencing

LEGEND
- Proposed Subdivision Area Boundary
- Fencing to be Removed
- Natural Fencing
- Proposed Fencing
- Existing Fencing

Scale: 1:14,000
Figure 2.5-6: Proposed Habitat Improvements

Legend:
- Proposed Subdivision Area Boundary
- Proposed Roadway
- Blue Blossom Ceanothus
- CA Toyon
- Mexican Elderberry
- CA Bay
- CA Fescue
- Red Flow Currant
- CA Buckeyes
- Coffeeberry
- Sycamore
- CA Rose
- Live Oak
- Willow

Source: ESRI 2012 and Panorama Environmental, Inc. 2012

Scale: Varies
Proposed habitat improvements would also include enhancement of approximately 2,247 linear feet (2.79 acres) of riparian habitat along Corralitos Creek to mitigate the 285 linear feet (0.026 acre) of proposed ephemeral drainage channel impact. The proposed ephemeral drainage channel impacts would occur at the two proposed crossings of Corralitos Creek by the primary access roadway, the first located near the terminus of Maple Avenue, and the second located approximately 0.5 mile east of the site entry and adjacent to the landslide repair area. Mitigation would include the planting of 234 trees as replacement for the 71 trees that would be removed incident to construction of the access roadway and the repair of an existing landslide. Habitat enhancement activities also would include the planting of native species within three riparian zones located along Corralitos Creek.

In addition to statutory mitigation, restoration, and monitoring requirements, the applicant is preparing a project-wide Coyote Highlands Resource Management Plan governing the use and operation of project lands, which will include a Coyote Highlands Conservation Strategy. This Coyote Highlands Conservation Strategy would be designed to conform to the regulatory requirements of the Federal Endangered Species Act (ESA), the Federal Water Quality Act, and the California Natural Community Conservation Planning Act.

The conservation strategy would be designed in accordance with principles of conservation biology to address natural communities primarily through the enhancement, restoration, and management of vegetation types.

**Riparian Management Units**
The subdivision area contains three riparian units: Fischer Creek, Foothill Creek, and Corralitos Creek. These three riparian units would be operated and managed as Riparian Management Units to preserve and enhance riparian, wetland, and oak woodland habitat.

New ponds and wetlands in addition to those already described above may be created where water resources are available.

**Rangeland Management Units**
The grassland and savannah habitats in the subdivision area would be divided into four rangeland units: Mesa Lead, Fountain Oaks, Dos Cumbres, and Rincon. These units would be operated and managed as Rangeland Management Units to preserve and enhance grassland and oak savannah habitats.

**2.5.9 Future Project Components**
The lands of the 25 residential lots would be deeded to private purchasers of individual lots. The Private Land Trust would regulate development on individual lots through a private design review committee in accordance with a set of Design Guidelines and CC&Rs, which would apply generally to the entire project and be specific to the site conditions on each lot. The private design review committee would include at least one independent design professional.
appointed by the applicant. Bonded assessment districts would fund and administer the maintenance of the roadway and the water and utility infrastructure.

Future residential development would be designed to comply with the Santa Clara County Design Review Guidelines, and would be designed to meet or exceed -d1 Design Review Tier 1 and Tier 2 requirements, including the following:

- Building sites shall be located, graded, and planted to provide a fundamental and sufficient level of visual mitigation
- Light Reflectivity Value shall not exceed 45
- Building massing shall follow requirements in the County’s Design Review Guidelines
- Maximum horizontal length of a continuous wall shall not exceed 80 feet
- Maximum height of a wall plane shall not exceed 24 feet unless an architectural component is used where the facade dimension does not exceed 18 feet
- Portions of a wall plane shall be offset by a minimum of 5 feet
- Retaining walls shall not exceed 10 feet in height or shall step/offset by a minimum of 6 feet
- Ridgeline protection policies of the General Plan shall be observed

Future residential development could potentially exceed –d1 Design Review Tier 1 and Tier 2 requirements. Such residential development would trigger the County’s –d1 Design Review Tier 3 requirements, which would involve a public hearing to review the development application.

The applicant has prepared preliminary Design Guidelines for the project. These Design Guidelines provide direction to future property owners regarding grading and drainage, driveways and parking requirements, architectural design, fences, retaining walls, exterior hardscaping, and landscaping and irrigation. A selection of topics addressed in these Design Guidelines is provided below:

- Structures would be located to best work with existing topography and vegetation
- Structures would be encouraged to “step down” slope as necessary to minimize grading
- Massing of the main residence would be parallel to the slope
- Development would maintain existing drainage patterns to the extent feasible
- Retaining walls would be constructed as needed to blend into the existing landscape
- Development would avoid prominent sites and skylines

Table 2.5-3 provides building height and maximum lot coverage parameters for the 25 residential lots.
2 PROJECT DESCRIPTION

2.6 CONSTRUCTION EQUIPMENT, MATERIALS, AND PERSONNEL

2.6.1 Construction Equipment
The proposed project would involve grading and earthmoving activities to create access roads, utility trenches, and drainage, agricultural, recreational, and habitat improvements. These activities would require the use of the construction equipment listed in Table 2.6-1.

**Earthmoving Activities Associated with the Proposed Subdivision Improvements**
Grading calculations for the access roads are based on preliminary designs submitted with the Tentative Map. The applicant attempted to optimize grading and balance cut and fill in the subdivision area by matching the roadway alignments to terrain features. The applicant intends to undertake further grading optimization during final design prior to improve the balance of cut and fill. These balancing optimization techniques are outlined below.

**Access Roads**
The project civil engineer and the project geotechnical engineer have identified several methods for optimizing grading in the course of detailed design for the access road. These grading optimization methods would include raising the elevation of the roadbed by 6 inches throughout its length and using lime treatment to stabilize the underlying expansive clay soil. Elevating the roadbed would reduce the cut volume and increase the fill volume. Soil stabilization would require stripping 3 inches of topsoil from the roadway right-of-way. Spoils

| Table 2.6-1: Construction Equipment Required for the Subdivision Improvements |
|---------------------------------------------|--------|----------|
| **Equipment Type** | **Size/Model** | **Quantity** | **Use (hours)** |
| Bulldozer | Cat D-8 | 1 | 160 |
| Bulldozer | Cat D-6 | 1 | 184 |
| Bulldozer | Cat D-4 | 2 | 160 |
| Motor Grader | Cat 1400 | 1 | 280 |
| Scraper | Cat 639 | 2 | 160 |
| Excavator | Cat 320 | 1 | 400 |
| Backhoe | Cat 420 | 1 | 260 |
| Front-end Loader | Cat 973 | 1 | 200 |
| Compactor | Cat 615 | 1 | 200 |
| Dump Truck | 10-yard Bobtail and 20-yard Semi or Transfer | 10 | 600 |
| Water Truck | 3,000-gallon | 1 | 600 |
| Asphalt Paver | Cat AP 800 | 1 | 65 |
| Roller | Cat 651, 3-ton | 1 | 200 |

Source: Coyote Highlands Construction Equipment Utilization 2012
from the stripping operation would be used to recover existing ranch roadways that would be reverted back to natural terrain as part of the project. Recovery of existing ranch roadways would also include track-walking and hydroseeding to reduce soil erosion and restore portions of grassland habitat.

Soil stabilization would reduce the overall cut requirement by approximately 5 percent, and would reduce base rock requirements by more than 50 percent. When implemented with other optimizations during final design, the applicant anticipates balancing cut and fill requirements in the subdivision area for all proposed access roadway and infrastructure improvements.7

Earthmoving Activities Associated with Future Residential Development
Grading calculations for driveways and building pads associated with future residential development are based on conceptual designs submitted with the Tentative Map. The conceptual designs and resulting estimates for earthmoving activities have not yet optimized to balance cut and fill within the subdivision area, as the timing for the construction of each residence is not known at this time. The applicant’s approach for minimizing grading impact is further discussed below.

Driveways
Driveway designs presented with the Tentative Map are conceptual only and do not attempt to optimize grading. The Design Guidelines and CC&Rs that would be developed for the project would require that driveway alignments conform to the natural terrain and implement design and construction measures similar to those to be implemented for the project access roads. The Coyote Highlands Design Review Board would enforce the Design Guidelines and CC&Rs.

Building Pads
Building pad designs presented with the Tentative Map are conceptual only and do not attempt to optimize grading. These conceptual designs were created to illustrate and document full development of each site as permitted under the current Santa Clara County Zoning Ordinance. The Design Guidelines and CC&Rs that would be developed for the project would require that building pads conform to the natural terrain and implement design and construction measures similar to those to be implemented for the project access roads. The Coyote Highlands Design Review Board would enforce the Design Guidelines and CC&Rs.

Excess Material Contingency Disposal Plan
In the event that either the proposed project or future residential development generates excess cut material, the excess material would be moved to a storage location on the property to the immediate east of the subdivision area. The applicant intends to grant access easements between the subdivision area and the neighboring property to secure access and use of this temporary soil storage area for the duration of project construction activities. The 4-acre temporary staging area would be able to accommodate up to 16,000 y^3 of excess cut materials,

with a maximum storage height of 30 inches. The temporary staging area is mostly flat and is geologically stable; the temporary soil storage area is not located near any drainages or riparian corridors. The temporary soil and excess cut storage location is shown on Figure 2.6-1.

Excess cut material would be temporarily stored at this location for a maximum of 12 months, after which time the excess cut material would be removed from the temporary storage location and either applied elsewhere in the subdivision area or removed to an offsite disposal location. The applicant anticipates that only a fraction of the temporary staging site would be used during any given 12-month period.

Prior to using the temporary staging site for soil storage during future residential development, each residential lot owner would be required to obtain and pay for all requisite permits, including grading permits, and to conform to all federal, state, and local air and water quality standards, including the NPDES-3 requirements, for the duration of soil storage.

If a balancing project cannot be identified within 12 months of the placement of excess cut materials in the temporary staging area, the materials would be transported to an acceptable disposal facility offsite.

**Equipment and Material Staging and Storage**

Four staging and parking areas for equipment and materials are proposed as part of the subdivision improvements, and are shown on Figure 2.6-1.

On-site storage would be limited to materials incidental to construction of the utility infrastructure, storm drains, and retaining walls, including pipe, wire, cable, conduit, and masonry materials. These inert materials would require no ground preparation. Road construction materials, including sand, gravel, base rock, and asphalt, would be delivered only as needed and would be hot-staged on trucks in designated parking areas. No grading, paving, or other improvements are proposed for any of the four staging and parking areas.

Staging and Parking Area 1, located at the bottom of the hill at the end of Carey Lane, would use an approximately 5-acre area that is already flat and largely cleared of vegetation. This location already has access to water, electricity, and telephone service, and would be the primary marshaling yard throughout the construction process.

Staging and Parking Area 2 would be located approximately 0.25 mile east of the terminus of Maple Avenue, and would involve the use of approximately 2 acres of flat ground. This site would be used to support the rough grading for the first portion of the primary access road and the construction of the Corralitos Creek crossing approximately 0.5 mile east of the terminus of

---

9 Hot staging of materials means leaving construction materials on board the delivery vehicle until the moment they are needed for construction purposes.
Figure 2.6-1: Staging Areas and Temporary Access Roads
Maple Avenue. This site would also support construction of the gated entry to the subdivision area, the first portion of the stormwater drainage improvements, and the mitigation pond. Staging and Parking Area 3 would be located approximately 0.25 mile south of the terminus of Oak Canyon Drive and would be near the eastern boundary of the subdivision area. This location would be used to support all aspects of construction once the rough grading has been completed for the primary access road.

Staging and Parking Area 4 would be located approximately 0.75 mile east of the terminus of Maple Avenue, and would involve the use of approximately 2 acres of flat to gently sloping ground. This area would be used to support rough grading of the remainder of the primary access road north of the Corralitos Creek crossing, and would also be used during mitigation of Landslide Complex A (see Section 4.6: Geology and Soils, for additional information on Landslide Complex A).

**Fueling and Repairs**

All equipment fueling and repairs would occur in designated locations within the four staging and parking areas. Fueling trucks would bring fuel to the project area. A Spill Prevention, Control, and Countermeasure plan (SPCC) would be prepared to ensure that any accidental spills of fuel, grease, solvents, or other potentially hazardous materials during equipment fueling and repairs are appropriately contained and prevented from entering either surface water or groundwater.

**Water Supply**

Approximately 1.8 million gallons of water would be used for roadway and infrastructure construction purposes, such as for dust control. Water requirements are highly weather dependent and could vary by as much as 50 percent from this estimate. Construction water would be purchased from the City of Morgan Hill and would be supplied from a fire hydrant located at the terminus of Oak Canyon Drive.

Water for residential construction would be obtained from groundwater wells that would be constructed as a part of infrastructure development.

Potable water for use by construction personnel would be provided on site by light support trucks.

**Access and Delivery**

Table 2.6-2 contains an estimate of the number of truck trips required to support construction of the access roads and utility infrastructure.

All heavy trucks would be required to navigate to and from the project area using a state-authorized truck route. Such access would come from US-101, east on Tennant Avenue, south on Hill Road, and then east on Maple Avenue to the main entry to the project area. Oak Canyon Drive would not be used to access the project area.
Table 2.6-2: Estimated Deliveries During Project Construction

<table>
<thead>
<tr>
<th>Type</th>
<th>Roundtrips</th>
<th>Distance</th>
<th>Point of origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment drayage</td>
<td>25</td>
<td>15</td>
<td>Gilroy</td>
</tr>
<tr>
<td>Residential demolition debris</td>
<td>14</td>
<td>10</td>
<td>Coyote Ridge (landfill)</td>
</tr>
<tr>
<td>Stumps and limbs from tree removal</td>
<td>10</td>
<td>10</td>
<td>Coyote Ridge (landfill)</td>
</tr>
<tr>
<td>Boles and large limbs from tree removal</td>
<td>10</td>
<td>5</td>
<td>Morgan Hill (commercial wood yard)</td>
</tr>
<tr>
<td>Sand for utility trenches</td>
<td>267</td>
<td>55</td>
<td>Monterey or Santa Cruz</td>
</tr>
<tr>
<td>Base rock</td>
<td>519</td>
<td>30</td>
<td>San Jose</td>
</tr>
<tr>
<td>Construction material</td>
<td>25</td>
<td>30</td>
<td>San Jose and/or Gilroy</td>
</tr>
<tr>
<td>Asphalt</td>
<td>365</td>
<td>30</td>
<td>San Jose</td>
</tr>
<tr>
<td>Plants and trees for mitigation</td>
<td>7</td>
<td>15</td>
<td>Gilroy</td>
</tr>
</tbody>
</table>

When arriving from the south, light truck and auto traffic may follow a different route to the site, exiting US-101 and traveling east on San Martin Avenue, north on Foothill Avenue, and east on Maple Avenue to the main entry to the project area.

In the event that excess cut materials cannot be retained on site, heavy trucks would take these materials to an approved offsite disposal facility.

Two temporary access roads would be used during the early stages on construction. Both temporary access roads are shown on Figure 2.6-1.

**Disposal**

Three primary sources of waste and debris would be generated during construction activities: incidental waste, tree removal, and building demolition.

Incidental waste includes personal trash generated by construction personnel and refuse generated by construction activities. Incidental waste would include packaging, trim, oils, solvents, glues, and similar materials. Contractors would be required to provide appropriate containers for the collection of incidental wastes, to segregate the debris by class, and to regularly remove the debris to an appropriately licensed disposal facility. Oils, solvents, grease, and other hazardous materials would be stored temporarily in appropriate containers until they can be delivered to an appropriately licensed facility.

Tree removal debris would consist of several types of debris, and each type would be disposed of at the appropriate facility. Boles and large limbs would be hauled to a commercial woodlot in Morgan Hill for processing. Tree stumps would be hauled to the Kirby Canyon Landfill located on Coyote Ridge. Small limbs and branches would be either chipped on site or hauled to the Kirby Canyon Landfill.
Prior to obtaining a demolition permit for the two residences on site, the applicant would have the structures inspected for the presence of hazardous materials, including asbestos and lead paint. If hazardous waste materials are found to be present in either of these existing residences, then the applicant would use an appropriately licensed contractor to demolish the residences and deliver the hazardous waste materials to an approved disposal facility. Otherwise, demolition debris would be hauled to the Kirby Canyon Landfill.

2.6.2 Construction Personnel
Project construction would require an average of ten personnel on site for the first 30 days of construction activities. This number would increase to approximately 30 on-site personnel during the middle 4 months of project construction, and then decrease to an average of approximately 15 on-site personnel for the final month of the estimated 6-month construction period.

Worker Parking
Staging and Parking Area 1 would be used by the majority of construction personnel throughout the construction process. The other three staging and parking areas would be used less frequently for parking of construction personnel vehicles. No construction personnel vehicles would be parked off site or in areas not designated as staging and parking areas.

Access
Construction personnel commute traffic would likely exit US-101 and travel east on San Martin Avenue, north on Foothill Avenue, and east on Maple Avenue to the main entry to the project area.

2.7 Construction Schedule

2.7.1 Proposed Project Construction
Construction of access roads, the water supply system, utility infrastructure, the entry gate, and recreation and agriculture infrastructure improvements, and implementation of all required mitigation measures is expected to require a total of 6 months.

2.7.2 Future Components
The applicant anticipates that residential construction would begin approximately 18 to 24 months after the subdivision map is recorded. Residential construction would likely continue at varying rates for a period of approximately 10 years to achieve a build-out of between 92 to 96 percent of the 25 proposed residential lots.
3 ENVIRONMENTAL IMPACT ANALYSES

3.1 AESTHETICS AND VISUAL RESOURCES

This aesthetics and visual analysis is based on information contained in the following documents:


3.1.1 Environmental Setting

Regional Setting

The project area is situated in southern Santa Clara County on the west-southwest-facing slopes of the first rank of foothill ridgelines of the Diablo Range as seen from the Santa Clara Valley (see Figure 2.2-1) between the cities of Gilroy and Morgan Hill. Extending nearly 100 miles from Pacheco Pass to the Sacramento River, the north-south-trending Diablo Range forms an important topographic setting rising above Santa Clara Valley east of the cities of Gilroy, Morgan Hill, Milpitas, and San Jose, as well as other cities in the San Francisco Bay Area.

Notable ridgelines of the Diablo Range in the vicinity of the project area as seen from the Santa Clara Valley floor include:

- Finley Ridge (elevation 2,198 feet above mean sea level [AMSL]), Fitzgerald Ridge (elevation 2,612 feet AMSL), and Nesbit Ridge (elevation: 2,289 feet AMSL), which provide the primary ridgelines seen directly behind and above the project area
- Larious Peak (elevation 2,766 feet AMSL), Palasou Ridge (elevation 2,768 feet AMSL), and Sheep Ridge (elevation 2,650 feet AMSL) that provide other high points as part of the project area backdrop.

With the exception of Finley Ridge, all ridgelines are undeveloped.

Santa Clara Valley Water District, Santa Clara County Parks and Recreation Department, Santa Clara County Open Space Authority, California State Park System, Nature Conservancy, and other public and private entities maintain significant land holdings in the Diablo Range.
3.1 AESTHETICS AND VISUAL RESOURCES

Local Setting
The project area is bordered by:

- The City of Morgan Hill’s Jackson Oaks neighborhood with an average density of four dwelling units per acre (north)
- Undeveloped lands owned by the Santa Clara Valley Water District, a portion of which consists of Anderson Lake County Park and the Coyote Lake-Harvey Bear Ranch County Park (north and east)
- The 33-lot rural residential Rancho Robles subdivision with an average density of one dwelling units per 10 acres (south)
- 14 rural residences along the Carey Lane corridor between Tennant and Maple Avenues with an average density of three dwelling units per acre (west)

An additional 26 rural residences border Foothill Avenue 0.25 mile west of the project area. The Fry Institute Golf Course located within the City of Morgan Hill is located approximately 0.25 mile southwest of the Coyote Highlands property line.

There are nine existing rural residential sites along Finley Ridge with structures that protrude above the ridgeline as seen in the background from Santa Clara Valley. They are located approximately 4 miles away, as seen from U.S. Highway 101 (US-101), and are above and to the northeast of the project area.

The project area visual setting is summarized in Table 3.1-1. Additional information and definitions are provided in Appendix F.

<table>
<thead>
<tr>
<th>Table 3.1-1: Project Site Visual Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameter</td>
</tr>
<tr>
<td>Visual character</td>
</tr>
<tr>
<td>Scenic quality</td>
</tr>
<tr>
<td>Scenic integrity</td>
</tr>
<tr>
<td>General viewshed/distance</td>
</tr>
</tbody>
</table>

Source: 2M Associates 2012

Key Observation Points
Key Observation Points (KOPs) are locations that provide a perspective of the project’s visual impacts from area vantage points. They are selected based on their relation to visual resources to include varying levels of observer sensitivity that may be affected by the proposed project. KOPs typically include locations that are publicly accessible such as along roadways and travel corridors, at recognized vista points, and in public recreational areas. Three KOPs along US-101 were selected by the County to be used as the basis of the visual analysis and photo simulation (2M Associates, July 2012). Figure 3.1-1 shows the KOP locations, and descriptions of the three KOPs used for the visual analysis are provided in Table 3.1-2.
3.1 AESTHETICS AND VISUAL RESOURCES

Figure 3.1-1: Photos and Key Observation Points (KOPs)
Views of Project Area

The Site Visibility Analysis (Figure 3.1-2) maps the project area visibility from the valley floor. The analysis identifies the project area as ranging from low to high visibility, with those portions towards the lower elevations of the subdivision area low in visibility and those higher west-facing slopes and portions of the ridgeline as medium high to high visibility. Figure 3.1-2 also indicates the approximate locations of the 25 future residences and shows that these homes would largely avoid the highest visibility locations on the project site.

Views within and around the Santa Clara Valley street system are generally focused on the foreground commercial, rural residential, and agricultural development within the valley floor, with the west-facing hills, including the subdivision area, serving as a backdrop when traveling east on the local road system.

Table 3.1-2: Key Observation Points (KOP) Descriptions

<table>
<thead>
<tr>
<th>KOP #</th>
<th>View Direction</th>
<th>Location</th>
<th>Viewshed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>East</td>
<td>E. Dunne Avenue overcrossing of US-101 (see Figure 3.1-3)</td>
<td>A variety of rural land uses backdropped by the project area and, beyond that, Nesbit Ridge, Sheep Ridge, Palasou Ridge, and Larios Peak. The Jackson Heights neighborhood is within view but is not shown in photos taken from this KOP.</td>
</tr>
<tr>
<td>2</td>
<td>East</td>
<td>Tennant Avenue, ½ mile east of US-101 (see Figure 3.1-4)</td>
<td>A variety of rural land uses backdropped by the project area and, beyond that, Sheep Ridge, Palasou Ridge, and Larios Peak.</td>
</tr>
<tr>
<td>3</td>
<td>Northeast</td>
<td>E. Middle Avenue at US-101 (see Figure 3.1-5)</td>
<td>The foreground includes a variety of rural land uses backdropped by the project area in the middleground and, beyond that, Finley Ridge. The Jackson Oaks neighborhood is seen adjacent to the project area and the Fischer Creek drainage. Residential development along Finley Ridge is seen.</td>
</tr>
</tbody>
</table>

NOTES:
* E. San Martin Avenue is identified as a Sub Regional Trail (Route S7-San Martin Cross-Valley Trail) in the Santa Clara County Trails Master Plan.

Source: 2M Associates 2012
3.1 AESTHETICS AND VISUAL RESOURCES

Figure 3.1-3: Key Observation Point #1

Figure 3.1-4: Key Observation Point #2

KOP #2: E. Tennant Avenue at US-101 looking east.
3.1 AESTHETICS AND VISUAL RESOURCES

Figure 3.1-5: Key Observation Point #3

KOP #3: Looking northeast from E. Middle Avenue at US-101.
Viewer Sensitivity
Viewer sensitivity is a measure of public concern for changes to scenic quality. Numbers of viewers, viewer activity, view duration, distance away from seen objects (foreground versus background), adjacent landscape character, and special planning designations such as scenic routes are used to characterize viewer sensitivity.

The project area is visible to motorists from US-101 and the local road network east of US-101. For east-west routes such as Tennant Avenue and Maple Avenue, the project area serves as a terminating visual backdrop. On the remainder of the street systems, views to the project area are sometimes blocked by buildings and vegetation located near the roads. The number of viewers along these roadways would be moderate throughout the week, with somewhat higher volumes during commute hours.

Motorists traveling in both the north and south directions on US-101 may see the project area over an approximately 6-mile length. The sensitivity of motorists along US-101 to visual change is low to moderate due to the relatively short period of time that the project area is in view and the fact views of the project area would not be directly in front of motorists. The sensitivity of motorists to visual change would be moderate as they would view the project area frequently.

Bicyclists’ sensitivity along the local road network is considered high, due to their frequent exposure to the project site and their longer viewing intervals. Hikers within the Coyote Lake-Harvey Bear Ranch County Park can view portions of the project area from portions of the Park trail system. Park visitors’ sensitivity to visual change is considered high.

To the north, approximately 20 residences of the Jackson Oaks neighborhood whose property is located directly adjacent to the project boundary have unobstructed views into the subdivision area. To the south, approximately 11 residential properties are located in the hillsides adjacent to the subdivision area. These properties are located along Carey Lane, Paseo Robles Avenue, and Paseo Vista Avenue. Residents’ sensitivity to visual change is considered high.

Scenic Highways
The project area is not visible from any State Scenic Highway within Santa Clara County. The Regional Parks and Scenic Highways Map Element of the Santa Clara County General Plan indicates that US-101 through the Santa Clara Valley is a route that should be added to the State Scenic Route Master Plan; however, that action has not taken place. US-101 is considered a County scenic road.

The County has also established the “-sr” Scenic Roads Combining District. The purpose of this district is to protect the visual character of scenic roads in Santa Clara County through special

3.1 AESTHETICS AND VISUAL RESOURCES

development and sign regulations. The -sr combining district applies to all designated scenic
go roads in unincorporated Santa Clara County. The project area is not zoned “-sr” Scenic Roads
Combining District.

Scenic Vistas
There are no state-designated scenic vistas or areas (scenic byway, scenic corridor, or similar
designations) in or near the project area. The project area is zoned in the Zoning Ordinance as
“-d” Design Review Combining District. The purpose of this district is to designate certain
visually and environmentally sensitive areas as requiring design review, with the intention of
mitigating adverse visual impacts of development and encouraging quality design.

The Coyote Lake-Harvey Bear Ranch County Park trail system includes routes that go to and
over prominent topographic points (hills and peaks). Specific points are not designated as vista
points; however, the entire trail system provides a wide variety of scenic vistas in all directions
from the higher elevations of the park. These vistas include views into the project area.

Light and Glare
Light pollution is defined as any adverse effect of artificial light, including sky glow, glare, light
trespass, light clutter, decreased visibility at night, and energy waste (IDA 2012). There are
numerous light sources north, south, and west of the project area. Existing sources of light and
glare that do exist are generally related to streetlights, residences, outbuildings, private
recreation facilities such as tennis courts, and traffic on the local road system. The urban,
suburban, and rural development of the valley floor also provides numerous sources artificial
light.

3.1.2 Regulatory Setting

Federal and State
There are no federal or state regulations that pertain to the aesthetics of the project area.

Local
The Santa Clara County policies addressing scenic resources and viewshed protection are found
in the Santa Clara County General Plan and zoning ordinances.

Santa Clara County General Plan
Scenic resource and viewshed protection and related goals and policies of the current General
Plan are defined as a significant component of the General Plan in maintaining the quality of
life of the County. Table 3.1-3 lists the General Plan policies that are applicable to the project
area.
### Table 3.1-3: General Plan Policies Related to Viewshed Protection

<table>
<thead>
<tr>
<th>Policy Key</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C-PR 37</strong></td>
<td>The natural scenery along many of Santa Clara County’s highways should be protected from land uses and other activities which would diminish its aesthetic beauty.</td>
</tr>
<tr>
<td><strong>C-RC 60</strong></td>
<td>Hillsides, ridgelines, scenic transportation corridors, major county entryways, and other areas designated as being of special scenic significance should receive additional consideration and protections due to their prominence, visibility, or symbolic value.</td>
</tr>
<tr>
<td><strong>C-RC 61</strong></td>
<td>Public and private development and infrastructure located in areas of special scenic significance should not create major, lasting adverse visual impacts.</td>
</tr>
<tr>
<td><strong>R-GD 3</strong></td>
<td>Land uses and development permitted under County jurisdiction shall be consistent with the following major County policies: (d) preservation of rural character, rural lifestyle opportunities, and scenic resources.</td>
</tr>
<tr>
<td><strong>R-GD 20</strong></td>
<td>Grading and terrain alteration to conduct lawful activities and use of property should conserve the natural landscape and resources, minimize erosion impacts, protect scenic resources, habitat, and water resources. Grading should not exacerbate existing natural hazards, particularly geologic hazards.</td>
</tr>
<tr>
<td><strong>R-GD 24</strong></td>
<td>Where an existing parcel contains multiple possible building or development sites, and where one or more possible site requires less grading, with less overall environmental and visual impacts, greater economy of access roads or other site improvements, and better achieves matters of public health and safety, grading approval may be granted only for the alternative which minimizes grading amounts and is deemed otherwise suitable with respect to other development issues, regulations, and conditions of reviewing agencies. Buildings should also be designed to respect and conform with existing topography of site as much as possible, using stepped designs and multiple levels rather than an expansive single story floor plan on only one level.</td>
</tr>
<tr>
<td><strong>R-GD 25</strong></td>
<td>Grading associated with roads, bridges, retaining walls, or similar improvements related to access requirements should not create a significant visual scar or impact to the environment. Grading proposals for driveways and roads should generally follow natural terrain and contours to maximum extent feasible. Requirements and conditions for erosion control, landscaping or plantings, retaining wall design, and other design features may be imposed where necessary to ensure that completed work blends as harmoniously as possible with the natural environment and landscape. Use of native and drought tolerant species for the above purposes should be employed for at least 50% or more of the design.</td>
</tr>
<tr>
<td><strong>R-GD 27</strong></td>
<td>Grading and excavation to situate a residence or other structure within a hillside to reduce visual impacts is encouraged, in accordance with due consideration of geologic issues, structural integrity, and other pertinent design features and lot characteristics.</td>
</tr>
<tr>
<td><strong>R-GD 31</strong></td>
<td>Ridgelines and ridge areas have special significance for both public policy and private interests. Ridgeline and hillside development that creates a major negative visual impact from the Valley floor should be avoided or mitigated, particularly for those areas most immediately visible from the Valley floor. Ridgeline development policy should also take into account the need to allow reasonable use and development of private land.</td>
</tr>
</tbody>
</table>
### 3.1 AESTHETICS AND VISUAL RESOURCES

**Table 3.1-3 (Continued): General Plan Policies Related to Viewshed Protection**

<table>
<thead>
<tr>
<th>Policy Key</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-GD 32</td>
<td>For subdivision proposals, land should be subdivided in such a way that building sites are not located on ridgelines, if possible, taking into consideration other development constraints and issues. Where ridgeline locations are proposed, alternatives shall be evaluated to determine relative development suitability. If ridgeline or hilltop locations prove to be more suitable and less visually obtrusive than alternatives, reasonable mitigations for significant, adverse visual impacts may include, but are not limited to:</td>
</tr>
<tr>
<td></td>
<td>(a) careful locations of building sites;</td>
</tr>
<tr>
<td></td>
<td>(b) tree and vegetation retention, and use of additional landscaping, as appropriate;</td>
</tr>
<tr>
<td></td>
<td>(c) building height, façade length, and similar dimensional limitations; and</td>
</tr>
<tr>
<td></td>
<td>(d) use of natural materials, colors, and design features that blend with the natural surroundings and reduce apparent bulk.</td>
</tr>
<tr>
<td>R-GD 34</td>
<td>For existing legal lots, if a ridgeline or hilltop location is a potentially suitable location for development, consistent with grading or other land development policies and regulations, due to the particular geologic circumstances, access needs, or other suitability characteristics of the lot, the following conditions or mitigations to visual impacts of development shall be considered and applied through applicable land use and development approvals, as necessary and appropriate:</td>
</tr>
<tr>
<td></td>
<td>(a) landscaping and vegetation retention, as appropriate,</td>
</tr>
<tr>
<td></td>
<td>(b) color and material choices that blend with the natural surroundings, and</td>
</tr>
<tr>
<td></td>
<td>(c) any other similar requirements or mitigations that reasonably relate to the degree of visual impact. [Note: Where Design Review zoning applies or is required by condition of subdivision or other approval, such requirements will be addressed through the applicable Design Review procedure.]</td>
</tr>
<tr>
<td>R-RC 95</td>
<td>The scenic and aesthetic qualities of both the natural and built environments should be preserved and enhanced for their importance to the overall quality of life for Santa Clara County.</td>
</tr>
<tr>
<td>R-RC 97</td>
<td>Scenic qualities of the rural areas of Santa Clara County shall be maintained and enhanced through existing land use and development policies. Development compatible with scenic resource conservation should be encouraged.</td>
</tr>
<tr>
<td>R-RC 98</td>
<td>Hillsides, ridgelines, scenic transportation corridors, major county entryways, stream environments, and other areas designated as being of special scenic significance should receive utmost consideration and protection due to their prominence, visibility, and overall contribution to the quality of life in Santa Clara County.</td>
</tr>
<tr>
<td>R-RC 101</td>
<td>Roads, building sites, structures and public facilities shall not be allowed to create major or lasting visible scars on the landscape.</td>
</tr>
<tr>
<td>R-RC 102</td>
<td>Structures on ridgelines must be located, constructed or landscaped so that they do not create a major negative visual impact from the valley floor. Land should be divided in such a way that building sites, if possible, are not located on ridgelines.</td>
</tr>
<tr>
<td>R-RC 103</td>
<td>Development in rural areas should be landscaped with fire resistant and/or native plants which are ecologically compatible with the area.</td>
</tr>
<tr>
<td>R-RC(i) 36</td>
<td>Protect the scenic value of the following major County thoroughfares and entranceways through state scenic highway designation, including:</td>
</tr>
<tr>
<td></td>
<td>(c) Route 101 (from the San Jose City limits south to the San Benito County border).</td>
</tr>
</tbody>
</table>
### Table 3.1-3 (Continued): General Plan Policies Related to Viewshed Protection

<table>
<thead>
<tr>
<th>Policy Key</th>
<th>Policy</th>
</tr>
</thead>
</table>
| R-LU 21    | Design of the cluster development shall incorporate the following basic principles:  
5. Roads, building sites, and other facilities shall not be allowed to create major, lasting visible scars on the landscape.  
6. Structures on or near ridgelines shall be located, constructed, and/or landscaped so that they do not create a significant adverse visual impact as seen from the valley floor. |
| R-PR 14    | Privately-owned recreational land uses and facilities within rural unincorporated areas, including but not limited to golf courses, campgrounds, recreational vehicle (RV) parks, and similar uses, should be compatible with the landscape and resources of the areas in which they are proposed. To ensure such compatibility, potentially significant impacts often associated with such land uses should be avoided or reduced to less than significant levels, including:  
(i) visual impacts |
| R-PR 45    | New structures should be located where they will not have a negative impact on the scenic quality of the area, and in rural areas they should generally be set back at least 100 feet. |

Source: Santa Clara County 1994

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**Santa Clara County Zoning Ordinance**  
The portions of the project area containing the entrance road and proposed residential lots are zoned rural residential with a design review combining district (RR-20AC-d1). The portion of the project area that includes the proposed water supply system and soil stockpile area is zoned AR.

**Section 3.20.040. Chapter 3.20: Design Review Combining District**  
Also referred to as the Santa Clara Valley Viewshed Ordinance, the “-d1” combining district is intended to conserve the scenic attributes of those hillside lands most immediately visible from the valley floor. It is intended to minimize the visual impacts of structures and grading on the natural topography and landscape, using a combination of supplemental development standards, design guidelines, design review, and use of process incentives for smaller and less visible projects. This ordinance adds additional standards, procedures, and regulations to properties rezoned pursuant to the viewshed protection study to preserve and protect the scenic quality of the hillsides that frame the Santa Clara Valley.

Development standards and procedures within the -d1 combining district use a tiered regulatory structure based primarily on building size. Future residential development would be required to comply with the Santa Clara County Design Review Guidelines, and be individually evaluated as part of a discretionary design review process. Any potential environmental effects of residential development are analyzed and reviewed by the County during this discretionary design review process. The description below summarizes the applicable design review regulations for each of the three design review tiers, as outlined in Section 3.20.050 of the County’s Zoning Ordinance:
3.1 AESTHETICS AND VISUAL RESOURCES

- Tier 1 projects are those projects where the gross floor area of the primary dwelling is 5,000 square feet or smaller, or where the cumulative gross floor area of the primary dwelling and all detached accessory buildings is 6,500 square feet or smaller. Tier 1 projects are subject to an administrative review without a requirement for a public hearing, provided that the project complies with all Tier 1 requirements, such as those related to color, maximum earthwork activities, and retaining wall heights.

- Tier 2 projects are those projects where the gross floor area of the primary dwelling is between 5,001 square feet and 12,500 square feet. Additional buildings (secondary dwellings, accessory buildings, others) are subject to the standard design review procedures and exemptions of Chapter 5.50 of the Zoning Ordinance. Tier 2 projects are subject to the County’s standard design review procedures, as are all detached accessory buildings associated with Tier 2 projects. These standard design review procedures require a public hearing in accordance with the provisions of Chapter 5.20, Common Procedures, of the Zoning Ordinance. Projects designated as Tier 2 are encouraged to use a combination of natural topography and existing vegetation to reduce the visibility of the structures to the extent possible and practical. Tier 2 projects are also required to install story poles a minimum of seven (7) days prior to the scheduled design review public hearing.

- Tier 3 projects are projects where the gross floor area of any proposed dwelling or accessory building exceeds 12,500 square feet. Building projects classified under Tier 3 are subject to the County’s design review procedure, and require a public hearing in accordance with Chapter 5.20 of the Zoning Ordinance with the Planning Commission designated as the approval authority for the design review applications. Tier 3 projects are required to be sited in an area where natural topography and existing vegetation provide at least a fundamental and sufficient measure of visibility mitigation, with a goal that the Tier 3 project’s viewshed impacts are no greater than what might result from a sensitively designed Tier 1 or Tier 2 building. As with Tier 2 projects, Tier 3 projects are required to install story poles a minimum of seven (7) days prior to the scheduled design review public hearing.

For purposes of this analysis, it is assumed that the majority of future residential buildings and structures would fall within the ordinance as a “Tier 2” project classification. Countywide, very few applications have been received to date for residences that would trigger the County’s Tier 3 design review requirements, and it is therefore considered unlikely that future residential development on the project area would involve applications for Tier 3 residences.

Standards that affect visual resources are summarized in Table 3.1-4. Although the size of primary residence that individual property owners may wish to construct is not known at this time, it is assumed that future residences will likely comply with a Tier 2 classification and that the size of the primary residence would therefore likely not exceed 12,500 square feet.
### Table 3.1-4: Santa Clara County Design Review Combining District Policies Related to Residential Development within the Tier 2 Category (§ 3.20.040)

<table>
<thead>
<tr>
<th>Ordinance Key</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Project Classification</strong></td>
<td>Design Review: Building projects shall be subject to the design review procedure, per Chapter 5.50, and are not eligible for a discretionary exemption except when subsection G, Exemption for Sites Not Visible, applies.</td>
</tr>
<tr>
<td>Siting: Building should, to the extent possible and practical, be sited where natural topography, or a combination of topography and existing vegetation, provide at least a fundamental and sufficient measure of visibility mitigation.</td>
<td></td>
</tr>
<tr>
<td>Story Poles: Story poles may be required of all new buildings and will be fully erected, per the County’s story poles standards, at least seven (7) days prior to the scheduled design review hearing.</td>
<td></td>
</tr>
<tr>
<td><strong>B. Color; Light Reflectivity Value</strong></td>
<td>The light reflectivity value (LRV) of exterior surfaces shall not exceed 45. The Zoning Administrator may additionally specify subdued chroma (color saturation) when warranted for a structure deemed to have high visibility and contrast against the site’s background. The Zoning Administrator may waive this LRV requirement for minimal trim or other minor architectural features. LRV restrictions may be waived entirely when subsection G, Exemption for Sites Not Visible, applies.</td>
</tr>
<tr>
<td><strong>C. Building Massing</strong></td>
<td>Buildings with moderate to high visibility (see Figure 3) shall be designed following the massing guidelines within the adopted Design Review Guidelines. In addition, specific limitations on wall dimensions apply to all projects not deemed exempt under subsection G. These include:</td>
</tr>
<tr>
<td>1) The maximum height of a wall plane, including foundation and other continuous components, shall be 24 feet, with the following exceptions:</td>
<td></td>
</tr>
<tr>
<td>a) Any architectural component where façade dimension does not exceed 18 horizontal feet, or</td>
<td></td>
</tr>
<tr>
<td>b) multiple such components (18 horizontal feet maximum) where combined horizontal dimension does not exceed 25% of the total horizontal dimension of the façade. This limitation may be varied through the design review process for wall planes not facing the valley floor or otherwise having demonstrably low visibility.</td>
<td></td>
</tr>
<tr>
<td>2) Portions of a wall plane must be offset by at least five (5) horizontal feet to be deemed discontinuous for the purposes of this provision.</td>
<td></td>
</tr>
<tr>
<td><strong>D. Retaining Walls</strong></td>
<td>Retaining walls visible from the valley floor shall not exceed 10 feet in height as measured from grade at face to top of wall. Multiple “stepped” retaining walls whose total height exceeds 10 feet must each be offset by at least six (6) horizontal feet. Visible walls shall be colored and textured to complement the background land and vegetation, per the adopted Design Review Guidelines.</td>
</tr>
<tr>
<td><strong>E. Ridgeline Development</strong></td>
<td>The ridgeline protection policies of the General Plan Growth and Development chapter shall be applied to any project situated on or adjacent to a ridgeline.</td>
</tr>
<tr>
<td><strong>F. Design Review Guidelines</strong></td>
<td>All projects subject to design review shall comply with applicable provisions of the adopted Design Review Guidelines document.</td>
</tr>
<tr>
<td><strong>G. Exemption for Sites Not Visible</strong></td>
<td>Any project where structures would be situated on portions of a lot outside of the visible viewshed area (based on GIS visibility analysis – see Figure 3) shall be eligible for a discretionary exemption. Additional visibility analysis tools and methods may be utilized by staff to further evaluate the potential visibility of a project proposed on such a site.</td>
</tr>
</tbody>
</table>

Source: Santa Clara County 1994
Santa Clara County Cluster Permit Procedures and Subdivision Ordinance
The cluster subdivision application will be reviewed by the County’s Architectural & Site Approval (ASA) Committee, as set forth by Chapter 5.45 of the County Zoning Ordinance, and shall provide a written report and recommendations to the Planning Commission regarding project approval or denial, required modifications, and conditions of approval. The Planning Commission then holds a public hearing to receive the report and recommendations to determine whether to grant the cluster permit, subject to findings of conformance with the General Plan and County development standards. The Planning Commission approval shall serve as the basis for the scheduling of a subsequent public hearing by the Board of Supervisors to consider approval of the tentative subdivision map, pursuant to the County Ordinance Code (Division C12, Chapter 1, Subdivisions).

Santa Clara County Design Review Guidelines
The goal of Santa Clara County Design Review Guidelines is to maintain the predominantly natural character of hillsides areas. The Guidelines address reducing the visual impacts of residential development and outline procedures for design review. Key elements of the County’s Design Review Guidelines are presented in Table 3.1-5. The Guidelines apply to future residential development and include the following:

- Building sites shall be located, graded, and planted to provide a fundamental and sufficient level of visual mitigation
- Light Reflectivity Value (LRV) shall not exceed 45
- Building massing shall follow requirements in the Design Review Guidelines
- Maximum horizontal length of a continuous wall shall not exceed 80 feet
- Maximum height of a wall plane shall not exceed 24 feet unless an architectural component is utilized where the facade dimension does not exceed 18 feet
- Portions of a wall plane shall be offset by a minimum of 5 feet
- Retaining walls shall not exceed 10 feet in height of shall step/offset by a minimum of 6 feet
- Ridgeline protection policies of the General Plan shall be observed.
### Table 3.1-5: Santa Clara County Design Review Guidelines

<table>
<thead>
<tr>
<th>Topic</th>
<th>Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective I. To minimize the visibility of new structures from the valley floor</strong></td>
<td></td>
</tr>
<tr>
<td>1. Site Design</td>
<td>(a) The site design should incorporate the existing natural features of the land and take into consideration the contours of the land.</td>
</tr>
<tr>
<td></td>
<td>(b) The building form should follow the natural contours of the land.</td>
</tr>
<tr>
<td></td>
<td>(c) Whenever possible, the site and structure design should also take into consideration, the impacts on privacy and views of neighboring properties.</td>
</tr>
<tr>
<td>2. Building Form</td>
<td>(a) The slopes of the roof should follow the natural contours of the land.</td>
</tr>
<tr>
<td></td>
<td>(b) Bulk of the building should be broken up by incorporating varied roof heights rather than having just one or two massive roof planes.</td>
</tr>
<tr>
<td></td>
<td>(c) Expansive facades shall be avoided by offsetting walls and by using architectural elements such as windows and cornices to produce patterns of light and shade.</td>
</tr>
<tr>
<td></td>
<td>(d) The second and the third stories should be set back from the first floor facade to step with the land and reduce apparent bulk. For parcels zoned &quot;d2&quot; within the unincorporated Milpitas hillsides, the maximum continuous height of an exposed wall plane on the downhill elevation should be limited to 15 feet. A break in a continuous wall plane can be accomplished by setting back the second story, incorporating architectural elements such as a significant change in building material, or inclusion of a deck or awning which spans the majority of the wall plane.</td>
</tr>
<tr>
<td></td>
<td>(e) Additions to buildings should not result in a major increase to the apparent bulk of the building.</td>
</tr>
<tr>
<td>3. Fences and Retaining Walls</td>
<td>(a) Open fencing such as welded wire mesh attached to wood posts or other alternate material should be used. Solid fencing should be avoided, especially where highly visible to the public.</td>
</tr>
<tr>
<td></td>
<td>(b) Retaining walls should be landscaped by using vines, shrubbery, or planters to reduce their apparent height and to ensure that they blend with the natural surroundings.</td>
</tr>
<tr>
<td>3. Color and Material</td>
<td>(a) Exterior colors of all structures (walls, roof, window trim/accent, retaining walls, and fences) shall use natural dark earth tones such as hues of brown, green and shades of gray. (The colors used must also comply with light reflectance standards in the County Zoning Ordinance.)</td>
</tr>
<tr>
<td></td>
<td>(b) Light, bright, and reflective materials shall be avoided on the exterior surfaces of buildings.</td>
</tr>
<tr>
<td>4. Landscape</td>
<td>(a) Where necessary, vegetation shall be used to blend the structure with the surrounding landscape and soften the impact of development.</td>
</tr>
<tr>
<td></td>
<td>(b) Ground cover, shrubs, and trees should be used to mitigate visual impacts of development.</td>
</tr>
<tr>
<td></td>
<td>(c) All landscaping will be subject to approval by the Fire Marshall to make sure that it does not create a fire hazard.</td>
</tr>
</tbody>
</table>
### Table 3.1-5 (Continued): Santa Clara County Design Review Guidelines

<table>
<thead>
<tr>
<th>Topic</th>
<th>Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Outdoor Lighting</td>
<td>(a) Artificial lighting provided for tennis and other recreational courts is discouraged. If provided, it should not be directly visible from off site.</td>
</tr>
<tr>
<td></td>
<td>(b) The number, intensity, and location of light sources should be carefully designed so as not to be directly visible from off site.</td>
</tr>
</tbody>
</table>

**Objective II: To retain the natural topography and vegetation of the hillsides**

1. Grading                      | (a) Proposed structures and driveways should be sited so as to minimize the need for grading.                                        |
|                               | (b) When grading is required, gradient shall not be steeper than 1:2 (vertical to horizontal) and preferably will be a 1:3 gradient. |
|                               | (c) Newly graded areas shall be seeded/mulched or revegetated within a reasonable time period (30 days) to reduce visual impacts of grading and to prevent erosion. |
|                               | (d) All cuts and fills of grading should be adequately rounded off to blend with the surrounding natural terrain, where conditions permit. |

2. Vegetation                  | (a) Existing trees with a circumference of 37.5 inches, measured 4.5 feet above the ground level should be preserved and integrated into the site design. |
|                               | (b) Existing trees with a circumference of 37.5 inches, measured 4.5 feet above the ground level should be protected during site preparation and building construction. |
|                               | (c) To ensure a sense of character, trees and shrubs native to the area should be selected as new plant materials in areas visible to the public. |

3. Ridgeline Protection        | (a) Structures determined to be located on ridgelines should be designed with low profile elevations. (Building height may be required to be lower than the maximum allowed in the ordinance.) |
|                               | (b) Landscaping should be used to blend the structure with the natural ridgelines and to mitigate the impact of the structure’s intrusion into the skyline. |
|                               | (c) There may be instances where even with a low profile of a structure and substantial landscaping it may not be possible to make the structure less obtrusive on a ridgeline. In such instances, structures determined to be intruding into the skyline may be required to be relocated on the site to ensure that they do not disrupt the lines of the natural ridgeline. This may be required only if alternative locations on the site are possible that will not further increase visual or environmental impacts. If more than one such alternative location is possible, the applicant may choose the preferred location. |
3.1 AESTHETICS AND VISUAL RESOURCES

3.1.3 Thresholds of Significance
The proposed project would result in a significant impact if it would:

- Have a substantial adverse effect on a scenic vista
- Substantially damage scenic resources along a designated scenic highway
- Substantially degrade the existing visual character or quality of the site and its surroundings
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area
- If subject to Design Review, be generally in non-compliance with the Guidelines for Design Review Approval
- Be located on or near a ridgeline visible from the valley floor

In addition, the consistency with the project with the County of Santa Clara General Plan and Zoning policies related to aesthetic and hillside protection are also evaluated. Inconsistency with the visual and aesthetic resources policies of Santa Clara County would represent a significant impact.

Visual impact significance is a function of two factors, including overall visual sensitivity and extent of visual change. Table 3.1-6 illustrates the general relationship between visual sensitivity and visual change. Determinations of visual sensitivity and visual change were based primarily on the analyst’s professional experience and site-specific circumstances.

3.1.4 Impacts and Mitigation
The project would not have a substantial adverse effect on a scenic vista. (No impact)
There are no designated scenic vistas in the project area. The project would, therefore, have no impact on scenic vistas.

There are a number of panoramic view points along the higher elevations of the trail system within the Coyote Lake-Harvey Bear Ranch County Park. The impacts on these resources are addressed below.

The project would not substantially damage scenic resources along a designated scenic highway. (No impact)
There are no designated state scenic highways within the viewshed of the project area; therefore, the project construction and operation would have no impact on scenic resources within a state scenic highway.
Table 3.1-6: General Guidance for Review of Visual Impact Significance

<table>
<thead>
<tr>
<th>Visual Sensitivity</th>
<th>Visual Change to Scenic Quality</th>
<th>Low</th>
<th>Low to Moderate</th>
<th>Moderate</th>
<th>Moderate to High</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Not Significant (1)</td>
<td>Not Significant (1)</td>
<td>Adverse but Not Significant (2)</td>
<td>Adverse but Not Significant (2)</td>
<td>Adverse but Not Significant (2)</td>
<td></td>
</tr>
<tr>
<td>Low to Moderate</td>
<td>Not Significant (1)</td>
<td>Adverse but Not Significant (2)</td>
<td>Adverse but Not Significant (2)</td>
<td>Adverse and Potentially Significant (3)</td>
<td>Adverse and Potentially Significant (3)</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>Adverse but Not Significant</td>
<td>Adverse but Not Significant</td>
<td>Adverse and Potentially Significant</td>
<td>Adverse and Potentially Significant</td>
<td>Adverse and Potentially Significant</td>
<td></td>
</tr>
<tr>
<td>Moderate to High</td>
<td>Adverse but Not Significant</td>
<td>Adverse but Not Significant</td>
<td>Adverse and Potentially Significant</td>
<td>Adverse and Potentially Significant</td>
<td>Significant (4)</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>Adverse but Not Significant</td>
<td>Adverse and Potentially Significant</td>
<td>Adverse and Potentially Significant</td>
<td>Significant</td>
<td>Significant</td>
<td></td>
</tr>
</tbody>
</table>

NOTES:
1. Not Significant – Impacts may or may not be perceptible but are considered minor in the context of existing landscape characteristics and view opportunity.
2. Adverse but Not Significant – Impacts are perceived as negative but do not exceed environmental thresholds.
3. Adverse and Potentially Significant – Impacts are perceived as negative and may exceed environmental thresholds depending on project and site-specific circumstances.
4. Significant – Impacts with feasible mitigation may be reduced to levels that are not significant or avoided all together. Without mitigation, significant impacts would exceed environmental thresholds.

With the incorporation of identified mitigation measures, the project would not substantially degrade the existing visual character or quality of the site and its surroundings. (Less than significant with the incorporation of mitigation measures)

Implicit in Table 3.1-6 is the acknowledgment that for a visual impact to be considered significant two conditions generally exist: (1) the existing landscape is of reasonably high quality and is relatively valued by viewers; and (2) the perceived incompatibility of one or more elements or characteristics of the project tends toward the high extreme, leading to a substantial reduction in visual quality.

Table 3.1-7 summarizes the major characteristics of the project that to varying degrees would be visible to the general public from the valley floor and surrounding areas as presented through the KOPs.

Figure 3.1-6 illustrates the proposed pattern of residential development within the subdivision area.
### 3.1 AESTHETIC AND VISUAL RESOURCES

<table>
<thead>
<tr>
<th>Project Feature</th>
<th>Visual Characteristics</th>
<th>County and Applicant Design Guidelines Affecting Visual Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staging and Parking Areas</td>
<td><strong>Number:</strong> 4 of varying sizes.</td>
<td>Per County guidelines, retaining walls shall not exceed 10 feet in height or shall step/offset by a minimum of 6 feet and would visually blend into the existing landscaped</td>
</tr>
<tr>
<td>Primary Access Road (Asphalt)</td>
<td><strong>Disturbed Area:</strong> associated with cut and fill slopes</td>
<td>Per County guidelines, retaining walls shall not exceed 10 feet in height or shall step/offset by a minimum of 6 feet and would visually blend into the existing landscape.</td>
</tr>
<tr>
<td></td>
<td><strong>Paved Width:</strong> 20 feet</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Lighting:</strong> address marker lighting only</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Cut and Fill Slopes:</strong> numerous slope combinations of varying heights</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Tree Removal:</strong> any trees removed to be replaced at a 3:1 ratio</td>
<td></td>
</tr>
<tr>
<td>Secondary Access Roads (asphalt)</td>
<td><strong>Disturbed Area:</strong> associated with cut and fill slopes</td>
<td>Applicant Design Guidelines indicate tanks will be painted to blend with the landscape.</td>
</tr>
<tr>
<td></td>
<td><strong>Width:</strong> one lane in each direction</td>
<td></td>
</tr>
<tr>
<td>Water Tanks</td>
<td><strong>Number of tanks:</strong> 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Size / Volume:</strong> approximately 150,000 gallons each.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Material:</strong> bolted or welded steel</td>
<td></td>
</tr>
<tr>
<td>Homestie Zone Uses</td>
<td><strong>Ground Disturbance:</strong> cut and fill related to residential development</td>
<td>In addition to primary residential structures, uses could include built facilities including, but not limited to, secondary dwellings, parking areas, recreational amenities such as patios, tennis courts, and swimming pools; propane and other utility features; and auxiliary structures such as garages, workshops, storage facilities, and barns. Individual building site development will be subject to design review by Santa Clara County in compliance with the following guidelines:</td>
</tr>
<tr>
<td></td>
<td><strong>Size of primary residence:</strong> average of approximately 8,000 square feet anticipated; up to 12,500 square feet allowed under zoning</td>
<td>• Structures shall be located to best work with existing topography and vegetation</td>
</tr>
<tr>
<td></td>
<td><strong>Additional structures:</strong> anticipated average of approximately 1,200 square feet for a detached secondary dwelling unit and 1,000 square feet for another detached accessory structure per residential lot; no limit under zoning</td>
<td>• Structures would be encouraged to “step down” slope as necessary to minimize grading</td>
</tr>
</tbody>
</table>
### Table 3.1-7 (Continued): Visible Project Features

<table>
<thead>
<tr>
<th>Project Feature</th>
<th>Visual Characteristics</th>
<th>County and Applicant Design Guidelines Affecting Visual Resources</th>
</tr>
</thead>
</table>
| Homesite Zone Uses (continued)           | **Height of residential structures:** Homesite #1 up to 35 feet; other Homesites anticipated to vary between 20 feet and 30 feet | • Massing of the main residence shall be parallel to the slope  
  • Building massing shall follow requirements in the County Design Review Guidelines  
  • Maximum horizontal length of a continuous wall shall not exceed 80 feet  
  • Maximum height of a wall plane shall not exceed 24 feet unless an architectural component is used where the facade dimension does not exceed 18 feet  
  • Portions of a wall plane shall be offset by a minimum of 5 feet  
  • Retaining walls shall not exceed 10 feet in height or shall step/offset by a minimum of 6 feet and would visually blend into the existing landscaped |
| Transition Zone Uses                     | **Ground Disturbance:** for agriculture or grazing uses surrounding selected Homesite Zones  
  **Fencing:** low-visibility agricultural fencing, such as barbed wire, unpainted welded pipe, split rail, or natural stone | The Transition Zone could contain private agricultural uses, including but not limited to grazing; vineyards; orchards; other agriculture; riding arenas; and trails. |
| Open Space Zone and Open Space Lot Uses  | **Ground Disturbance:** none to minimal related to new pedestrian/equestrian trails  
  **Fencing:** low-visibility agricultural fencing, such as barbed wire, unpainted welded pipe, split rail, or natural stone | None |
| Temporary Soil Storage Area              | **Ground Disturbance:** one location with size of soil stockpile varying depending on use at the time | Would be used over an approximate 10-year timeframe during initial construction and as individual residences are constructed |

Source: 2M Associates 2012
Appendix E contains photo simulations of the project. These photo simulations were prepared from the vantage points of KOPs #1, #2, and #3. Each KOP includes a series of three images: a view of the existing setting, a view immediately following subdivision and house construction, and a view 5 years after completion of construction. These photo simulations show:

- The location of the proposed roadway
- The location of the homesites
- An example of the primary residences that could be built on each of the 25 proposed residential lots, with some accessory structures.
- An example of the screening vegetation that would be planted to help reduce the visual impacts of these residences.

All utility lines (electricity, communications, water, and sanitary) servicing the proposed development would be underground and, therefore, would not be visible.

**Construction**

The time of construction would be limited to the period from 7:30 AM until 5:30 PM Monday through Friday, and 9 AM until 5 PM on Saturday. Visible impacts associated with construction of the subdivision improvements would be seen from a variety of viewpoints. Construction of the proposed private trail would involve limited new trail construction to connect existing ranch roads and, in some cases, elimination and revegetation of selected ranch roads. Initial construction of the roadway, utility, and drainage improvements is anticipated to take approximately 6 months. Construction impacts would be noticeable to area residents, motorists along the local road system, and visitors in Coyote Lake-Harvey Bear County Park.

Construction activities that may be seen include, but are not limited to:

- Activities associated with the four proposed construction staging and parking areas for equipment and materials within the valley floor
- Removal of vegetation along the proposed entrance road
- Open trenches and excavated material
- Temporary construction signs and workers/flaggers
- Temporary outdoor storage of materials, construction and office supply trailers, and temporary security fencing
- Large pieces of equipment used for constructing roads and utilities. This activity would include digging trenches; constructing retaining walls and foundations; hauling pipe, wire, cable, conduit, masonry materials, sand, gravel, base rock, and asphalt; water trucks spraying water to control dust; and movement of assorted construction vehicles
- Temporary construction-limit fencing

Short-term impacts to visual resources would occur during initial construction. It is expected that nearby residents and visitors at Coyote Lake-Harvey Bear County Park would view construction activities.
The aesthetic impacts of construction are unavoidable and are considered temporary (i.e., less than 5 years). Standard construction methods and best management practices, such as watering for dust control, would be followed to minimize the visual effects caused by construction. However, fugitive dust from construction may be noticed immediately adjacent to the project area limits.

On-site construction staging areas would be located within the footprints of proposed homesites, thus resulting in no long-term impacts. Up to 9 acres of off-site construction-related parking and equipment storage areas would be converted for temporary use. While the locations and existing uses of these storage areas are not yet known, the visual effects of any fencing, graveling, soil compaction, or other security measures used at these sites could be long-lasting unless remediated. County regulations would require that all construction equipment and staging areas be removed upon completion of construction activities, and that such areas be restored to their natural state. Compliance with County regulations would reduce the visual impact of construction staging areas to a less-than-significant level.

Development of the 25 individual residential lots presents a long-term construction impact (over 5 years). Assuming a 10-year development period, there would be on average two or three residences under construction at any one time. However, construction activities visible to any adjacent properties, including Coyote-Harvey Bear County Park, would be limited to a few, but not all, of the 25 individual residential lots. These construction impacts therefore would be less than significant.

The soil storage area would be used for up to 12 months during initial construction and then would be available for use during construction of individual residences. The soil storage area would be seen from the Ed Wilson Trail and other higher locations in Coyote Lake-Harvey Bear County Park. This impact would be less than significant.

**Subdivision Improvements**

Table 3.1-8 summarizes long-term visual impacts of the proposed project as seen from the KOPs along US-101. Development of residential lot #1 on Carey Avenue would essentially only be seen from that street and for a short segment along Maple Avenue due to existing landscaping and rural development within the Santa Clara Valley floor would screen development on this lot from view. Visible impacts associated with residential lot #1 would be less than significant.

There are a variety of general perspectives from which the remainder of the project area would be seen. These perspectives include:

- **Views from US-101 and Local Roads**
  
  Motorist views of the project area would be limited when traveling at 65 miles per hour on US-101. Travelling along the highway, the angle of view would change with essentially all of the project features, with the exception of development associated with residential lot #1 and the soil storage area. Residential lot #1 and the soil storage area would not be visible from US-101.
Motorists and bicyclists traveling along the local road system would see the project from a variety of perspectives. There is a point when moving east from US-101 on the local road system where some structures on the high elevation lots of the project area would protrude above the ridgeline without the benefit of a backdrop to soften potential visual contrasts related to development.

*Views from Coyote Lake-Harvey Bear Ranch County Park*
Trail users on the Ed Wilson Trail would have immediate views to the southeast portions of the project area and views northward to the upper elevations of the project area. Trail users along portions of the Martin Murphy Trail would have views to the uppermost portions of the project area.

*Views from Adjacent Residences*
Residences, including those within the Jackson Oaks neighborhood of the City of Morgan Hill and the Rancho Robles subdivision in unincorporated Santa Clara County immediately adjacent to the project area, would have views into the project area.
### Table 3.1-8: Description of KOPs and Impact Analysis

<table>
<thead>
<tr>
<th>KOP # and Photo Point Reference</th>
<th>Visibility</th>
<th>Visual Sensitivity/ Duration of View</th>
<th>Contrast/ Change to Scenic Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KOP #1:</strong> Looking east from E. Dunne Avenue at US-101. (Photo #1)</td>
<td>Views to the project area are open at an approximate distance of between 2.2 and 3.4 miles. Most parcel development in the upper portions of the project area with the exception of parcels #4, #5, #10, #11, #12, #22 and #C-2 would be visible in whole or in part. The uppermost portions of the entrance road would be seen but in a low-profile perspective. The view to the project area is generally backdropped by ridges and peaks. Buildings and structures associated with Lot #9 would protrude above the perceived ridgeline.</td>
<td>Viewer sensitivity is low to moderate. Views from US-101 looking east to the project area would last up to approximately 3 minutes at a traveling speed of 65 miles per hour. Views from the Tennant Avenue interchange look directly into the northern portion of the project area and at a slight angle into the southern portion of the project area.</td>
<td>Moderate: There would a discernible change to existing forms, pattern, textures, and colors presented by the proposed residential development. The allowable visual elements associated with development and land management practices within the Homesite and Transitions Zones would contrast with the surrounding Natural Lands Zone and Open Space Lots creating a noticeable series of edges and islands along the outside perimeter of the Transition Zone. The levels of contrast would likely vary from lot to lot based on the program of buildings, structures, plantings, and outdoor uses of each property owner. This contrast would be most noticeable during the dry months of the year. The overall visual effect would be to connect the existing development of the Jackson Oaks neighborhood with the rural residential Rancho Robles subdivision. The visual impact of development on the upper elevation of the project area would create an open space island within the lower elevations of the project area. This visual effect as seen from the KOP would be adverse but not significant because the project area is seen in the middleground and because the backdrop effect of the more distant ridgelines and peaks reduces the overall level of contrast.</td>
</tr>
<tr>
<td><strong>KOP #2:</strong> Tennant Avenue at US-101 looking east. (Photo #2)</td>
<td>Views to the project area are open at an approximate distance of between 1.9 and 3.2 miles. Virtually all residential lot development in the upper portions of the subdivision area would be visible. The upper portions of the entrance road would be seen but in a low-profile perspective. The water tanks would be seen. The view is backdropped by ridges and peaks.</td>
<td>Same as for KOP #1. Viewer sensitivity is low to moderate. Views from US-101 looking east to the project area would last up to approximately 3 minutes at a traveling speed of 65 miles per hour. Views from the Tennant Avenue interchange look directly into the northern portion of the project area and at a slight angle into the southern portion of the project area.</td>
<td>Moderate: Contrasts and impacts of overall residential lot development are essentially the same as for KOP #1. The impact to the view from this KOP to the project area would be adverse in terms of contrast, but not significant.</td>
</tr>
</tbody>
</table>
### Table 3.1-8 (Continued): Description of KOPs and Impact Analysis

<table>
<thead>
<tr>
<th>KOP # and Photo Point Reference</th>
<th>Visibility</th>
<th>Visual Sensitivity/Duration of View</th>
<th>Contrast/Change to Scenic Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KOP #3: Looking northeast from E. Middle Avenue at US-101. (Photo #3)</strong></td>
<td>Views to the project area are open at an approximate distance of between 1.8 and 2.8 miles. Virtually all residential lot development in the upper portions of the subdivision area would be visible. The water tanks would be visible. The main entrance road and its cut-and-fill slopes as it crosses Corralitos Creek and meanders up the hill would be visible above approximately the 500-foot elevation. The project area is mostly, but not entirely, backdropped by ridges and peaks. Buildings and structures associated with Lot #18 would come the closest to protruding above the perceived ridgeline.</td>
<td>Same as for KOP #1. <strong>Viewer sensitivity is low to moderate.</strong> Views from US-101 looking east to the project area would last up to approximately 3 minutes at a traveling speed of 65 miles per hour. Views from the Tennant Avenue interchange look directly into the northern portion of the project area and at a slight angle into the southern portion of the project area.</td>
<td><strong>High:</strong> Contrasts and impacts of overall residential lot development are essentially the same as KOP #1 with the exception that the entrance road and its associated cut-and-fill slopes would be in full view and attract attention. The overall impact of development within the Homesite and Transition Zones would remain moderate but less than significant because the view from this KOP to the project area is seen in the middleground and because the backdrop effect of more distant ridgelines and peaks reduces the overall level of contrast. Because of the open views to the entrance road, the impact of the entrance road would be adverse and potentially significant without implementation of appropriate mitigation. Development of structures that would protrude above the perceived ridgeline and would draw the viewer’s attention and represent a high contrast. The development would therefore be inconsistent with the ridgeline protection policies of the County General Plan and Zoning Ordinances. These policies include: General Plan Policies R-GD 31, R-GD 32, R-RC 98, R-RC 102, and R-LU 21; Design Review Policy “E”; and Design Review Guideline #3. This would be a significant impact without implementation of appropriate mitigation.</td>
</tr>
</tbody>
</table>
Long-term Views
Lasting visible impacts associated with roadway, utility, and drainage improvements as seen from US-101 and the Santa Clara Valley include:

- A series of cut-and-fill slope along the main entrance road and driveways would be evident. The most prominent would be a south-facing combination cut-and-fill slope along the main entrance.
- Asphalt road surfaces that would initially be seen when newly constructed, but the asphalt surface color would fade over time to a light gray and would only slightly contrast with the grasslands surrounding them.
- Aboveground water tanks that would be seen from some locations within the valley and from the Ed Wilson Trail in Coyote Lake-Harvey Bear Ranch County Park (KOP #11). Note: The visual impacts of the water storage tanks are addressed in the discussion of future residences below.

Visual impacts associated with the construction of the roadway and drainage improvements would be less than significant.

Future Residences
Development of the future residences would result in the views of roads, residential structures, fencelines, and water tanks. The viewing locations and general view distances are described below. Figure 3.1-2 shows the 25 proposed residence locations superimposed on the County’s site visibility analysis.

Views of Roads
Asphalt roads surfaces and grading patterns would be seen as lines with a pavement color contrasting with the grasslands surrounding them. The roads would be seen from residences immediately adjacent to the project area and along the Ed Wilson Trail in Coyote Lake-Harvey Bear County Park. Roads would be seen from the road system of the valley and the Martin Murphy Trail in Coyote Lake-Harvey Bear County Park.

Views of Residential Structures
Development of residential lots with buildings and structures would be seen from the Santa Clara Valley floor. Development of residential lots #C-1 and #C-2 would be partially seen from the Ed Wilson Trail in Coyote Lake-Harvey Bear County Park. Up to 6 residences and an unknown number of related structures, as well as the water tanks, would be seen from varying vantage points along the Martin Murphy Trail in Coyote Lake-Harvey Bear County Park.

A varying number of residences would be visible in the upper elevations of the subdivision area and an unknown number of related structures would be seen from some residences of the Jackson Oaks neighborhood and approximately 11 residences in the Rancho Robles subdivision.

Approximately 12 residences in the subdivision would be visible from the road system of the Santa Clara Valley.
3.1 AESTHETICS AND VISUAL RESOURCES

Views of Fencelines
Geometric patterns on the hillside created by changes in color and texture along the fence lines associated with the combined Homesite and Transition Zones would be seen from the following vantage points:

• Residences immediately adjacent to the project area
• Trail users along the Ed Wilson Trail in Coyote Lake-Harvey Bear County Park
• Trail users along the Martin Murphy Trail in Coyote Lake-Harvey Bear County Park
• Motorists along US-101 and the local road system within Santa Clara Valley

Views of Water Tanks
Aboveground water tanks that may protrude above the ridgeline would be seen from the Ed Wilson Trail in Coyote Lake-Harvey Bear County Park and from the road system of the valley.

Visual impacts of future residences and associated structures would be potentially significant. The following mitigation measures would reduce visual impacts of the future residences and associated structures to a less-than-significant level:

Mitigation Measure Aesthetics-1: To reduce the visual contrast of the water tanks as seen from nearby residences, the Coyote Lake-Harvey Bear Ranch County Park, and the Santa Clara Valley floor, water tank systems, including exposed piping and tank support facilities, shall be painted with LRV of less than 45.

Mitigation Measure Aesthetics-2: To reduce the visual presence of the water tanks as seen from the Ed Wilson Trail in Coyote Lake-Harvey Bear Ranch County Park, the applicant shall develop a grading plan and landscaping plans that may include berming and or thick vegetation to obscure views from the trails. Plans shall be provided to the County of Santa Clara for review and acceptance.

Mitigation Measure Aesthetics-3: To avoid visual impacts from residential structures protruding above the perceived ridgeline, the future residence developer shall develop vegetative screening plans prepared by a licensed Landscape Architect. These plans shall include planting and irrigation plans and specifications. Plans shall be submitted to County of Santa Clara for review and acceptance prior to building permit issuance for construction. The specific visual design goals of the plans will be to:

(a) Screen views to Homesite from adjacent residences to the project area.
(b) Screen views to Homesite from Coyote Lake-Harvey Bear Ranch County Park through selective planting of native species along the eastern and southern boundaries of the project area.
(c) Provide a visual backdrop (such as taller trees or hedge rows) to any building site as seen from the Santa Clara Valley floor where the allowable structure height limit would extend above existing ridgelines to avoid the skylining effect of structures.
All plants shall be watered for a minimum of 3 years from time of planting and until such time as the plants are established and can survive without additional watering. The tree species included in the applicant’s proposed Design Guidelines that could be used to provide vegetative screening include, but are not limited to, the following:

Homesite Zone
- Fan-Tex Ash (*Fraxinus velutina* 'Fan-Tex')
- Hinds’ Black Walnut (*Juglans californica hindsii*)
- Chinese Pistache (*Pistacia chinensis*)
- London Plane Tree (*Platanus x acerifolia* 'Columbia')
- California Sycamore (*Platanus racemosa*)
- Coast Live Oak (*Quercus agrifolia*)

Transition Zone, Natural Lands Zone, and Open Space Lots
- California Sycamore (*Platanus racemosa*)
- Coast Live Oak (*Quercus agrifolia*)
- Valley Oak (*Quercus lobata*)
- Ceanothus (*Ceanothus spp.*)
- California Buckeye (*Aesculus californica*)
- Coyote Brush (*Baccharis pilularis*)

To help ensure the backdrop effects of plantings are effective when the residential construction takes place, the planting and irrigation plans shall be implemented concurrently with construction. Planted areas shall be protected during all construction activities.

The project would not create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area. *(Less than significant impact)*

**Construction**

No nighttime construction activities are proposed, nor is there any security lighting proposed for constructing staging. Construction would therefore not have any impacts related to light or glare.

**Subdivision Improvements**

Neither the primary access road nor any of the secondary access roads would have street lights. Motion-activated lights are proposed for the entrance from Maple Avenue. While the addition of motion-sensor lighting would create intermittent lighting, this effect would only be seen from the immediate area and would be temporary. This lighting would result in a less than significant impact.
Future Residences
The project proposes that the light reflectivity value associated with any building surfaces shall not exceed 45. The potential for residences, outbuildings, and private recreation features to include lighting that could be readily evident from the Santa Clara Valley floor is less than significant.

The project would be generally in compliance with the Guidelines for Design Review Approval. (Less than significant with the incorporation of mitigation measures)

Construction
Construction-related activities covered in the County’s Guidelines for Design Review are limited to the protection of existing trees during construction.

Approximately 75 trees would be removed to construct the primary and secondary access roads. These trees would be replaced with new trees at a 3:1 ratio. Over time, this replacement planting would mitigate the visual effects of tree removal to less-than-significant level.

No trees would be removed from any of the proposed residential lots except for trees that may be diseased or damaged.

Subdivision Improvements
Grading associated with the primary and secondary access roads could potentially be seen from the valley floor in the short-term, but in the long term would blend in with the surrounding native vegetation. With the exception of the water tanks that would be visible from the valley floor, all utilities would be underground. Mitigation Measure Aesthetics-1 would reduce the visibility of the two water tanks as seen from the valley floor to a less-than-significant level.

Future Residences
Implementation of Mitigation Measure Aesthetics-3 would ensure that the Santa Clara County Design Review Guidelines shall be applied to all facilities and areas of the Homesite and Transition Zones of individual residential lots. As such, impacts from buildings and structures to views from the valley floor would be less than significant.

Proposed residences would be located near a ridgeline visible from the valley floor. (Less than significant with the incorporation of mitigation measures)

Construction
The aesthetic impacts of construction activities are unavoidable and are considered temporary (less than 5 years). Standard construction methods and best management practices, such as watering for dust control, would be followed to minimize the visual effects caused by construction. Impacts from construction activities would be less than significant.

Subdivision Improvements
The uppermost portions of the primary and secondary access roads would be visible, but in a low-profile perspective that would not change the character of the ridgeline. As seen from the valley floor, the two water tanks would be backdropped by a hillside. The subdivision improvements would have no impacts to the ridgeline.
Future Residences
The development of up to 12 of the residential lots could result in buildings and structures that would be seen from the valley floor. With the implementation of Mitigation Measure Aesthetics-3, impacts would be reduced to a less than significant level.
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3.2 AGRICULTURAL AND FORESTRY RESOURCES

3.2.1 Environmental Setting
The project area is located in a rural area of Santa Clara County that has historically included agricultural land use. Areas within the City of Morgan Hill north and south of the project area include urban residential development and limited agricultural land. Agricultural areas west of the project area are on the valley floor and generally include row crops. The project area and areas to the east include rolling hills that are more conducive to open grazing than crop production.

Agricultural Land Use
The Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency Department of Conservation (CDC) rates land according to soil quality, irrigation status, and current land use. The project area is designated as grazing land as shown on Figure 3.2-1. There is Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland west of the project area. Definitions of farmland designations are provided in Table 3.2-1.

The property west of Carey Lane includes agricultural land planted in row-crops and hay. According to FMMP, approximately 563 acres of the total 566.85-acre subdivision area is classified as Grazing Land (i.e., approximately 99 percent) (CDC 2010), and is currently used for grazing. The subdivision area is not under a Williamson Act contract.

Forest Land
The project area does not include any areas identified as forest land. There are no current forestry uses in the project area or project vicinity. Since no forest land or forestry uses are located in the project vicinity, forestry resources are not addressed in the impacts and mitigation discussion below.

3.2.2 Regulatory Setting
Federal
There are no federal laws or regulations pertaining to agricultural and forestry resources applicable to the proposed project.

State
The California Land Conservation Act of 1965 (commonly referred to as the Williamson Act) enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. These lands are subject to a lower tax rate.
3.2 AGRICULTURAL AND FORESTRY RESOURCES

Figure 3.2-1: FMMP and Williamson Act Land Classifications

[Map showing FMMP and Williamson Act Land Classifications with legends and proposed subdivision area boundary.]
### Table 3.2-1: Definitions of Farmland Designations

<table>
<thead>
<tr>
<th>Designation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime Farmland</td>
<td>Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.</td>
</tr>
<tr>
<td>Farmland of Statewide Importance</td>
<td>Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.</td>
</tr>
<tr>
<td>Unique Farmland</td>
<td>Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.</td>
</tr>
<tr>
<td>Farmland of Local Importance</td>
<td>Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.</td>
</tr>
<tr>
<td>Grazing Land</td>
<td>Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.</td>
</tr>
</tbody>
</table>

Source: CDC 2011

**Local**

The Santa Clara County General Plan (Santa Clara County 1994) Land Use policies relevant to agricultural and forestry resources of the proposed project are listed below.

**C-RC 37** Agriculture should be encouraged and agricultural lands retained for their vital contributions to the overall economy, quality of life, and for their functional importance to Santa Clara County, in particular:

- (a) local food production capability;
- (b) productive use land not intended for urban development; and
- (c) protection of public health and safety.

**C-RC 40** Long-term land use stability and dependability to preserve agriculture shall be maintained and enhanced by the following general means:

- (a) limiting the loss of valuable farmland from unnecessary and/or premature urban expansion and development;
- (b) regulating nonagricultural uses in agricultural areas, and their intensity and impacts on adjacent lands;
- (c) maintaining agriculturally viable parcel sizes; and
- (d) minimizing conflicts between adjacent agricultural and nonagricultural land uses, through such means as right-to-farm legislation and mediation of nuisance claims.
3.2 AGRICULTURAL AND FORESTRY RESOURCES

R-RC 57 Agriculture shall be encouraged and prime agricultural lands retained for their value to the overall economy and quality of life of Santa Clara County, including:

(a) local food production capability;
(b) productive use of lands not intended or suitable for urban development; and
(c) preservation of a diminishing natural resource, prime agricultural soils.

R-RC 65 The long term economic viability of agricultural activities shall be maintained and enhanced by promoting:

(a) improved markets for locally-grown products;
(b) Williamson Act provisions for property tax relief;
(c) use of innovative, more cost-efficient growing techniques;
(d) review of the economic impacts of regulation and other means of enhancing competitiveness; and
(e) adequate agricultural worker housing.

3.2.3 Thresholds of Significance
The proposed project would result in a significant impact if it would:

• Convert 10 or more acres of farmland classified as prime to nonagricultural use
• Conflict with existing zoning for agricultural use
• Conflict with an existing Williamson Act Contract
• Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to nonagricultural use

3.2.4 Impacts and Mitigation
The project would not convert 10 or more acres of farmland classified as prime to nonagricultural use. (No impact)
The project area does not include any areas of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) mapped by FMMP. The proposed roadway, utility, private recreation, and infrastructure improvements, as well as future residential development, would have no impact on prime farmland and would not convert prime farmland to nonagricultural use. No impacts would occur.

The project would not conflict with existing zoning for agricultural use. (No impact)
The project area is zoned for rural residential and hillside development (Figure 3.10-3). The project area does not include any areas exclusively zoned for agricultural use. Areas zoned for agricultural use are located west of the project area and ranchlands are located to the east. The proposed project would not conflict with existing zoning for agricultural use and, therefore, would have no impact.

The project would not conflict with an existing Williamson Act Contract. (No impact)
The project area is not subject to a Williamson Act contract. The proposed project would not conflict with a Williamson Act contract and, therefore, would have no impact.
3.2 AGRICULTURAL AND FORESTRY RESOURCES

The project would not involve significant changes in the existing environment that, due to their location or nature, could result in conversion of farmland to nonagricultural use. (*Less than significant impact*)

The project area is not currently used as farmland, but is used as grazing land. The project area is zoned for rural residential and hillside development. Construction would displace some of the existing cattle grazing uses; however, cattle grazing could still occur on other parts of the property during construction. Since the property is not zoned for agricultural use, the loss of some current grazing operations during construction would be considered less than significant.

Post-construction, the proposed subdivision improvements and future residential development would result in the permanent loss of approximately 254 acres of land that is currently used for grazing (Table 3.2-2). Since the proposed project area was zoned by the County for rural residential and hillside development, and conversion of grazing land to rural residential development is consistent with the zoning for the project area, impacts regarding the loss of current grazing operations would be less than significant. The proposed project would also include the potential addition of agricultural land within the transition zones defined for each lot. The allowed agricultural uses associated with the future residential development are defined in Section 2.5.7, adding some agricultural lands where there were not previously designated agricultural lands.

<table>
<thead>
<tr>
<th>Project Phase</th>
<th>Approximate Loss of Grazing Land</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subdivision Improvements</td>
<td>51 acres</td>
</tr>
<tr>
<td>Future Residences</td>
<td>203 acres</td>
</tr>
</tbody>
</table>
3.3 AIR QUALITY

3.3.1 Environmental Setting
Ambient air quality is affected by local climate, topography, and pollutants emitted into the atmosphere from activities such as farming, construction, industrial facilities, and traffic.

Air Basin
The project area is located in the southern end of Santa Clara County, just south and east of the City of Morgan Hill and in the foothills of the Diablo Range, and is within the San Francisco Bay Area Air Basin (SFBAAB). This air basin includes Marin, San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, and Napa Counties and portions of Solano and Sonoma Counties. The City of Morgan Hill is located within Santa Clara County. Elevations in the SFBAAB range from sea level along the coast and the bay front to over 4,000 feet AMSL in the Diablo Mountain Range.

Climate
Temperatures in the SFBAAB average 58 degrees Fahrenheit (°F) annually, and range from an average low of 40°F on winter mornings to a high of 80°F on summer afternoons. Daily and seasonal fluctuations in temperatures are reduced because of the moderating effects of the Pacific Ocean and San Francisco Bay. However, further inland where the moderating effect of the Bay is not as strong, temperature extremes are greater.

Precipitation in the SFBAAB is highly variable and confined almost exclusively to the “rainy” season from early November to mid-April. Average annual precipitation in the City of Morgan Hill is 18.9 inches, and the summer months are typically dry. Snowfall is rare, about once every 20 years, and is light and short-lived when it occurs. The majority of area rainfall is derived from fringes of mid-latitude storms; shifts in the annual storm track of a few hundred miles can result in annual variations from a very wet year to near-drought conditions.

Winds across the City of Morgan Hill are strongly influenced by the wind patterns of the Santa Clara Valley. The valley, formed by the Santa Cruz Mountains to the west and the Diablo Range to the east, experiences a prevailing flow roughly parallel to the valley’s northwest-southeast axis with a north-northwesterly sea breeze extending up the valley during the afternoon and early evening and a light south-southeasterly flow occurring during the late evening and early morning. In summer, a convergence zone is sometimes observed in the southern end of the valley between Gilroy and Morgan Hill, when air flowing from Monterey Bay through the Pajaro Gap gets channeled northward into the south end of Santa Clara Valley and meets with the prevailing north-northwesterly winds. Speeds are greatest in the spring and summer, and least in the fall and winter. Nighttime and early morning hours have light winds and are frequently calm in all seasons, whereas summer afternoons and evenings are quite breezy. Strong winds are rare, coming only with an occasional winter storm (Bay Area Air Quality Management District [BAAQMD] 2010a).
3.3 AIR QUALITY

Baseline Air Quality
The air pollution potential of the Santa Clara Valley is high. The valley has a large population and the largest complex of mobile sources in the Bay Area making it a major source of carbon monoxide (CO), particulate, and photochemical air pollution. In addition, photochemical precursors from San Francisco, San Mateo, and Alameda Counties can be carried along by the prevailing winds to the Santa Clara Valley making it also a major ozone (O₃) receptor. Geographically, the valley tends to channel pollutants to the southeast as a result of its northwest-southeast orientation, and concentrate pollutants by its narrowing to the southeast. Meteorologically, on high-ozone, low-inversion summer days, pollutants can be recirculated by the prevailing northwesterly winds in the afternoon and the light drainage flow in the late evening and early morning, increasing the impact of emissions significantly. On high particulate and CO days during late fall and winter, clear, calm, and cold conditions associated with a strong surface-based temperature inversion prevail (BAAQMD 2010a).

The U.S. Environmental Protection Agency (EPA) has established a National Ambient Air Quality Standard (NAAQS) for O₃, nitrogen dioxide (NO₂), CO, sulfur dioxide (SO₂), particulate matter less than 10 microns in diameter (PM₁₀), and particulate matter less than 2.5 microns in diameter (PM₂.₅). The California Air Resources Board (CARB) has established a California Ambient Air Quality Standard (CAAQS) for O₃, CO, NO₂, SO₂, sulfates, PM₁₀, PM₂.₅, lead, hydrogen sulfide (H₂S), and visibility-reducing particles.

Table 3.3-1 shows the current air quality designations under the Clean Air Act (CAA) and CARB standards. Nonattainment and attainment designations are based on whether or not air quality standards have been achieved. Some air basins or areas have not received sufficient analysis for certain criteria air pollutants and are designated as unclassified for those pollutants.

Sensitive Receptors
Sensitive receptors include residences, schools, assisted living facilities, and hospitals. The proposed project would allow for construction of 25 new residences. The residences surrounding the proposed project area would all be considered sensitive receptors with regards to construction activities. The new residences would be considered new sensitive receptors to any air contaminant sources in the surrounding area.

Toxic Air Contaminants
Toxic air contaminants are air pollutants that may cause adverse health effects, particularly cancer or reproductive harm. The Air Toxics “Hot Spots” Information and Assessment Act (Assembly Bill [AB] 2588) was enacted in September 1987. The project would not be considered a stationary source subject to AB 2588 requirements.
### Table 3.3-1: National and State Air Quality Designations for the San Francisco Bay Area Air Quality Management District

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>National Designation</th>
<th>State Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone (O₃) (1-hour)</td>
<td>-</td>
<td>Nonattainment</td>
</tr>
<tr>
<td>Ozone (O₃) (8-hour)</td>
<td>Nonattainment</td>
<td>Nonattainment</td>
</tr>
<tr>
<td>Fugitive Dust (PM₁₀) (Annual Arithmetic Mean)</td>
<td>-</td>
<td>Nonattainment</td>
</tr>
<tr>
<td>Fugitive Dust (PM₁₀) (24-hour)</td>
<td>Unclassified</td>
<td>Nonattainment</td>
</tr>
<tr>
<td>Fugitive Dust (PM₂.₅) (Annual Arithmetic Mean)</td>
<td>Attainment</td>
<td>Nonattainment</td>
</tr>
<tr>
<td>Fugitive Dust (PM₂.₅) (24-hour)</td>
<td>Nonattainment¹</td>
<td>-</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO₂) (Annual Arithmetic Mean)</td>
<td>Attainment</td>
<td>-</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO₂) (1-hour)</td>
<td>Unclassified</td>
<td>Attainment</td>
</tr>
<tr>
<td>Carbon Monoxide (CO) (1-hour)</td>
<td>Attainment</td>
<td>Attainment</td>
</tr>
<tr>
<td>Carbon Monoxide (CO) (8-hour)</td>
<td>Attainment</td>
<td>Attainment</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO₂) (Annual Arithmetic Mean)</td>
<td>Attainment</td>
<td>-</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO₂) (24-hour)</td>
<td>Attainment</td>
<td>Attainment</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO₂) (1-hour)</td>
<td>Attainment</td>
<td>Attainment</td>
</tr>
<tr>
<td>Sulfates</td>
<td>-</td>
<td>Attainment</td>
</tr>
<tr>
<td>Lead (Calendar Quarter)</td>
<td>Attainment</td>
<td>-</td>
</tr>
<tr>
<td>Lead (30-Day Average)</td>
<td>Attainment</td>
<td>-</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>-</td>
<td>Unclassified</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>-</td>
<td>No Information Available</td>
</tr>
<tr>
<td>Visibility-Reducing Particles</td>
<td>-</td>
<td>Unclassified</td>
</tr>
</tbody>
</table>

**NOTE:**

¹ EPA lowered the 24-hour PM₂.₅ standard from 65 micrograms per cubic meter to 35 micrograms per cubic meter in 2006. EPA designated the Bay Area as nonattainment for the 35 micrograms per cubic meter PM₂.₅ standard as of December 14, 2009.

Source: BAAQMD 2012
3.3 AIR QUALITY

3.3.2 Regulatory Setting

Federal

National Ambient Air Quality Standards (NAAQSs)
The CAA, which was last amended in 1990, requires EPA to set NAAQSs (40 CFR Part 50) for pollutants considered harmful to public health and the environment. The CAA established two types of national air quality standards. Primary standards set limits to protect public health, including the health of sensitive populations such as children and the elderly, and people with asthma. Secondary standards set limits to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

The EPA Office of Air Quality Planning and Standards has set NAAQSs for six principal pollutants, which are called criteria pollutants. Units of measure for the standards are parts per million (ppm) by volume, milligrams per cubic meter of air (mg/m³), and micrograms per cubic meter of air (µg/m³).

State

California Air Resources Board
Areas of California have naturally occurring asbestos minerals. Section 93105 Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations of the California Code of Regulations, Title 17, addresses hazards associated with ground disturbance in these areas.

(a) Effective Date.
   (1) No later than 120 days after the approval of this section by the Office of Administrative Law, each air pollution control and air quality management district must:
      (A) Implement and enforce the requirements of this section; or
      (B) Propose their own asbestos airborne toxic control measure as provided in Health and Safety Code section 39666(d).
   (2) Pre-Existing Operations: The owner / operator of any project in which the construction, grading, quarrying, or surface mining operation started before the effective date of this section shall comply with this section by:
      (A) The date the district begins implementing and enforcing this section as required in subsection (a)(1)(A);
      (B) The compliance date specified in the airborne toxic control measure adopted by the district as required in subsection (a)(1)(B).

(b) Applicability. Unless one of the specific exemptions specified in subsection (c) applies, this section shall apply to any construction, grading, quarrying, or surface mining operation on any property that meets any of the following criteria:

1 An exemption may be granted if a geologic evaluation has been conducted by a registered geologist and found no serpentine or ultramafic rock is likely to be found.
(1) Any portion of the area to be disturbed is located in a geographic ultramafic rock unit; or
(2) Any portion of the area to be disturbed has naturally-occurring asbestos, serpentine, or ultramafic rock as determined by the owner / operator, or the Air Pollution Control Officer (APCO); or
(3) Naturally-occurring asbestos, serpentine, or ultramafic rock is discovered by the owner / operator, a registered geologist, or the APCO in the area to be disturbed after the start of any construction, grading, quarrying, or surface mining operation.

State Implementation Plan
The State Implementation Plan (SIP) describes measures the state uses to attain and maintain federal NAAQSs. The SIP consists of narrative, rules, technical documentation, and agreements that an individual state uses to clean up polluted areas.

California Clean Air Act
The California Clean Air Act is a California law passed in 1988 that provides the basis for air quality planning and regulation independent of federal regulations. A major element of the California Clean Air Act is the requirement that local air districts in violation of CAAQS must prepare attainment plans that identify air quality problems, causes, trends, and actions to be taken to attain and maintain California’s air quality standards by the earliest practicable date. Table 3.3-2 lists both the federal and state air quality standards.

Local
Bay Area Air Quality Management District
Air quality is managed at the local level through land use and development planning practices. The proposed project would be regulated under the jurisdiction of BAAQMD. BAAQMD is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws.

Pursuant to the California Clean Air Act, BAAQMD developed the Clean Air Plan (CAP) to reduce emission of certain air pollutants that lead to the formation of O₃. The 2010 CAP updates the most recent O₃ plan and addresses particulate matter emissions and concentrations in anticipation of future planning requirements. The CAP outlines a control strategy review to ensure that the CAP continues to include "all feasible measures" to reduce ozone, an update of the BAAQMD’s emission inventory, estimates of emission reductions achieved by the CAP, and an assessment of air quality trends. The CAP includes measures to reduce air pollutant emissions from industrial facilities, commercial processes, motor vehicles, and other sources. The goal of the CAP is to improve air quality in the region through tighter industry controls, cleaner cars and trucks, cleaner fuels, and increased commute alternatives (BAAQMD 2010b).
### 3.3 AIR QUALITY

#### Table 3.3-2: State and Federal Ambient Air Quality Standards

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>California Standard(^1)</th>
<th>National Standard(^2)</th>
<th>Secondary(^3,5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Concentration(^3)</td>
<td>Primary(^3,4)</td>
<td></td>
</tr>
<tr>
<td>Ozone (O(_3))</td>
<td>1 Hour</td>
<td>0.09 ppm (180 μg/m(^3))</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8 Hours</td>
<td>0.070 ppm (137 μg/m(^3))</td>
<td>0.075 ppm (147 μg/m(^3))</td>
<td>Same as Primary Standard</td>
</tr>
<tr>
<td>Particulate Matter (PM(_{10}))</td>
<td>24 Hours</td>
<td>50 μg/m(^3)</td>
<td>150 μg/m(^3)</td>
<td>Same as Primary Standard</td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean</td>
<td>20 μg/m(^3)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Particulate Matter (PM(_{2.5}))</td>
<td>24 Hours</td>
<td>—</td>
<td>35 μg/m(^3)</td>
<td>Same as Primary Standard</td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean</td>
<td>12 μg/m(^3)</td>
<td>15.0 μg/m(^3)</td>
<td></td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>8 Hours</td>
<td>9.0 ppm (10 mg/m(^3))</td>
<td>9 ppm (10 mg/m(^3))</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>1 Hour</td>
<td>20 ppm (23 mg/m(^3))</td>
<td>35 ppm (40 mg/m(^3))</td>
<td></td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO(_2))</td>
<td>Annual Arithmetic Mean</td>
<td>0.030 ppm (57 μg/m(^3))</td>
<td>0.053 ppm (100 μg/m(^3))</td>
<td>Same as Primary Standard</td>
</tr>
<tr>
<td></td>
<td>1 Hour</td>
<td>0.18 ppm (339 μg/m(^3))</td>
<td>0.100 ppm</td>
<td></td>
</tr>
<tr>
<td>Sulfur Dioxide (SO(_2))</td>
<td>Annual Arithmetic Mean</td>
<td>—</td>
<td>0.030 ppm (80 μg/m(^3))</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>24 Hours</td>
<td>0.04 ppm (105 μg/m(^3))</td>
<td>0.14 ppm (365 μg/m(^3))</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean</td>
<td>—</td>
<td>0.030 ppm (80 μg/m(^3))</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>1 Hour</td>
<td>0.25 ppm (655 μg/m(^3))</td>
<td>0.075 ppm (196 μg/m(^3))</td>
<td>—</td>
</tr>
<tr>
<td>Lead(^6)</td>
<td>30-Day Average</td>
<td>1.5 μg/m(^3)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Calendar Quarter</td>
<td>—</td>
<td>1.5 μg/m(^3)</td>
<td>Same as Primary Standard</td>
</tr>
<tr>
<td></td>
<td>Rolling 3-Month Average(^7)</td>
<td>—</td>
<td>1.5 μg/m(^3)</td>
<td></td>
</tr>
<tr>
<td>Visibility-Reducing Particles</td>
<td>8 Hours</td>
<td>Extinction coefficient of 0.23 per kilometer — visibility of 10 miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent</td>
<td>No Federal Standards</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Sulfide (H(_2)S)</td>
<td>1 Hour</td>
<td>0.03 ppm (42 μg/m(^3))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinyl Chloride(^6)</td>
<td>24 Hours</td>
<td>0.01 ppm (26 μg/m(^3))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfates</td>
<td>24 Hours</td>
<td>25 μg/m(^3)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 3.3-2 (Continued): State and Federal Ambient Air Quality Standards

<table>
<thead>
<tr>
<th>NOTES:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>California standards for O₃, CO (except Lake Tahoe), SO₂ (1- and 24-hour), NO₂, and suspended particulate matter (PM₁₀, PM₂.₅, and visibility-reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQSs are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.</td>
</tr>
<tr>
<td>2</td>
<td>National standards (other than for O₃, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O₃ standard is attained when the fourth-highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration greater than 150 μg/m³ is equal to or less than 1. For PM₂.₅, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact EPA for further clarification and current federal policies.</td>
</tr>
<tr>
<td>3</td>
<td>Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.</td>
</tr>
<tr>
<td>4</td>
<td>National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.</td>
</tr>
<tr>
<td>5</td>
<td>National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.</td>
</tr>
<tr>
<td>6</td>
<td>CARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.</td>
</tr>
<tr>
<td>7</td>
<td>National lead standard, rolling 3-month average: final rule signed October 15, 2008.</td>
</tr>
</tbody>
</table>

Source: BAAQMD 2012
3.3 AIR QUALITY

3.3.3 Thresholds of Significance
The proposed project would result in a significant impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)
- Expose sensitive receptors to substantial pollutant concentrations
- Create objectionable odors affecting a substantial number of people

3.3.4 Impacts and Mitigation
The project would not conflict with or obstruct implementation of the applicable air quality plan. *(Less than significant impact)*
The most recently adopted air quality plan for the Bay Area is the 2010 CAP. The 2010 CAP is an update to the BAAQMD’s 2005 Ozone Strategy to comply with State air quality planning requirements. The 2010 CAP also serves as a multi-pollutant air quality plan to protect public health and the climate. The 2010 CAP control strategy includes revised, updated, and new measures in the three traditional control measure categories:

- Stationary sources measures
- Mobile source measures
- Transportation control measures

The 2010 CAP identifies two new categories of control measures, including land use and local impact measures and energy and climate measures.

BAAQMD recommends that the agency approving a project where an air quality plan consistency determination is required should analyze the project with respect to the following questions:

1. Does the project support the primary goals of the air quality plan?
2. Does the project include applicable control measures from the air quality plan?
3. Does the project disrupt or hinder implementation of any 2010 CAP control measures?

If the answer to questions 1 and 2 is yes and the answer to question 3 is no, then the BAAQMD considers the project consistent with air quality plans prepared for the Bay Area. Any project that would not support the 2010 CAP goals would not be considered consistent with the 2010 CAP. The recommended measure for determining project support of these goals is consistency with the CEQA thresholds of significance. As presented in the subsequent impact discussions, the project would not exceed the established significance thresholds; therefore, the project would support the primary goals of the 2010 CAP.
Projects that incorporate all feasible air quality plan control measures are also considered consistent with the 2010 CAP. One 2010 CAP control measure, MSM C-1, would be applicable to the project. The intent of MSM C-1 is to reduce diesel particulate emissions from construction equipment through either installation of filters or upgrading to cleaner-burning engines. The project would be consistent with this measure because the applicant would be required to comply with phase-in of the CARB In-Use Off-Road Diesel Vehicle Regulation (CARB 2011b).

The project would support the primary goals of the 2010 CAP, it would include the applicable 2010 CAP control measures, and it would not disrupt or hinder implementation of any 2010 CAP control measures. Therefore, the project would not conflict with or obstruct implementation of with the 2010 CAP.

The project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. (Less than significant impact)

Construction
The project has the potential to emit several criteria pollutants during the construction phase. Emissions estimates were calculated for the project using URBEMIS 2007 Version 9.2.4, as recommended by BAAQMD (2012). Model assumptions and results are shown in Appendix F and summarized in Table 3.3-3.

Due to the existing court order\(^2\) on BAAQMD’s adopted 2010 CEQA Thresholds of Significance, BAAQMD cannot recommend specific thresholds of significance for use by local governments, as stated in BAAQMDs May 2012 CEQA Air Quality Guidelines. Each local jurisdiction is encouraged to establish its own emissions criteria.

Santa Clara County has opted to use the BAAQMD’s CEQA Thresholds Options and Justification Report developed by staff in 2009\(^3\) to provide for quantitative and qualitative thresholds by which to measure impacts of the project for the purposes of this analysis because these thresholds were based on sound science. The County would consider the construction of this project to have a less than significant impact on air quality if the thresholds for criteria pollutants as provided in Table 2 of the CEQA Thresholds Options and Justification Report (2009)

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2 The BAAQMD’s June 2010 adopted thresholds of significance were challenged in a lawsuit. On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds. The court found that the adoption of the thresholds was a project under CEQA and ordered the BAAQMD to examine whether the thresholds would have a significant impact on the environment under CEQA before recommending their use. The court did not determine whether the thresholds are or are not based on substantial evidence and thus valid on the merits. The court issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the BAAQMD had complied with CEQA. Lead agencies may still rely on the BAAQMD’s CEQA Guidelines for assistance in calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures.

3 The County has determined that the BAAQMD thresholds are based on substantial scientific evidence to be applicable to this project.
### 3.3 AIR QUALITY

#### Table 3.3-3: Estimated Construction Emissions of Criteria Pollutants by Year and Thresholds

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Estimated Total Unmitigated Emissions in tons/yr</th>
<th>Threshold (tons/yr)</th>
<th>Violation?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013</td>
<td>2014</td>
<td>2015</td>
</tr>
<tr>
<td>ROG</td>
<td>0.55</td>
<td>0.48</td>
<td>0.66</td>
</tr>
<tr>
<td>NOx</td>
<td>4.5</td>
<td>3.26</td>
<td>4.45</td>
</tr>
<tr>
<td>CO</td>
<td>2.42</td>
<td>2.44</td>
<td>3.52</td>
</tr>
<tr>
<td>SO2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PM10</td>
<td>4.60</td>
<td>1.93</td>
<td>2.88</td>
</tr>
<tr>
<td>PM2.5</td>
<td>1.10</td>
<td>0.53</td>
<td>0.77</td>
</tr>
</tbody>
</table>

Source: Santa Clara County 2012

are not exceeded and the County’s Basic Construction Mitigation Measures for construction projects are implemented, as identified below.

1. Water all active construction areas at least twice daily.
2. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
3. Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
4. Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites. The use of dry powder sweeping is prohibited.
5. Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets. The use of dry powder sweeping is prohibited.
6. All construction vehicles, equipment, and delivery trucks shall have a maximum idling time of 5 minutes (as required by the California Airborne Toxic Control Measure Title 13, Section 2485 of the California Code of Regulations). Engines shall be shut off if construction requires longer idling time unless necessary for proper operation of the vehicle.
7. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
8. All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
9. Post a sign that is at least 32 square feet in size with a minimum 2-inch letter height visible near the entrance of the construction site that identifies the following requirements. Obtain an encroachment permit for the sign from the Roads Department or other applicable agency if required.
10. 15 miles per hour speed limit.
11. 5 minutes maximum idling time of vehicles.
3.3 AIR QUALITY

12. Telephone number to contact BAAQMD regarding dust complaints. Include the air pollution complaint hotline phone number of the BAAQMD, which is 1 (800) 334-6267.
13. All fill slopes shall be compacted and left in a smooth and firm condition capable of withstanding weathering.
14. All exposed disturbed areas shall be seeded with brome seed spread at the rate of 5 pounds per 1,000 square feet (or approved equivalent). Seeding and watering shall be maintained as required to ensure growth.
15. All ditches shall be lined per County Standard SD8.
16. All storm drainage structures shall be installed with effective entrance and outfall erosion controls, such as sacked concrete rip-rap. Energy dissipaters shall be installed at all ditch outfalls. Where outfalls are not into an existing creek or water course, runoff shall be released to sheet flow.
17. Only those trees with trunk diameters greater than 12 inches measured 4.5 feet above the ground that are identified for removal in the project plans are authorized for removal. Any other such trees are not to be removed unless an amended plan is approved or a separate tree removal permit is obtained from the Planning Office. It is the applicant’s responsibility to ensure that the removal of additional trees has been permitted.
18. Prior to grading completion and release of the bond required by the County, all graded areas shall be reseeded in conformance with the County Grading Ordinance to minimize the visual impacts of the grade slopes and reduce the potential for erosion of the subject site.
19. Approved permanent landscaping must be installed and field approved by the County Planning Office prior to final approval by the County Engineer, and final occupancy release by the Building Inspection Office.
20. The owner shall prepare and present a winterization report to the County Inspector for review prior to October 15th of every year.

The project would not result in any emissions that exceed the thresholds established for this project. The County’s required BMPs and protection measures would also be implemented to ensure impacts would be less than significant.

Subdivision Improvements and Future Residences
Approval of the proposed project would lead to the future development of single-family, detached residential units, which in turn would lead to the generation of vehicular trips. Vehicular trips are the primary source of airborne emissions for residential development.

The County is also proposing to use the significant emissions thresholds for project “operation” established in the CEQA Thresholds Options and Justification Report (BAAQMD 2009) (Table 5 in the report) to compare the emissions from the use of road and the future residences against emissions thresholds. The total operational emissions were calculated using the URBEMIS model and are presented in Table 3.3-4 along with the thresholds. Support data is provided in Appendix F.
Emissions of criteria pollutants would be less than the thresholds, and impacts to air quality would therefore be less than significant.

### Table 3.3-4: Estimated Operation Emissions of Criteria Pollutants by Year and Thresholds

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Estimated Annual Emissions (tons/yr)</th>
<th>Thresholds</th>
<th>Violation?</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROG</td>
<td>0.27</td>
<td>15</td>
<td>No</td>
</tr>
<tr>
<td>NOx</td>
<td>0.33</td>
<td>15</td>
<td>No</td>
</tr>
<tr>
<td>CO</td>
<td>3.11</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SO2</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>PM10</td>
<td>0.56</td>
<td>15</td>
<td>No</td>
</tr>
<tr>
<td>PM2.5</td>
<td>0.11</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Source: Santa Clara County 2012

The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors). *(Less than significant impact)*

The total project construction and operations emissions of criteria pollutants are considerably less than the established significant emissions thresholds established by the County for this project, as previously discussed (Tables 3.3-3 and 3.3-4). Since the emissions would be considerably less than the thresholds, the project is not anticipated to cause a cumulatively considerable net increase in any of the criteria pollutants for which the region is in non-attainment (PM10, PM2.5, and ozone).

The project would not expose sensitive receptors to substantial pollutant concentrations. *(Less than significant impact with mitigation incorporated)*

**Construction**

Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollution. Hospitals, schools, convalescent facilities, parks, playgrounds, and residential areas are examples of sensitive receptors. The proposed project site is currently used for livestock grazing. There are existing residential areas to the north and west of the proposed project; however there are no sensitive receptors within 1,000 feet of planned construction disturbances, based on a review of aerial photos. The project would not expose sensitive receptors to significant pollutant concentrations. The criteria pollutant emissions from construction would be minimal and considerably less than thresholds. Impacts would be less than significant.

While the project would not expose sensitive receptors to criteria pollutants, the project construction has the potential to expose people to airborne asbestos through disturbance of naturally occurring asbestos (NOA) in bedrock and soils. NOA is associated with serpentinite rock formations in many areas of California, including portions of the project footprint.
3.3 AIR QUALITY

BAAQMD enforces the California Airborne Toxic Control Measure (ATCM), which regulates the NOA emissions from grading, quarrying, and surface mining operations at sites which contain ultramafic rock.

 Portions of the proposed project would be located within an ultramafic rock unit as discussed in Section 3.6: Geology and Soils. BAAQMD requires an Asbestos Dust Mitigation Plan for construction in areas of asbestos, ultramafic rock, and serpentine that primarily minimize dust during grading. Mitigation Measure Air Quality-1 requires that a Dust Mitigation Plan be prepared pursuant to BAAQMD requirements. With implementation of this measure impacts to people from exposure to NOA would be less than significant.

**Mitigation Measure Air Quality-1:** A Dust Mitigation Plan shall be prepared pursuant to the requirements of BAAQMD. The plan shall address construction and ground disturbing activities within serpentine soils with the goal of minimizing dust generation and exposure for work in these areas.

Subdivision Improvements and Future Residences

The proposed development would include the construction of residences and private recreational facilities; thus, the project itself would result in new sensitive receptors. When siting a new receptor, the existing or future proposed sources of toxic air contaminants and PM$_{2.5}$ emissions that would adversely affect individuals within the planned project should be examined, including:

- The extent to which existing sources would increase risk levels, hazard index, and/or PM$_{2.5}$ concentrations near the planned future residences
- Whether the existing sources are permitted or non-permitted by BAAQMD
- Whether there are freeways or major roadways near the planned receptor

Per the BAAQMD CEQA Air Quality Guidelines, a review of BAAQMD GIS data shows that the project boundaries are well beyond 1,000 feet from the following potential toxic air contaminant (TAC) and PM$_{2.5}$ emission sources:

- Stationary sources of emissions identified by BAAQMD
- County highways near the planned sensitive receptors
- Major roadways near the planned sensitive receptors

Consequently, according to these guidelines, the post-construction phase of the project would create a less-than-significant hazard from air contaminant emissions.

The project would not create objectionable odors affecting a substantial number of people. *(Less than significant impact)*

**Construction**

Construction of the project and future residential development would require the use of trucks and equipment with diesel engines and the paving of surfaces with asphalt. These construction activities would result in the temporary emission of diesel combustion and curing asphalt odors. The areas that would be paved are either linear (primary and secondary access roads and
3.3 AIR QUALITY

driveways) or are relatively small (homesites for each of the 25 residential lots), and the paving would occur over a short period of time, reducing the effects of temporary odor emissions on nearby sensitive receptors. In addition, the proposed project site is located in a sparsely populated area with few nearby sensitive receptors. Therefore, the impact of the temporary emission of odors during project construction would be less than significant.

Subdivision Improvements and Future Residences
No odor emission sources, as described in Table 3.3-5, would be installed during or following construction of the project. No odor emission sources currently exist within the screening distances (listed in Table 3.3-5) from planned residences. The post-construction impact of odors from the project and on new receptors would be less than significant.

<table>
<thead>
<tr>
<th>Land Use/Type of Operation</th>
<th>Project Screening Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater Treatment Plant</td>
<td>2 miles</td>
</tr>
<tr>
<td>Wastewater Pumping Facilities</td>
<td>1 mile</td>
</tr>
<tr>
<td>Sanitary Landfill</td>
<td>2 miles</td>
</tr>
<tr>
<td>Transfer Station</td>
<td>1 mile</td>
</tr>
<tr>
<td>Composting Facility</td>
<td>1 mile</td>
</tr>
<tr>
<td>Petroleum Refinery</td>
<td>2 miles</td>
</tr>
<tr>
<td>Asphalt Batch Plant</td>
<td>2 miles</td>
</tr>
<tr>
<td>Chemical Manufacturing</td>
<td>2 miles</td>
</tr>
<tr>
<td>Fiberglass Manufacturing</td>
<td>1 mile</td>
</tr>
<tr>
<td>Painting/Coating Operations</td>
<td>1 mile</td>
</tr>
<tr>
<td>Rendering Plant</td>
<td>2 miles</td>
</tr>
<tr>
<td>Coffee Roaster</td>
<td>1 mile</td>
</tr>
<tr>
<td>Food Processing Facility</td>
<td>1 mile</td>
</tr>
<tr>
<td>Confined Animal Facility/Feed Lot/Dairy</td>
<td>1 mile</td>
</tr>
<tr>
<td>Green Waste and Recycling Operations</td>
<td>1 mile</td>
</tr>
<tr>
<td>Metal Smelting Plants</td>
<td>2 miles</td>
</tr>
</tbody>
</table>

Source: BAAQMD 2011
3.4 BIOLOGICAL RESOURCES

This section describes the biological resources that occur within the project area and the regulations that pertain to the protection of biological resources. This section identifies potential impacts to sensitive species and their habitat that may result from construction, operation, and maintenance of the project and mitigation, where appropriate, to reduce impacts.

Information presented in the following biological resource reports were used to prepare this analysis:

- Biological Resources Analysis Report for the Coyote Highlands Property (Olberding Environmental 2010a)
- Raptor and Burrowing Owl Survey for the Coyote Highlands Property (Olberding Environmental 2010b)
- Special-Status Plant Survey Report for the Coyote Highlands Property (Olberding Environmental 2010c)
- U.S. Army Corps of Engineers (ACOE) Jurisdictional Delineation (Olberding Environmental 2010d)
- 404 Jurisdictional Impact Delineation Map (Olberding Environmental 2011b)
- Mitigation and Monitoring Plan (Olberding Environmental 2011a)

3.4.1 Environmental Setting

Field Studies

The following field studies were conducted by Olberding Environmental, Inc.:

- A reconnaissance survey for wildlife and sensitive species habitat performed on November 17, 2009, and April 9, May 5, and June 23, 2010 (Olberding Environmental 2010a)
- Raptor surveys and focused burrowing owl surveys performed on May 4 and June 23, 2010 (Olberding Environmental 2010b)
- Special-status plant surveys performed on May 4, June 23, July 22, and August 17, 2010 (Olberding Environmental 2010c)
- A delineation of jurisdictional waters performed on April 9, May 5, and June 23, 2010 (Olberding Environmental 2010d)

An additional reconnaissance-level field survey was conducted by H.T. Harvey Senior Wildlife Ecologist Steve Rottenborn, Ph.D., on March 8, 2012, as part of a peer review of the aforementioned biological resources studies. Reconnaissance surveys were also conducted by H.T. Harvey Senior Herpetologist Jeff Wilkinson, Ph.D., Senior Wildlife Ecologist S. Demers, M.S., Wildlife Ecologist Robin Carle, M.S., and Botanist Catherine Roy, M.S. on March 12, 2012.
Habitats

Vegetation and Wildlife Habitat Descriptions

Vegetation communities and habitat types identified within the project area are identified on Figure 3.4-1. Vegetation habitats were defined using generalized plant community classification schemes (Sawyer and Keeler-Wolf 1995). The project area supports seven habitat types:

- Grazed Annual Grassland
- Aquatic Communities
- Rock Outcrop
- Chaparral
- Oak Woodland
- Eucalyptus Grove
- Developed Habitats

Each of these habitats is shown in Figure 3.4-1 and the typical species supported in these habitats is summarized in Table 3.4-1.

Nonnative Annual Grassland

Grazed annual grassland is the dominant habitat type within the project area covering approximately 425 acres. This habitat type occurs along rolling hillsides. Domestic cattle grazing is conducted within the areas dominated by annual grasses.

Aquatic Communities

A wetland delineation was conducted by Olberding Environmental on April 9, May 5, and June 23, 2010 (Olberding 2010a). The delineation was verified by ACOE on May 20, 2011. Wetlands and other waters identified during the wetland delineation are depicted on Figure 3.4-1. A total of 0.67 acre of jurisdictional wetlands and 3.79 acres of water features subject to federal jurisdiction occur within the project area. Four separate aquatic communities were identified within the project area. Aquatic communities occurring within the project area are potentially subject to federal jurisdiction under Sections 401 and 404 of the Clean Water Act (CWA), and would be subject to state jurisdiction under Section 1603 of California Fish and Game Code and the Porter-Cologne Water Quality Control Act.

Creeks. Fischer Creek occurs on the north side of the project area, Foothill Creek lies near the center of the project area, and Corralitos Creek occurs near Maple Avenue on the south side of the project area. All three of these creeks drain into Llagas Creek, less than one mile southwest of the project area. Seven wetland features, and several perennial tributary drainages are associated with each of these creeks on the project area. Dense tree growth, understory vegetation, and a thick layer of leaf litter were observed along the banks of the three creeks during the reconnaissance survey. Three main creek channels range in width from approximately 12 feet towards the top of the channels and narrows to approximately 4 feet near the southwestern portion of the project area. The same animals that would use the grassland habitat are likely to use the creek habitat as well. Given the density of large trees in this area, the woodland habitat along the creek offers several opportunities for both raptors and passerines to nest within the riparian habitat.
Figure 3.4-1: Habitat Map

Legend:
- Proposed Subdivision Area Boundary
- Oak Woodland
- Wetland
- Coyote Lake - Harvey Bear Ranch County Park
- Developed
- Grassland
- Surveyed Creek or Drainage
- Eucalyptus
- Pond
- Shrub
### Table 3.4-1: Species Found or Likely to Occur by Habitat Type

<table>
<thead>
<tr>
<th>Habitat Type</th>
<th>Plants</th>
<th>Wildlife</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grazed Annual Grassland</td>
<td>Wild oat (Avena fatua)</td>
<td>Western gray squirrel (Sciurus griseus)</td>
</tr>
<tr>
<td></td>
<td>Ripgut brome (Bromus diandrus)</td>
<td>Black-tailed deer (Lepus californicus)</td>
</tr>
<tr>
<td></td>
<td>Soft chess (Bromus hordaceus)</td>
<td>Wild boar (Sus scrofa)</td>
</tr>
<tr>
<td></td>
<td>Black mustard (Brassica nigra)</td>
<td>Raccoon (Procyon lotor)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Field mouse (Peromyscus sp.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>California vole (Microtus californicus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Striped skunk (Mephitis mephitis)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Opossum (Didelphis virginiana)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gopher snake (Pituophis melanoleucus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Common garter snake (Thamnophis sirtalis)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Western fence lizard (Sceloporus occidentalis)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pacific tree frog (Pseuderis regilla)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Western toad (Bufo boreas)</td>
</tr>
<tr>
<td>Wetlands</td>
<td></td>
<td>Black phoebe (Sayornis nigricans)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>House finch (Carpodacus mexicanus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>House sparrow (Passer domesticus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mourning dove (Zenaida macroura)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brewer’s blackbird (Spizella beri)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Red-tailed hawk (Buteo jamaicensis)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>American crow (Corvus brachyrhynchos)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>California Tiger Salamander (CTS) (Ambystoma californiense)</td>
</tr>
<tr>
<td>Drainage Channels</td>
<td></td>
<td>California red-legged frog (CRLF) (Rana draytonii)</td>
</tr>
<tr>
<td></td>
<td>Wild oat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ripgut brome</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Curly dock (Rumex crispus)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Common vetch (Vicia sativa ssp. nigra)</td>
<td></td>
</tr>
<tr>
<td>Ponds</td>
<td>Duckweed (Lemna minor)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Iris-leaved rush (Juncus xiphoides)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sierran chorus frog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CRLF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arboreal salamander (Aneides lugubris)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Snowy egret (Egretta thula)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Great egret (Ardea alba)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Great blue heron (Ardea Herodias)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Red-winged blackbirds (Agelaius phoeniceus)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Killdeer (Charadrius vociferus)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Red-shouldered hawk (Buteo jamaicensis)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>California Tiger Salamander (CTS) (Ambystoma californiense)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>California red-legged frog (CRLF) (Rana draytonii)</td>
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</tr>
</tbody>
</table>

**Note:** The table provides a list of species found or likely to occur in different habitat types. The species are listed under plants and wildlife, with specific examples given for each category.
### Table 3.4-1 (Continued): Species Found or Likely to Occur by Habitat Type

<table>
<thead>
<tr>
<th>Habitat Type</th>
<th>Plants</th>
<th>Wildlife</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rock Outcrop</td>
<td>Several special-status plants have the potential to occur in these</td>
<td>The rock outcrops provide habitat for snakes, lizards, and other basking animals. Small</td>
</tr>
<tr>
<td></td>
<td>outcrops including Santa Clara Valley dudleya (Dudleya setchellii)</td>
<td>rodents looking for seeds and seeking shelter from predators can also be found within this</td>
</tr>
<tr>
<td></td>
<td>and smooth lessingia (Lessingia micradenia var. glabrata)</td>
<td>habitat. Rock outcrops provide uncommon habitat and physical features and contribute to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>biodiversity within a landscape. Reptiles such as the northern Pacific rattlesnake (Crotalus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>oreganus), gopher snake (Pituophis catenifer), and western fence lizard (Scoloporus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>occidentalis) can be found basking and hunting within this habitat. Birds, especially</td>
</tr>
<tr>
<td></td>
<td></td>
<td>rattors, may use rock outcrops as perches.</td>
</tr>
<tr>
<td></td>
<td>Manzanita (Arctostaphylis sp.) Coyote brush (Baccharis pilularis)</td>
<td>Coyote (Canis latrans)</td>
</tr>
<tr>
<td></td>
<td>Blue blossom ceanothus (Ceanothus thyrsiflorus)</td>
<td>California mouse (Peromyscus californicus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brush rabbit (Sylvilagus bachmani)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>San Francisco dusky-footed woodrat (Neotoma fuscipes annectens)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gopher snake</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Northern Pacific rattlesnake</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Northern alligator lizard (Elgaria coerulea)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Western fence lizard</td>
</tr>
<tr>
<td>Shrub</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oak Woodland</td>
<td>Coast live oak</td>
<td>Red-tailed hawks (Buteo jamaicensis)</td>
</tr>
<tr>
<td></td>
<td>Valley oak, blue oak (Quercus douglasi)</td>
<td>Cooper’s hawks (Accipiter cooperii)</td>
</tr>
<tr>
<td></td>
<td>California bay (Umbellularia californica)</td>
<td>American kestrels (Falco sparverius)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Golden eagle (Aquila chrysaetos)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>San Francisco dusky-footed woodrats</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mountain lions (Felis concolor)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arboreal salamander</td>
</tr>
<tr>
<td></td>
<td></td>
<td>California Tiger Salamander (CTS) (Ambystoma californiense)</td>
</tr>
<tr>
<td>Eucalyptus Grove</td>
<td>Eucalyptus</td>
<td>The eucalyptus grove provides foraging and nest sites for a variety of birds, rattors, and</td>
</tr>
<tr>
<td>Developed Habitats</td>
<td></td>
<td>mammals.</td>
</tr>
<tr>
<td></td>
<td>Bam owls (Tyto alba)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mourning doves (Zenaida macroura)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>House finches (Carpodacus mexicanus)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Black phoebes (Sayomis nigricans)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Northern mockingbird (Mimus polyglottos)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>American robin (Turdus migratorius)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bats</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Striped skunks (Mephitis mephitis)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Raccoons (Procyon lotor)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Virginia opossums (Didelphis virginiana)</td>
<td></td>
</tr>
</tbody>
</table>

Source: Olberding 2010a
3.4 BIOLOGICAL RESOURCES

Wetlands. Seven wetland features (four seeps, two swales, and one seasonal wetland) occur in association with the three creeks on the project area (Figure 3.4-1). A seasonal wetland (Wetland 1) is located at the southern project area boundary near Corralitos Creek. A branched wetland seep (Wetland 2), located near Corralitos Creek is fed by a polyvinyl chloride (PVC) pipe from an off-site vineyard. Water from this seep flows into Corralitos Creek. A third wetland seep (Wetland 3) is located adjacent to the pond near Fischer Creek. Wetland 4 is a seep feature, located in the northern corner of the project area. Water from this wetland flows into an adjacent secondary channel. Wetlands 5 and 6 are swale features that result from runoff from nearby water tanks. Both Wetlands 5 and 6 are not subject to federal jurisdiction. Wetland 7 is a seep feature which forms along a tributary to Fischer Creek.

A variety of reptiles and amphibians would also be expected to occur within these habitats. In particular, California tiger salamander (CTS) and California red-legged frog (CRLF) could occur within the wetland habitats within the site.

Drainage Channels. Several secondary, intermittent and perennial tributary drainages are confluent with all three creeks on the project area. These features were dry at the time of the survey and only transport water seasonally. The channels are all incised features and are characterized by a defined bed and bank, scouring and drift lines. These drainages provide limited habitat value for wetland-associated wildlife species and do not support fish because water only flows within these drainages during the wet season. Amphibians are not expected to breed in these habitats due to the very brief period in which they carry water. These drainages provide dispersal and foraging habitat for amphibians during the wet season.

Ponds. Two ponds occur on the site. Pond 1 feeds a tributary to Fischer Creek along the northern edge of the project area. Pond 2 occurs along the eastern portion of the site near the rock outcrops along Foothill Creek. These ponds were full at the time of the 2010 surveys. Pond 2 is primarily used for stock watering. Pond 1 is fenced off and exhibits a dense amount of wetland vegetation along the fringes. Rare amphibians, such as CTS may breed in both the perennial and seasonal pond on the site and may use burrows in adjacent grassland areas as refugia during the dry months. CRLF may occur in the perennial pond year-round, and they may also breed in the seasonal pond in wet years.

Rock Outcrop
Five rock outcrops occur along the eastern portion of the site. Several special-status plants have the potential to occur in these outcrops including smooth lessingia (Lessingia micradenia var. glabrata). Santa Clara Valley dudleya (Dudleya setchellii) could occur within serpentinite outcrops. These species were not identified during the November 2009 or April, May, and June 2010 surveys.

Chaparral
Several patches of chaparral habitat occur throughout the project area. The chaparral habitat provides food and nesting areas for a variety of passerines and mammals. Dense shrubs in these patches can also provide refuge to potential prey species.
3.4 BIOLOGICAL RESOURCES

Oak Woodland
Large patches of oak woodland habitat occur on the project area, predominantly near the center portion of the site. The oak woodland community is protected by the State of California under Public Resources Code §21083.4. The large patches of oak woodland habitat provide excellent foraging and nesting sites for a variety of birds, raptors, reptiles, and mammals. A large raptor nest was observed in a coast live oak tree in the eastern portion of the site.

Eucalyptus Grove
A blue gum eucalyptus (Eucalyptus globules) grove occurs along the dirt access road on the western portion of the project area. Eucalyptus are allelopathic trees, killing other vegetation types and dominating the landscape in which they occur.

Developed Habitats
Developed habitats include disturbed areas where a residential structure, barn and corral are located. The vegetation is composed predominantly of nonnative grass species. The developed habitats could provide habitat for bat roosting within structural overhangs.

Wildlife Movement Corridors
Wildlife movement within or in the vicinity of the project area takes many forms that vary among the various species associated with these lands. Bird and bat species move readily over the landscape, foraging over and within both natural lands and developed areas of the site. Some species, especially among the birds and bats, are migratory, moving into or through the area during specific seasons. There are no other mammal species in the project vicinity that are truly migratory, aside from bats. Wildlife such as bobcats, mountain lions, black-tailed deer, and American badgers (Taxidea taxus) may move through the project area to some extent while dispersing along the western edge of the Diablo Range. Many wildlife species will move across the project area through its different habitats, however, the project area does not provide movement pathways that are of particular importance to larger-scale movements within the regional landscape. The presence of US-101 and dense development in portions of Morgan Hill and San Martin west of the site act as barriers to dispersal of wildlife species other than birds and bats between the Santa Cruz Mountains and the Diablo Range in the project vicinity. The Santa Clara Valley Habitat Plan does not identify any critical regional linkages for wildlife movement that included the project area (ICF International 2010).

Communities of Special Concern
CDFG ranks certain rare or threatened plant communities as threatened or very threatened. The CNDDB identified two sensitive habitats as occurring within the project vicinity: Sycamore Alluvial Woodland and Serpentine Bunchgrass. Based upon the results of the field studies, neither sensitive plant community occurs within the project area (H.T. Harvey 2012).
Special-Status Plants and Wildlife

Special-status species occurrences within the vicinity of the project were reviewed from the CNDDB, and identified from field studies. Tables 3.4-2, 3.4-3, and 3.4-4 provide species information and an assessment of the probability of encountering the species on the project area. Many of the special-status species were evaluated and eliminated from further review based on the following criteria:

- The proposed action is outside the species known geographic range
- The project area does not contain conditions known to support the species
- The project action will not alter or adversely affect habitat of the species

Special-Status Plant Species

Special-status plants are considered plant species that are:

- Listed under the federal Endangered Species Act (FESA) as threatened, endangered, proposed threatened, proposed endangered, or a candidate species
- Listed under the California Endangered Species Act (CESA) as threatened, endangered, rare, or a candidate species
- Listed by the California Native Plant Society (CNPS) as rare or endangered on Lists 1A, 1B, 2, 3, or 4.

A total of 34 special-status plant species were considered to have at least some potential to occur in the project region based on a review of special-status plant species mapped by the California Native Plant Society (CNPS 2012) within the Mount Sizer, Gilroy, Mississippi Creek, Gilroy Hot Springs, Mount Madonna, and Morgan Hill 7.5-minute U.S. Geological Survey (USGS) quadrangles. Of these, only 13 are considered to have habitat requirements similar to those within the proposed project area. A summary of the status, habitat affinities, potential for occurrence in the project area, blooming period, habitat for special-status plants with potentially occur within the project area is presented in Table 3.4-2.
### Table 3.4-2: Special-Status Plant Species for the Mount Sizer, Gilroy, Mississippi Creek, Gilroy Hot Springs, Mount Madonna, and Morgan Hill 7.5-Minute Quadrangle Maps

<table>
<thead>
<tr>
<th>Common Name/Scientific Name</th>
<th>Status</th>
<th>Habitat</th>
<th>Blooming Period</th>
<th>Potential to Occur on Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bent-Flowered Fiddleneck</td>
<td>1B</td>
<td>Coastal bluff scrub, cismontane woodland, and valley and foothill grassland.</td>
<td>March – June</td>
<td>Low</td>
</tr>
<tr>
<td>(Amsinckia lunaris)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Big-Scale Balsamroot</td>
<td>1B</td>
<td>Chapparal, cismontane woodland and valley and foothills grasslands, sometimes in serpentine outcrops.</td>
<td>March – June</td>
<td>Low</td>
</tr>
<tr>
<td>(Balsamorhiza macrolepis var. macrolepis)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tiburon Indian Paintbrush</td>
<td>E,ST,1B</td>
<td>Valley and foothill grasslands in serpentine soils.</td>
<td>April – June</td>
<td>Low</td>
</tr>
<tr>
<td>(Castilleja affinis ssp. neglecta)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mount Hamilton Fountain Thistle</td>
<td>1B</td>
<td>Cismontane woodland, chaparral, valley and foothill grassland; in season and perennial drainages on serpentine seeps.</td>
<td>April – October</td>
<td>Moderate</td>
</tr>
<tr>
<td>(Cirsium fontinale var. campylon)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital Canyon Larkspur</td>
<td>1B</td>
<td>Chaparral and foothill woodlands.</td>
<td>April – June</td>
<td>Low</td>
</tr>
<tr>
<td>(Delphinium califomicum ssp. interius)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santa Clara Valley Dudleya</td>
<td>E,1B</td>
<td>Cismontane woodland, valley and foothill grasslands in rocky, serpentine soils.</td>
<td>April – October</td>
<td>Moderate</td>
</tr>
<tr>
<td>(Dudleya setchellii)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fragrant Fritillary</td>
<td>1B</td>
<td>Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grasslands, often in serpentine soils.</td>
<td>February – April</td>
<td>Low</td>
</tr>
<tr>
<td>(Fritillaria liliacea)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loma Prieta Holta</td>
<td>1B</td>
<td>Chaparral, cismontane woodland, riparian woodland, usually in mesic, serpentine soils.</td>
<td>May – July</td>
<td>Moderate</td>
</tr>
<tr>
<td>(Holta strobilina)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smooth Lessingia</td>
<td>1B</td>
<td>Chaparral and cismontane woodland in serpentine soils, often at roadsides.</td>
<td>July – November</td>
<td>Low</td>
</tr>
<tr>
<td>(Lessingia micradenia var. glabrata)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shadowy golden aster</td>
<td>1B</td>
<td>Grasslands and oak woodlands on heavy clay soils; typically found in openings rather than under closed canopy.</td>
<td>March – May</td>
<td>Low</td>
</tr>
<tr>
<td>(Madia radiata)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 3.4-2 (Continued): Special-Status Plant Species for the Mount Sizer, Gilroy, Mississippi Creek, Gilroy Hot Springs, Mount Madonna, and Morgan Hill 7.5-Minute Quadrangle Maps

<table>
<thead>
<tr>
<th>Common Name/Scientific Name</th>
<th>Status</th>
<th>Habitat</th>
<th>Blooming Period</th>
<th>Potential to Occur on Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woodland Woolythreads (Monolopia gracilens)</td>
<td>1B</td>
<td>Broad-leaved upland forest, chaparral openings, cismontane woodland, north coast coniferous forest openings, and valley and foothill grassland with serpentine soils.</td>
<td>March – July</td>
<td>Low</td>
</tr>
<tr>
<td>Metcalf Canyon Jewel-Flower (Streptanthus albidus ssp. albidus)</td>
<td>1B</td>
<td>Valley and foothill grasslands in serpentine soils.</td>
<td>April – July</td>
<td>Low</td>
</tr>
<tr>
<td>Most Beautiful Jewel-Flower (Streptanthus albidus ssp. peramoenus)</td>
<td>1B</td>
<td>Chaparral, cismontane woodland, and valley and foothill grasslands in serpentine soils on ridges and slopes.</td>
<td>April – September</td>
<td>Low</td>
</tr>
</tbody>
</table>

NOTES:
SOC - Federal species of concern
T - Federally listed as a threatened species
E - Federally listed as an endangered species
C - Species listed as a candidate for federal threatened or endangered status
SC - California species of concern
SE - State listed as an endangered species
ST - State listed as a threatened species
R - Rare
D - Delisted
CP - California protected
FP - State fully protected
1B - CNPS considers Rare, Threatened, or Endangered in California and elsewhere
1A - CNPS Plants presumed extinct in California
2 - CNPS Plants Rare, Threatened, or Endangered in California, but more common elsewhere
3 - CNPS Plants on a review list to find more information about a particular species
4 - CNPS Plants of limited distribution - a watch list.

Source: Olberding 2010a; H.T. Harvey 2012
Special Status Wildlife Species
Special-status animals are considered animal species that are:

- Listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species
- Listed under CESA as threatened, endangered, or a candidate threatened or endangered species
- Designated by CDFG as a California species of special concern
- Listed in the California Fish and Game Code as a fully protected species (birds at §3511, mammals at §4700, reptiles and amphibians at §5050, and fish at §5515).

A total of 14 special-status insects, reptiles, fish, or mammalian species have the potential to occur within the project region based on the California Natural Diversity Data Base (CNDDB 2012) and an understanding of the geographic range and habitat affinities of special-status animals. A summary of the formal status, habitat affinities, and potential for occurrence within the project area for these potential special status animals is presented in Table 3.4-3. None of these species were identified during reconnaissance field surveys of the project area in May 2010; however, focused surveys have not been conducted for these species. Presence is assumed where potential habitat occurs on site. Each species with some potential to occur in the project area is described in more detail. Additional descriptions of species that would not occur in the project area and the reasons for their absence is provided in Appendix F.

California Tiger Salamander
Adult CTS inhabit rolling grassland and oak savannah. Adults spend most of the year in subterranean retreats such as rodent burrows, but may be found on the surface during dispersal to and from breeding sites. The preferred breeding sites are vernal pools and other temporary ponds. However, CTS may use permanent manmade ponds as breeding habitat. CTS adults begin migrating to ponds after the heavy rains of fall and can be found in or around the breeding ponds during and after winter rainstorm events. CTS may not reproduce in extremely dry years.

Several occurrences of this species have been recorded within the project vicinity from 2003 to 2008. The most recent occurrence of this species in the vicinity of the property occurred in June 2004, southeast of the property. CTS are known to occur at the California Institute Golf Course approximately 0.7 mile from the project area (H.T. Harvey 2012). The pond, wetland, and creek habitats on the property are considered suitable breeding habitat to support this species. Several mammal burrows were observed during the field surveys that could provide refuge habitat in the upland areas. Previous studies indicate that CTS can disperse up to 1.3 miles (H.T. Harvey 2012). CTS could potentially disperse to the project area from potential and known breeding ponds located within 1.3 miles to the east or southwest. All portions of the project area are located within 1.3 miles of potential breeding ponds; therefore, CTS may occur anywhere in the project area.
### Invertebrates

<table>
<thead>
<tr>
<th>Common Name/Scientific Name</th>
<th>Status</th>
<th>Habitat</th>
<th>Potential to Occur on Site/Status on Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opler’s longhorn moth (Adela Oplerella)</td>
<td>SOC</td>
<td>In serpentine grasslands on host plant Platystemon californicus from Marin County and the Oakland area on the inner coast ranges, south to Santa Cruz County.</td>
<td>Low Presumed Absent</td>
</tr>
<tr>
<td>Bay checkerspot butterfly (Euphydryas editha bayensis)</td>
<td>T</td>
<td>Native grasslands in serpentine outcrops in the San Francisco Bay Area. Host plant is Plantago erecta. Also occurs on Orthocarpus densiflorus and O. purpurascens.</td>
<td>Low Presumed Absent</td>
</tr>
<tr>
<td>Hom’s micro-blind harvestman (Microcina homi)</td>
<td>SOC</td>
<td>Known only from Santa Clara County on serpentine rocks in xeric, grassland habitats.</td>
<td>Known only from Santa Clara County on serpentine rocks in xeric, grassland habitats.</td>
</tr>
</tbody>
</table>

### Fish

<table>
<thead>
<tr>
<th>Common Name/Scientific Name</th>
<th>Status</th>
<th>Habitat</th>
<th>Potential to Occur on Site/Status on Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steelhead-South/Central California Coast ESU (Oncorhynchus mykiss irideus)</td>
<td>T, SC</td>
<td>Federal listing refers to runs in coastal basins from the Pajaro River south to, but not including, the Santa Maria River. Spawning occurs in cool streams with low turbidity, and suitable sites for egg deposition.</td>
<td>Low Presumed Absent</td>
</tr>
</tbody>
</table>

### Amphibians

<table>
<thead>
<tr>
<th>Common Name/Scientific Name</th>
<th>Status</th>
<th>Habitat</th>
<th>Potential to Occur on Site/Status on Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>California tiger salamander (Ambystoma californiense)</td>
<td>T, ST</td>
<td>Vernal pools, swales and depressions for breeding, needs underground refugia.</td>
<td>High May Occur</td>
</tr>
<tr>
<td>Foothill yellow-legged frog (Rana boylii)</td>
<td>SOC, SC</td>
<td>Partially shaded shallow streams and ripples with a rocky substrate in a variety of habitats. Need cobble for egg-laying.</td>
<td>Low Presumed Absent</td>
</tr>
<tr>
<td>California red legged frog (Rana draytonii)</td>
<td>T, SC</td>
<td>Lowlands and foothills in or near permanent deep water with dense, shrubby or emergent riparian habitat. Requires 11-20 weeks of permanent water for breeding and larval development. Most have access to aestivation habitat.</td>
<td>High May Occur</td>
</tr>
</tbody>
</table>
### 3.4 BIOLOGICAL RESOURCES

**Table 3.4-3 (Continued): Special-Status Wildlife Species for the Mount Sizer, Gilroy, Mississippi Creek, Gilroy Hot Springs, Mount Madonna, and Morgan Hill 7.5-Minute Quadrangle Maps**

<table>
<thead>
<tr>
<th>Common Name/Scientific Name</th>
<th>Status</th>
<th>Habitat</th>
<th>Potential to Occur on Site/Status on Site</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reptiles</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western pond turtle (Emys marmorata)</td>
<td>SC</td>
<td>Aquatic turtle needs permanent water in ponds, streams, irrigation</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ditches. Nests on sandy banks or grassy fields.</td>
<td>May Occur</td>
</tr>
<tr>
<td>Coast horned lizard (Phrynosoma blainvillii)</td>
<td>SC</td>
<td>Frequents a wide variety of habitats, most common in lowlands along</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sandy washes with scattered low bushes; requires open areas for</td>
<td>Presumed Absent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sunning, bushes for cover, patches of loose soil for burial, and</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>abundant supply of ants and other insects.</td>
<td></td>
</tr>
<tr>
<td><strong>Mammals</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pallid bat (Antrozous pallidus)</td>
<td>SC</td>
<td>Forages in grasslands, shrublands, deserts, forests, and woodlands.</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Most common in open, dry habitats. Roosts in rock crevices, caves, tree</td>
<td>May Occur</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hollows, and buildings. Roosts must protect bats from high temperatures;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>very sensitive to disturbance of roosting sites.</td>
<td></td>
</tr>
<tr>
<td>Western red-tailed bat (Lasiurus blossevillii)</td>
<td>SC</td>
<td>Old growth cottonwood willow riparian habitat. Non-breeding population</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>may occur throughout the range.</td>
<td>May Occur</td>
</tr>
<tr>
<td>San Francisco dusky-footed woodrat (Neotoma</td>
<td>SC</td>
<td>Forest habitats of moderate canopy and moderate to dense understory,</td>
<td>High</td>
</tr>
<tr>
<td>fuscipes annectens)</td>
<td></td>
<td>may prefer chaparral and redwood habitats. Nests constructed of grass,</td>
<td>Present</td>
</tr>
<tr>
<td></td>
<td></td>
<td>leaves, sticks, feathers, etc. Population may be limited by availability</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>of nest materials.</td>
<td></td>
</tr>
<tr>
<td>American badger (Taxidea taxus)</td>
<td>SC</td>
<td>Shrub, forest, and herbaceous habitats with friable soils to dig</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>burrows. Need open, uncultivated ground. Prey on fossorial mammals.</td>
<td>May Occur</td>
</tr>
<tr>
<td>San Joaquin kit fox (Vulpes macrotis mutica)</td>
<td>E, ST</td>
<td>Annual grasslands or grassy stages with scattered shubby vegetation.</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Needs loose soils for burrowing.</td>
<td>Presumed Absent</td>
</tr>
</tbody>
</table>
### Table 3.4-3 (Continued): Special-Status Wildlife Species for the Mount Sizer, Gilroy, Mississippi Creek, Gilroy Hot Springs, Mount Madonna, and Morgan Hill 7.5-Minute Quadrangle Maps

<table>
<thead>
<tr>
<th>Common Name/Scientific Name</th>
<th>Status</th>
<th>Habitat</th>
<th>Potential to Occur on Site/Status on Site</th>
</tr>
</thead>
</table>

**NOTES:**

SOC – Federal species of concern
T - Federally listed as a threatened species
E – Federally listed as an endangered species
C – Species listed as a candidate for federal threatened or endangered status
SC – California species of concern
SE – State listed as an endangered species
ST – State listed as a threatened species
R – Rare
FP – State fully protected

Source: Olberding 2010a
3.4 BIOLOGICAL RESOURCES

California Red-Legged Frog
CRLF is a California species of special concern and was listed as a federal threatened species on May 31, 1996 (FR 25813). U.S. Fish and Wildlife Service (USFWS) has designated critical habitat for CRLF. Designated critical habitat for CRLF is located 3.2 miles east of the project area (Olberding 2010a).

CRLF is found in lowlands, foothill woodland and grasslands, near marshes, lakes, ponds, or other water sources. These amphibians require dense shrubby or emergent vegetation closely associated with deep still or slow moving water. These frogs favor intermittent streams with water at least 2.5 feet deep and where the shoreline has relatively intact emergent or shoreline vegetation. CRLF are known to take refuge in upland small mammal burrows during periods of high water flow. USFWS considers 1 mile a typical dispersal distance for the species in its critical habitat designation (USFWS 2010).

Several occurrences of this species have been recorded within the project vicinity from 2003 to 2008. CRLF are known to occur at the Institute Golf Course approximately 0.2 mile southwest of the project area, where breeding was detected in ponds in 2001 (CNDDB 2012). The flat grassland areas and perennial ponds (as well as the seasonal ponds, in years of high rainfall) that occur along the crests of hills to the east of the project area provide potential breeding habitat for CRLF. CRLF could potentially disperse to the project area from potential breeding ponds located within 1.0 mile to the east or southwest. All portions of the project area are located within 1.0 mile of potential breeding ponds. The pond and creek habitats on the property are considered highly suitable to support this species. Several mammal burrows were observed during the survey that could provide aestivation habitat. This species has the potential to occur within any portion of the project area, due to the numerous recent occurrences of this species within the project vicinity.

Western Pond Turtle
The western pond turtle is a California species of special concern. It is an aquatic turtle that may be found in marshes, ponds, streams and irrigation ditches where aquatic vegetation is present. The turtles require basking sites and suitable upland habitat for egg laying. Suitable breeding upland habitats may consist of sandy banks or grassy open fields.

The most recently observed occurrence of this species in the vicinity of the property occurred in May 2005, along Coyote Creek, Kelly Cabin Creek, and Grizzly Gulch Creek, roughly 5.4 miles northeast of the property. The pond, creek, and drainage habitats on the property are considered suitable breeding and foraging habitat to support this species. Basking habitat also occurs within the creeks and upland habitats. The perennial pond in the project area provides suitable habitat for the western pond turtle, and is the location where the species is most likely to occur.

Pallid Bat
Pallid bat is a California species of special concern. Coastal colonies commonly roost in deep crevices in rocky outcroppings, in buildings, under bridges, and in hollow trees. Colonies can
range from a few individuals to over 100, and are non-migratory. Some female/young colonies (typical of the coastal subspecies) use their day roost for their nursery as well as for hibernating. Night roosts often include porches, garages, barns, and highway bridges, although crevices are important for day roosts. Pallid bats prefer foraging on terrestrial arthropods in dry, open grasslands near water and rocky outcroppings or old structures.

The closest known occurrence of pallid bat is a maternity colony of 60 pallid bats in a barn approximately 2.9 miles northwest of the project area, near Anderson Dam. This colony was known to be active as recently as 2010. The old barn on the project area could provide a day and/or night roost site for pallid bats, and pallid bats may also form day roosts in any of the many large oaks with cavities scattered throughout the project area. The habitat in the project area is therefore considered suitable for maternity roosts, non-breeding day roosts, and night roosts, and the bats may forage in grasslands and other habitats throughout the project area.

**Western Red-Tailed Bat**
The western red-tailed bat is a California species of special concern. This migratory species is solitary and roosts in the foliage of deciduous trees in riparian areas and sometimes in orchards. Females often give birth to twins and breeding areas are confined primarily to old growth cottonwood-willow riparian habitat such as that found in parts of the Central Valley of California. The species is often associated with riparian habitats. The western red bat winters along the central coastal areas of California where breeding is not known to occur. Western red bats may occur in small numbers within oak woodland areas of the project area during spring and fall. The species is not expected to breed in the project area.

**San Francisco Dusky-Footed Woodrat**
The San Francisco dusky-footed woodrat is a California species of special concern. Wood rats prefer moderate canopy and a brushy understory in a variety of habitats. Houses are constructed from sticks, leaves and other debris either at the base of or in the branches of a tree. Houses can be constructed at the base of a hill as well.

Active houses of dusky-footed woodrats were observed in the rose bushes located around the water tanks immediately southwest of the project area, in the oak woodland habitat along the northwest border of the project area, and in the broad oak woodland habitat that traverses the central portion of the Project area (H.T. Harvey 2012). Woodrats are likely present in low densities throughout the oak woodland and chaparral habitats in the project area, and these areas provide suitable breeding and foraging habitat for this species.

**American Badger**
The American badger is a California species of special concern. This large member of the weasel family is found in open plains, prairies, forests and grasslands. This species feeds on ground squirrels, mice, and gophers. Badgers mate between July and August, but do not give birth until March.
The most recently observed occurrence of this species in the project vicinity was made in February 2007, about 2.4 miles northwest of Anderson Lake, roughly 8.5 miles northwest of the property. Suitable foraging and burrowing habitat occurs for this species within the chaparral, grassland, and woodland habitats on the property. Based on the locations of badgers detected within and adjacent to Santa Clara Valley, the high mobility of this species, and the suitability of grasslands in the project area for denning and foraging badgers could occur within the project area year-round as breeders, foragers, or dispersers. The number of individuals that could occur in the project area would be very low and it is likely that the species occurs primarily as an occasional visitor.

**Nesting Birds and Raptors**
Numerous species of birds may nest in the project area. The vast majority of bird species that occur in the project area are protected under the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code. Several special-status bird and raptor species may occur within the project area. These special status birds and raptors are identified in Table 3.4-4 and discussed below.

*Burrowing Owl*
The burrowing owl is a federal candidate species and a California species of special concern. Burrowing owls generally require open annual grassland habitats in which to nest, but can be found on abandoned lots, roads, airports and other urban areas. Burrowing owls generally use abandoned California ground squirrel holes for their nesting burrows, but are also known to use pipes or other debris. Burrowing owls prefer annual grassland habitats with low vegetative cover. The breeding season for burrowing owls occurs from March through August. Burrowing owls often nest in loose colonies approximately 100 yards apart.

The most recently observed occurrence of this species within the project vicinity occurred in June 2003, at El Toro School in Morgan Hill, roughly 3.5 miles west of the project area. The majority of the grassland habitat on the project area is large and free of canopy cover. Small mammal burrows were observed throughout the project area where burrowing owl could potentially establish a nest. The project area is considered highly suitable overwintering and foraging habitat for burrowing owls. Neither this species, nor secondary evidence of this species, was seen during raptor and plant surveys conducted from April to June 2010; however, due to recently observed occurrences within the vicinity of the project area this species has the potential to use the site for overwintering and foraging habitat within the grassland areas within the project area.

*Swainson’s Hawk*
Swainson’s hawk is listed by the state of California as threatened. Swainson’s hawks are summer migrants to the Central Valley and Delta region of California where they nest within large-sized trees. The Swainson’s hawk builds nests in tall blue gum, valley oak, live oak, pine, or other tall tree stands. These raptors require nearby foraging habitat such as annual grasslands, alfalfa fields, grain fields and even row crops.
Table 3.4-4: Special-Status Bird and Raptor Species for the Mount Sizer, Gilroy, Mississippi Creek, Gilroy Hot Springs, Mount Madonna, and Morgan Hill 7.5-Minute Quadrangle Maps

<table>
<thead>
<tr>
<th>Common Name/Scientific Name</th>
<th>Status</th>
<th>Habitat</th>
<th>Potential to Occur on Site/Status on Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burrowing owl <em>(Athene cunicularia)</em></td>
<td>SOC, SC</td>
<td>Dry open annual or perennial grassland, desert and scrubland. Uses abandoned mammal burrows for nesting.</td>
<td>High May Occur</td>
</tr>
<tr>
<td>Swainson’s hawk <em>(Buteo swainsonii)</em></td>
<td>ST</td>
<td>Nests in riparian areas and in oak savannah near foraging areas. Forages in alfalfa and grain fields with rodent populations.</td>
<td>High May Occur</td>
</tr>
<tr>
<td>White-tailed kite <em>(Elanus leucurus)</em></td>
<td>SOC, CP, FP</td>
<td>Various grassland habitats, urban land, oak woodlands with grassland for foraging.</td>
<td>High Present</td>
</tr>
<tr>
<td>Least Bell’s vireo <em>(Viero bellii pusillus)</em></td>
<td>E,SE</td>
<td>Low riparian in the vicinity of water or in dry river bottoms, below 2000 feet. Nesting in willows, baccharis, or mesquite.</td>
<td>Low Presumed Absent</td>
</tr>
<tr>
<td>Loggerhead shrike <em>(Lanius ludovicianus)</em></td>
<td>SC</td>
<td>Short grass habitat with many perches, shrubs, or trees for nesting, and sharp branches or barbed wire fences for impaling prey</td>
<td>Moderate May Occur</td>
</tr>
<tr>
<td>Grasshopper sparrow <em>(Ammodramus savannarum)</em></td>
<td>SC</td>
<td>Nests in short (often grazed) to middle-height, moderately open grasslands with few or no shrubs</td>
<td>Low May Occur</td>
</tr>
<tr>
<td>Golden eagle <em>(Aquila chrysaetos)</em></td>
<td>SC, FP</td>
<td>Nest in large sturdy trees and on cliffs, and forage widely over grasslands for rodents and other prey.</td>
<td>High Present</td>
</tr>
</tbody>
</table>

NOTES:
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Source: Olberding 2010a
3.4 BIOLOGICAL RESOURCES

The species is known to occur in Santa Clara County only as a very infrequent transient during migration. Although young not long out of the nest have been recorded on several occasions in the Santa Clara Valley in recent years, more concrete evidence of nesting has not been documented, and this species is not currently known to nest in Santa Clara County (Bousman 2007a). Therefore, while occasional individual Swainson’s hawks could potentially forage in the Project area during the non-breeding season, the project area is outside the species’ current breeding range, and Swainson’s hawks are not expected to nest within the Project area.

White-Tailed Kite
White-tailed kite is a federal species of concern and a CDFG fully protected species. White-tailed kites forage in annual grasslands, farmlands, orchards, chaparral, and at the edges of marshes and meadows. They are found in nesting trees and shrubs such as willows (Salix sp.), California sycamore (Platanus racemosa), and live oak (Quercus agrifolia) often near marshes, lakes, rivers, or ponds. This raptor often hovers while inspecting the ground below for prey. Annual grasslands are considered good foraging habitat for white-tailed kites, which will forage in human impacted areas.

The most recent occurrence of this species in the project vicinity was made in May 1994, just west of Rancho Hills Drive northwest of Gilroy, roughly 7.2 miles southwest of the project area. The white-tailed kite could nest within the oak, pine, willow, or redwood trees present on and adjacent to the project area. It could also use these trees to perch while foraging on adjacent lands. One white-tailed kite was observed foraging over the survey area during the May 2010 survey.

Loggerhead Shrike
The loggerhead shrike is a state species of special concern. Ideal breeding habitat for loggerhead shrikes consists of short grass habitat with many perches, shrubs, or trees for nesting, and sharp branches or barbed wire fences for impaling prey. Shrikes nest earlier than most other passerines, especially in the west where populations are sedentary. The breeding season can begin as early as late February, and lasts through July (Yosef 1996). Nests are typically established in shrubs and low trees including sagebrush (Artemisia spp.), willow, and mesquite (Prosopis spp.), through brush piles can be used when shrubs are not available. Coast live oaks and other dense trees and shrubs within the project area provide potentially suitable nesting habitat for shrikes, and the grassland habitat throughout the project area provides suitable foraging habitat. It is possible that one or two pairs of loggerhead shrikes may nest and forage in the project area.

Grasshopper Sparrow
The grasshopper sparrow is a California species of special concern. The grasshopper sparrow nests in short (often grazed) to middle-height, moderately open grasslands with few or no shrubs. This species is absent from or sparsely distributed in much of the grassland in the San Francisco Bay area and Santa Clara Valley. Grassland habitat within the project area is intermixed with and in close proximity to trees; this does not represent typical habitat for grasshopper sparrows, which typically occur in more expansive grassland habitats. A few pairs
of grasshopper sparrows could nest in the more extensive areas of grassland along the eastern edge of the subdivision area.

**Golden Eagle**

The golden eagle is a fully protected species in California and is protected under the federal Bald and Golden Eagle Protection Act (BGEPA). Golden eagles nest in large sturdy trees and on cliffs, and forage widely over grasslands for rodents and other prey. They build large nests of sticks, and nest from early spring through summer. Suitable nesting habitat for golden eagles is present in large trees throughout the project area. Open habitats such as annual grasslands provide foraging habitat for this species. Golden eagles are relatively rare in the region; Bousman (2007b) suggests that there may only be 20 pairs in the Diablo Range portion of Santa Clara County, with approximately another five pairs on the western side of the County.

An active golden eagle nest was observed by H.T. Harvey in the Fischer Creek drainage, on the northwestern portion of the project area, on March 12 and 14, 2012. Other nest sites associated with this pair may be present in the project area or in adjacent areas because golden eagles may have multiple nest sites within their territories (Kochert et al. 2002). The grasslands and other open habitats throughout the project area provide suitable foraging habitat for this species. The home range size of the golden eagles in the project area is unknown, although there is evidence that golden eagles in the region may have substantially smaller home ranges than eagles in more arid regions. Golden eagles in the Altamont region of the Diablo Mountains appear to have home range sizes on the order of 1.5 – 4 square miles (Hunt 2002), and it is likely that golden eagles in Santa Clara County have similar home range sizes, as habitat conditions in the foothills and mountain areas of the county are relatively similar to those in the Altamont area. These home range estimates suggest that there is likely only one pair of eagles that occupy the project area and that these eagles likely forage across much of the project area and other adjacent areas.

**3.4.2 Regulatory Setting**

**Federal**

**Federal Endangered Species Act (FESA)**

The FESA provides legislation to protect federally listed plant and animal species. Impacts to listed species resulting from the implementation of a project would require the responsible agency to consult with USFWS and/or National Marine Fisheries (NMFS). Section 7 of FESA requires that all federal agencies must, in consultation with USFWS and/or NMFS, ensure that the agency’s actions do not jeopardize the continued existence of a listed species, or destroy or adversely modify the listed species’ “critical habitat.” Section 10 of the Act describes the process by which take permits are issued by USFWS/NMFS for take of listed species incidental to an otherwise lawful activity. The FESA would apply to the proposed project due to the presence of federally listed species within the project area. The proposed project would require authorization under either Section 7 or Section 10 of the FESA.
3.4 BIOLOGICAL RESOURCES

Migratory Bird Treaty Act
The MBTA is administered by USFWS and implements four treaties between the United States and Canada, Mexico, Japan, and Russia, respectively, to manage and conserve migratory birds that cross national borders. The MBTA makes it unlawful in any manner, unless expressly authorized by permit pursuant to federal regulations, to pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export at any time, or in any manner, any migratory bird, or any part, nest, or egg of any such bird. The definition of “take” referred to by the MBTA is defined as any act to “pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture or collect.” This includes most actions, direct and indirect, that could result in “take” or possession, whether temporary or permanent, of any protected species (APLIC and USFWS 2005a). Although harassment and habitat modification do not constitute a take in themselves under the MBTA or Fish and Game Code, such actions that result in direct loss of birds, nests, or eggs including nest abandonment or failure are considered take under such regulations. A list of migratory birds protected under the MBTA, available in Section 10.13 of Title 50 of the Code of Federal Regulations, excludes nonnative species that have not been introduced into the United States or its territories, and species that belong to the families not listed in any of the four treaties underlying the MBTA, such as wrentit (Chamaea fasciata), European starling (Sturnus vulgaris), California quail (Callipepla californica), ring-necked pheasant (Phasianus colchicus), and chukar (Alectoris chukar), among other species less common in California.

On December 8, 2004, the U.S. Congress passed the Migratory Bird Treaty Reform Act (Division E, Title I, Section 143 of the Consolidated Appropriations Act, 2005, PL 108–447; MBTRA), which excludes all non-native migratory birds or birds that have been introduced to the United States or its territories. It defines a native migratory bird as a species present within the United States and its territories as a result of natural biological or ecological processes. USFWS published a list of the bird species excluded from the MBTA on March 15, 2005 (70 FR 12710), which included two species commonly observed in the United States, the rock pigeon (Columba livia) and domestic goose (Anser anser domesticus). Several migratory birds are known to nest within the project area. The proposed project would need to comply with the MBTA.

Bald and Golden Eagle Protection Act (BGEPA)
BGEPA (16 U.S.C. 668-668c), prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald or golden eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." A golden eagle nest has been identified within the project area. Due to the presence of golden eagle within the subdivision area, the proposed project would need to comply with the BGEPA.
Clean Water Act of 1977
ACOE and the EPA have jurisdiction over “Waters of the U.S.” Waters of the U.S. are classified as Wetlands, Navigable Water, or Other Waters and include marine waters, tidal areas, stream channels, and associated wetlands. Under federal regulations, wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” Wetlands generally include swamps, marshes, bogs, and similar areas. ACOE has verified the presence of waters of the U.S. within the project area. Impacts to these waters would be subject to permit under Section 404 and 401 of the CWA.

State
California Endangered Species Act
CESA provides legal protection for plants and wildlife listed as rare, threatened, or endangered. California Code of Regulations Title 14 Section 670.5 lists animal species considered endangered or threatened by the State and CDFG. CDFG also maintains a list of “Species of Special Concern” based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. Under state law, CDFG is empowered to review projects for their potential to impact state-listed species and Species of Special Concern, and their habitats. Several state listed species are known to occur or have suitable habitat within the project area. Impacts to these species would be subject to permitting under the CESA.

Public Resources Code
Public Resources Code §21083.4, requires that counties within California must determine whether a proposed project may result in the conversion of oak woodlands that would have a significant effect on the environment. If a county determines that there may be a significant effect to oak woodlands, the county must require mitigation for the effects to oak woodlands. Oak woodland habitat occurs within the project area. Impacts to oak woodlands would be subject to Public Resources Code §21083.4.

California Department of Fish and Game Code (CDFG)
CDFG Code governs state-designated wetlands, including riparian and stream habitat, and mandates that mitigation be implemented to replace wetland extent and value lost to development. Sections 1600-1607 of CDFG Code regulate activities that would alter the flow, substantially change or use any materials from the bed, channel, or bank of any river, stream, or lake, or dispose of any debris. Activities that affect these areas, as well as associated riparian habitats, would require a Streambed Alteration Permit from CDFG. Section 3503 of CDFG Code prohibits impacts to actively nesting birds, their nests, or their eggs. Riparian areas and nesting birds occur within the project area. Impacts to riparian areas and nesting birds would be subject to CDFG Code.

Porter-Cologne Water Quality Control Act and Section 401 of the Clean Water Act
The California Regional Water Quality Control Board (RWQCB) administers both the Porter-Cologne Water Quality Control Act and Section 401 of the CWA. The Porter-Cologne Water...
Quality Control Act, Water Code Section 13260, requires that “any person discharging waste, or proposing to discharge waste, within any region that could affect the ‘waters of the State’ to file a report of discharge” with RWQCB. Waters of the State as defined in the Porter-Cologne Act (Water Code Section 13050(e)) are “any surface water or groundwater, including saline waters, within the boundaries of the state.”

Pursuant to Section 401 of the CWA, RWQCB consider waters of the state to include, but not be limited to, rivers, streams, lakes, bays, marshes, mudflats, unvegetated seasonally ponded areas, drainage swales, sloughs, wet meadows, natural ponds, vernal pools, diked bay lands, seasonal wetlands, and riparian woodlands. RWQCB has also claimed jurisdiction and exercised discretionary authority over “isolated waters.” ACOE has determined federal jurisdiction over waters within the project area. Section 401 of the CWA would apply to the project.

Local
Santa Clara County Habitat Conservation Plan (HCP)/Natural Communities Conservation Plan (NCCP)
The Santa Clara Valley Habitat Plan, a joint HCP/NCCP, is being pursued by six local partners (the Santa Clara Valley Water District, the County of Santa Clara, the Santa Clara Valley Transportation Authority, and the cities of San Jose, Gilroy, and Morgan Hill) and two resource agencies (CDFG and USFWS). The Santa Clara Valley Habitat Plan is “intended to provide an effective framework to protect, enhance, and restore natural resources in specific areas of Santa Clara County, while improving and streamlining the environmental permitting process for impacts on threatened and endangered species” (ICF International (ICF) 2010).

Eighteen (18) plant and animal species are proposed for coverage under the plan. The Plan provides programmatic take coverage to private and public projects within the Plan area for the 18 covered plant and animal species. Projects covered under the plan are required to pay fees (to compensate for the loss of habitat) and adhere to conditions of approval, used to minimize potential impacts from projects and avoid take of certain rare species. Several mitigation measures under the plan concern avoidance and minimization of impacts on covered species and habitats through project design and construction measures (such as pre-construction species surveys and seasonal restrictions on construction activities) to directly protect species. Fees paid by covered projects will be used to create a comprehensive reserve system, in conformance with the conservation strategy under the plan, intended to protect the most critical habitat areas for covered species.

The Draft Santa Clara County Habitat Conservation Plan (HCP)/Natural Communities Conservation Plan (NCCP) was published in 2010 (ICF 2010) and the Final Plan was published in August 2012. The HCP/NCCP is proposed to be effective by spring 2013. If approved, the HCP/NCCP would allow for future incidental take permitting associated with the project for state and federally listed species.
**Santa Clara County Planning Office Guide to Evaluating Oak Woodland Impacts**

In accordance with California Public Resources Code 21083.4 (described above), the Santa Clara Planning Office provides guidance for evaluating the significance of impacts to oak woodland. This guidance defines a significant impact to oak woodlands as a land development project that results in 0.5 acre or more decrease in native oak canopy within oak woodland in the project area. If it is determined that the project is mapped within an oak woodland area, a tree removal plan and arborist report are required to be submitted to the County which identifies the species type, diameter, and amount of canopy of oak trees proposed for removal.

If the project would remove 0.5 acre or more of oak woodland canopy, at least two of the following mitigation measures must be implemented to mitigate for oak woodland impacts.

(a) Planting replacement oak trees  
(b) Conservation easement  
(c) Other options (e.g., in lieu fees paid to an agency)

**Santa Clara County Tree Removal Ordinance**

Santa Clara County requires that an Administrative Permit or Tree Removal Permit and mitigation measures be obtained for removal of any protected tree on any private or public property in designated areas (Design Review and Historic districts, smaller hillside properties) of the County. A protected tree is defined as any tree having a trunk that measures 37.7 inches or more in circumference (12 inches in diameter) at a height of 4.5 feet above the ground or immediately below the lowest branch, whichever is lower, or in the case of multi-trunk trees, a trunk size of 75.4 inches in circumference or more (24 inches or more in diameter). Mitigation is required in order to preserve and protect trees in areas that are graded and/or where construction activities are proposed within the canopy of a tree or trees. Trees greater than 24 inches or more in diameter removed as a result of the project would be subject to the tree removal ordinance.

**Santa Clara County General Plan**

The Habitat and Biodiversity Element of the Santa Clara County General Plan outlines a series of strategies and policies aimed at protecting and enhancing vegetation and wildlife. The selected policies listed below are applicable to the proposed project.

**C-RC 30**  
Habitat and other resource areas not suitable or intended for urbanization should be excluded from urbanization, and non-urban development which occurs within resource conservation areas should minimize impacts upon habitat and biodiversity.

**C-RC 31**  
Areas of habitat richest in biodiversity and necessary for preserving threatened or endangered species should be formally designated to receive greatest priority for preservation, including baylands and riparian areas, serpentine areas, and other habitat types of major significance.
3.4 BIOLOGICAL RESOURCES

C-RC 32 Land uses permitted in resource conservation areas should not be allowed to degrade the integrity of natural habitat.

C-RC 33 Linkages and corridors between habitat areas should be provided to allow for migration and otherwise compensate for the effects of habitat fragmentation.

R-RC 36 In cluster residential developments or other projects where open space dedication is required, the stream, riparian areas, and freshwater marshes should be included within the restricted open space area of the project or protected by other enforceable mechanisms, such as deed restrictions or conservation easements.

R-RC 37 Lands near creeks, streams, and freshwater marshes shall be considered to be in a protected buffer area, consisting of the following:

1. 150 feet from the top bank on both sides where the creek or stream is predominantly in its natural state;
2. 100 feet from the top bank on both sides of the waterway where the creek or stream has had major alterations; and
3. In the case that neither (1) nor (2) are applicable, an area sufficient to protect the stream environment from adverse impacts of adjacent development, including impacts upon habitat, from sedimentation, biochemical, thermal and aesthetic impacts.

R-RC 38 Within the aforementioned buffer areas, the following restrictions and requirements shall apply to public projects, residential subdivisions, and other private non-residential development:

(a) No building, structure or parking lots are allowed, exceptions being those minor structures required as part of flood control projects.
(b) No despoiling or polluting actions shall be allowed, including grubbing, clearing, unrestricted grazing, tree cutting, grading, or debris or organic waste disposal, except for actions such as those necessary for fire suppression, maintenance of flood control channels, or removal of dead or diseased vegetation, so long as it will not adversely impact habitat value.
(c) Endangered plant and animal species shall be protected within the area.

R-RC 39 Within areas immediately adjacent to the stream buffer area, new development should minimize environmental impacts on the protected buffer area, and screening of obtrusive or unsightly aspects of a project should be considered as a means of preserving the scenic value of riparian areas.
3.4 BIOLOGICAL RESOURCES

R-RC 40 Where new roads, clustered residential development, or subdivisions are proposed in proximity of streams and riparian areas, they should be designed so that:

(a) riparian vegetation is retained;
(b) creeks and streams remain open and unfenced; and
(c) there is adequate separation of new roads and building sites from the stream environment.

3.4.3 Thresholds of Significance
The project’s potential impacts to biological resources were evaluated by determining the sensitivity, significance, or rarity of each resource that could be adversely affected (either directly or indirectly) by the proposed project, and by using thresholds of significance to evaluate the significance of potential impacts. Guidance for evaluating significance thresholds is based on the CEQA Environmental Checklist (CEQA Guidelines Appendix G). Using these guidelines, the proposed project would result in a significant impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG or USFWS
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFG or USFWS
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) or tributary to an already impaired water body, as defined by Section 303(d) of the CWA through direct removal, filling, hydrological interruption, or other means
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
- Have a substantial adverse effect on oak woodland habitat as defined by Oak Woodlands Conservation Law (conversion/loss of oak woodlands) – Public Resource Code 21083.4
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan
- Conflict with any local policies or ordinances protecting biological resources:
  - Tree Preservation Ordinance [Section C16]
  - Wetland Habitat [GP Policy, R-RC 25-30]
  - Riparian Habitat [GP Policy, R-RC 31-41]
3.4 Biological Resources

3.4.4 Impacts and Mitigation

With implementation of identified mitigation measures, the proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG or USFWS. *(Less than significant impact with mitigation incorporated)*

Plants

Construction

The following special-status plants could occur within the habitats where construction activities are proposed:

- Bent-flowered fiddleneck
- Big-scale balsamroot
- Tiburon paintbrush
- Mount Hamilton fountain thistle
- Hospital Canyon larkspur
- Santa Clara Valley dudleya
- Fragrant fritillary
- Loma Prieta hoita
- Smooth lessingia
- Showy golden aster
- Woodland woollythreads
- Metcalf Canyon jewelflower

Impacts to special-status plants could occur as a result of mechanical or physical removal of vegetation in the work site during construction; crushing by equipment; trampling by personnel; and compaction of soil, which could result in damage to plant roots. These activities could result in mortality, altered growth, or reduced seed set through physically breaking, crushing, wilting, or uprooting plants. Construction of the roadway, utility, and drainage improvements could result in the temporary degradation or permanent loss of habitat for these species and could impact populations of special-status plant species, if the species occurs within the project area. These types of impacts to special-status plants would be considered significant. Mitigation Measures Biology-1 through Biology-4, and Mitigation Measure Biology-33 would be implemented to reduce impacts to special-status plants from construction activities to a less-than-significant level.

Mitigation Measure Biology-1. Prior to initiating construction, the applicant shall hire a qualified botanist to conduct protocol-level surveys for special-status plants in areas of direct impact. Surveys shall be conducted on three separate dates, spanning the published blooming period for the 13 special-status species that could potentially occur within proposed impact areas. The surveys must be conducted at an intensity that will allow each impact area to be carefully and thoroughly covered. The survey results shall be provided in a report to the County prior to construction. If a special-status plant species is identified, Mitigation Measures Biology-2 or Biology-3 shall be implemented.
Mitigation Measure Biology-2. To the extent feasible, construction activities shall avoid impacts to special-status plant populations on site. The applicant shall reduce indirect impacts to special-status plants to be preserved on site during construction by establishing a permanent buffer zone around the preserved plant populations, if feasible. If establishing an avoidance buffer is not feasible, Mitigation Measure Biology-3 shall be implemented. The buffer shall be determined by a qualified biologist and shall be of sufficient size to avoid potential disturbance and the width of the buffer shall depend on a consideration of site-specific characteristics including a consideration of the plant’s ecological requirements (e.g., sunlight, moisture, shade tolerance, soils physical and chemical characteristics) and adjacent uses (e.g., sprinkler irrigation or shading from buildings or other structures). The buffer zone shall be demarcated using exclusion fencing.

Mitigation Measure Biology-3. If avoidance of special-status plants, including establishment of a suitable buffer area is not feasible, mitigation shall be provided via the preservation, enhancement, and management of other existing occupied habitat for the affected species. Compensatory mitigation shall include preservation, enhancement, and management of lands that (a) already support equal or greater numbers (and health) of individuals of that species and (b) contain sufficient unoccupied habitat to allow for an increase in populations, the increase being at least equivalent to the number impacted, through habitat enhancement and management. The acreage of the mitigation lands shall be determined based on the number of individuals impacted and the characteristics of the mitigation lands with respect to the two criteria in the previous sentence. The mitigation ratio (mitigation:impact) shall be at least 1:1 on an acreage basis. The mitigation habitat shall be of equal or greater habitat quality compared to the impacted areas, as determined by a qualified botanist, in terms of soil features, extent of disturbance, vegetation structure, and dominant species composition.

Mitigation Measure Biology-4: An open space or conservation easement, or other similar instrument, shall be recorded on the property encompassing the mitigation habitat to be protected and preserved to protect special-status plant populations, CTS, CRLF native oak trees, riparian areas, and wetland habitats to protect the mitigation areas in perpetuity. The easement and an endowment for the management of the mitigation lands (or some other means of financially supporting management) shall be in place prior to initiation of impacts to the special-status plants, CTS, CRLF, riparian areas, or wetlands. The conservation easement areas shall be mapped, restricted, and recorded against each parcel affected, prior to issuance of grading permits for the roadway and driveways. The conservation area shall be clearly defined on parcel maps available to future owners. The conservation easement restrictions shall prohibit any physical alterations or ground disturbing activity within the conservation corridor. The conservation areas shall be marked with signs at the edge of the corridor that describe the area as sensitive habitat and indicate prohibition of any physical alterations or ground disturbing activity within the area, and the legal document shall allow for...
County enforcement, where necessary, with procedures for recovering costs of enforcement from the homeowners. Conservation area deed restrictions for individual parcels shall be approved by the County prior to recordation.

Mitigation Measure Biology-33: Prior to construction, the applicant shall provide a Habitat Mitigation & Monitoring Plan (HMMP) for preservation and management of special-status plant populations, CTS, CRLF, and golden eagles on the mitigation lands. Impacts to the special-status plants, CTS, CRLF, or golden eagles on the project site shall not commence until the County approves the HMMP. The HMMP shall be prepared by qualified biologists/botanists and shall provide, at a minimum, the following items:

(a) A summary of impacts and the proposed mitigation site/species management
(b) A description of the location and boundaries of the mitigation site/management area and description of existing site conditions
(c) A description of measures to be undertaken to enhance (e.g., through focused management) the mitigation site/management area for the focal special-status species
(d) A description of measures to transplant individual plants or seeds from the impact area to the mitigation site, if appropriate (which shall be determined by a qualified botanist)
(e) Proposed management activities to maintain high-quality habitat conditions for the focal species
(f) A description of habitat/community and species monitoring measures on the mitigation site, including specific, objective final and performance criteria, monitoring methods, data analysis, reporting requirements, monitoring schedule, etc.
(g) A description of the management plan’s adaptive component, including potential contingency measures for mitigation elements that do not meet performance criteria
(h) A description of the preservation mechanism (e.g., a conservation easement) and the funding mechanism to ensure the long-term maintenance and monitoring of the mitigation lands

The HMMP shall be submitted to the County for review and approval prior to implementation. An open space or conservation easement, or other similar instrument, shall be recorded on the mitigation lands to protect these lands. The easement and an endowment for the management of the mitigation lands (or some other means of financially supporting management) shall be in place prior to initiation of impacts to these species.
Subdivision Improvements and Future Residences

Potential impacts to special-status plants that could result from the use and maintenance of the roadway and infrastructure include increased runoff and erosion, contributing to soil loss and distribution throughout the project area. Through the implementation of Mitigation Measures Hydrology-3 and Hydrology-4 (Section 3.9), the proposed project would have a less than significant impact on special-status plants.

The presence, use, and maintenance of the proposed future residential development would not result in additional impacts to habitat for special-status plants beyond those considered for construction of the residences. Future residents of the on-site homes would have the potential to result in the direct mortality of individual special-status plants as a result of trampling or crushing by people, vehicles, and other equipment; or the placement, movement, or storage of materials. These activities could potentially impact individual special-status plants, but would not impact multiple special-status plants or populations of plants. The post-construction impact on special-status plants would not be substantial. The impact of the future residential development on special-status plants would be less than significant and no additional mitigation would be required.

Amphibians

Construction

The entire area proposed for construction of the subdivision and infrastructure is considered suitable dispersal habitat for CTS and CRLF. Construction would result in permanent impacts to 49.9 acres and temporary disturbance of 52.3 acres of foraging, refugial, and dispersal habitat for CTS and CRLF. Habitat loss would occur due to the replacement of habitat with roadways, other infrastructure, and residences. Incidental take approval from USFWS (for both CTS and CRLF) and from the CDFG (for CTS) would be necessary if “take” of these species, as defined in CESA and ESA would occur as a result of the project.

Construction activities could reduce the ability of CTS and CRLF to disperse or move across the landscape. Construction of the retaining walls could impede the movement of CTS or CRLF across the proposed roadway. CTS or CRLF could navigate around the retaining wall; however its presence could reduce the transfer of individuals between populations.

Construction activities could also result in the direct injury or mortality (“take”) of individual CTS and CRLF as a result of trampling or crushing by personnel or equipment. These impacts would be considered significant. Individuals can be crushed in their burrows by the passage of heavy equipment, or trapped within burrows. Individuals found during pre-activity surveys that are relocated outside of the development area can be subjected to physiological stress and a greater risk of predation. Relocated individuals can also undergo increased competition with CTS or CRLF already present in the area to which they are relocated.

Substrate vibrations caused by construction activities can potentially cause CTS or CRLF to move out of refuges, exposing them to a greater risk of predation or desiccation; interfere with predator detection; and result in a decrease in time spent foraging. Increases in human
concentration and activity due to construction activity can result in an increase in native and non-native predators that are attracted to trash left in the activity area resulting in injury or mortality or reduced reproductive success of individual CTS and/or CRLF.

The following mitigation measures, as well as Mitigation Measures Biology-4 and Biology-33, would be implemented to reduce construction impacts to CTS and CRLF to a less-than-significant level:

**Mitigation Measure Biology-5:** An education program for construction personnel shall take place prior to construction, and a USFWS-approved biologist shall explain to workers how best to avoid the accidental take of CTS and CRLF. The approved biologist shall train workers on CTS and CRLF recognition, their potential for occurrence in the impact area, measures to avoid take, and penalties for take. The program shall consist of a brief presentation by the on-site biologist to explain endangered species concerns to all personnel involved in the proposed project. The program shall include a description of the CTS and CRLF and their habitat needs; an explanation of the status of these species and their protection under the FESA; and a description of the measures being taken to reduce effects to these species during project implementation. The program shall be recorded electronically, and all future construction personnel shall be required to review the presentation prior to their initiation of work in the project area.

**Mitigation Measure Biology-6:** Prior to any ground disturbance (with the exception of trail construction and other activities associated with natural lands management that would result in only minor disturbance), either a qualified biological monitor will be on-site to observe ground-disturbing activities or USFWS-approved exclusion fencing that allows CTS and CRLF to leave the development area but prevents them from entering this area shall be constructed along the proposed ultimate limits of grading and disturbance. The exclusion fencing shall be at least 3 feet tall and buried at depth of at least 6 inches below the soil surface. The exclusion fencing shall be continuous between project activities and adjacent natural habitats, with openings only as needed for vehicular access. A qualified biologist shall inspect this area prior to installation of this exclusion fencing. The exclusion fencing shall remain in place for the duration of project construction activities, thus allowing CTS and CRLF to leave undisturbed portions of the subdivision area over time. This exclusion fencing shall be removed after project construction activities have ceased. During residential construction, the exclusion fencing shall be in place throughout the duration of construction at each lot.

**Mitigation Measure Biology-7:** A qualified biologist shall be present during all vegetation removal, grading, and other construction activities performed in suitable habitat for CTS and CRLF. The biologist shall conduct surveys of the work area during the rainy season (between October 15 and April 15), and following rain events, prior to the initiation of work each day and shall be present during construction activities to remove any CTS or CRLF that disperse into the impact area. The biologist shall also help to ensure that work is confined to predetermined construction areas through...
monitoring. During the dry season (roughly April 15 to October 15), dedicated construction personnel trained by the qualified biologist can perform this monitoring function after all clearing and grubbing has been performed and the construction site has been surrounded by exclusion fencing.

**Mitigation Measure Biology-8:** If a CTS or CRLF (or any amphibian that personnel think may be of one of these species) is encountered during project activities, the following protocol shall be implemented:

(a) All work that could result in direct injury, disturbance, or harassment of the individual animal shall immediately cease.
(b) A dedicated project contact (e.g., a supervisor) shall be immediately notified.
(c) The dedicated project contact shall immediately notify USFWS and CDFG.
(d) A qualified biologist approved by USFWS and CDFG to handle the individual CTS or CRLF shall move the individual to a safe location nearby.

**Mitigation Measure Biology-9:** To prevent inadvertent entrapment of CTS or CRLF during project activities, all excavated, steep-walled holes or trenches more than 2 feet deep shall be thoroughly inspected for trapped animals each morning before work activity is performed, and immediately before they are filled. If at any time a trapped special-status species is discovered, the procedure described in Mitigation Measure Biology-7 shall be implemented.

**Mitigation Measure Biology-10:** Vehicles shall observe a 15-mile-per-hour speed limit during construction. Off-road traffic outside of the designated development area shall be prohibited.

**Mitigation Measure Biology-11:** The project proponent shall compensate for any permanent loss of CTS and CRLF habitat at a minimum ratio of 2:1. Mitigation must be provided prior to the commencement of impacts to these species’ habitat.

Compensatory mitigation may be carried out through purchasing credits at a habitat mitigation bank (if there are any banks with CTS and CRLF habitat credits with a service area that includes the project area when construction commences), and/or one or both of the following on-site mitigation methods:

(a) The preservation and management of high-quality habitat (in a ratio approved by CDFG) that is already occupied by CTS and CRLF, and that is located in a position within the landscape that would support long-term persistence of the species within the mitigation area (i.e., in an area providing connectivity to other populations)
(b) The restoration or enhancement of degraded habitat (in a ratio approved by the CDFG) or habitat that is unsuitable for use by CTS and CRLF, but that (a) is in close proximity to and easily accessible by CTS occurring in nearby habitats; (b) could be made more suitable for use via construction of one or more breeding ponds, enhancement of breeding and non-breeding aquatic habitat via improvements to emergent vegetation or other cover, or management to improve the quality of upland habitat; and (c) is located in a position within the landscape that would support long-term persistence of the species within the restored/enhanced habitat.

**Mitigation Measure Biology-12:** Wherever retaining walls or other vertical curbs are unnecessary, slopes on the edges of roads shall be designed to allow CTS and CRLF to move from adjacent grassland habitats over the surface of the road (i.e., vertical features shall be minimized).

The proposed construction could potentially result in indirect impacts to CTS and CRLF through impacts to hydrology and water quality. Increased turbidity and sedimentation in either of the two potential breeding ponds due to erosion from construction of the proposed project could impair the health of eggs or larvae and make detection of predators and prey more difficult resulting in significant indirect impacts. This impact would be reduced to less than significant through implementation of Mitigation Measure Hydrology-1.

**Subdivision Improvements and Future Residences**

The presence, use, and maintenance of the newly constructed roadway and infrastructure could result in a small amount of additional impacts to CTS and CRLF through increased erosion resulting from increased runoff and minor changes in drainage patterns. These impacts would be less than significant with implementation of permanent BMPs as required in Mitigation Measure Hydrology-4.

The presence of the access roads and improvements could impede CTS and CRLF movement and dispersal. As discussed for construction, the proposed retaining walls would impede movement of CTS and CRLF and reduce transfer of individuals between populations. The potential isolation of CTS and CRLF populations within the project area as a result of the proposed project would be a significant impact. Mitigation Measures Biology-3, Biology-5 through Biology-12, and Biology-33 would reduce the post-construction impacts of the roadway and infrastructure on CTS and CRLF to a less-than-significant level. The presence, use, and maintenance of the residences would not result in any additional impacts on habitat for CTS and CRLF, but would potentially result in the direct injury or mortality of individuals as a result of trampling or crushing by people, vehicles, agricultural equipment, and other equipment; the placement, movement, or storage of materials; and horses or other livestock. Residential activities could potentially increase the likelihood of direct injury or mortality by predation by dogs or cats; falling into pits or trenches, or features that resemble pits or trenches; harassment or predation by people (i.e., capture for fishing bait, or harassment by children); poisoning by toxic chemicals related to residential activities or agriculture; or predation by
native and non-native predators that are attracted to human residences and agriculture (i.e., crows, ravens, raccoons, opossums, and skunks).

Features such as houses, barns, retaining walls, garages, tennis courts, workshops, arenas, and vineyards, would create impediments to CTS and CRLF movement and dispersal across the landscape. The construction of the 25 residences and the activity associated with these residences could act to further isolate CTS and CRLF populations. Vibrations caused by the operation of equipment (e.g., vehicles and agricultural equipment) can affect the survival of CTS and CRLF. Nearby lights from development, including night lighting related to residential activities (i.e., lights shining through the windows of houses, porch lights, and other lighting) could affect CTS and CRLF nocturnal movements, foraging, and reproduction (H.T. Harvey 2012) and could make dispersing individuals more visible to predators. Implementation of Mitigation Measures Biology-4, Biology-5 through Biology-11, and Biology-33, would reduce the impacts from the future residences to a less than significant level.

**Reptiles**

**Construction**

Construction of the proposed roadway, infrastructure, and residential development would result in the permanent loss of approximately 50 acres of grassland, oak woodland, and other habitat that could potentially serve as dispersal habitat for the western pond turtle. Breeding habitat is unlikely to be impacted due to the distance between proposed development and the perennial pond which is the only potential breeding habitat in the project area. Construction would have very little impact on western pond turtle habitat due to limited breeding habitat within the proposed area of development. The project area represents a very small portion of this habitat available to pond turtles regionally, and the loss of this dispersal habitat would not affect regional populations.

Western pond turtles could potentially disperse in small numbers in upland habitats in the project area. If an individual were to occur within the construction area for the utility and road infrastructure or for the future residences, construction could potentially result in the direct injury or mortality of individual pond turtles as a result of trampling or crushing by personnel or equipment. If unmitigated, the direct injury or mortality of western pond turtles would be a significant impact. Because the habitat requirements for western pond turtles are similar to those for CRLF and CTS, implementation of Mitigation Measures Biology-6, Biology-9, and Biology-10 would reduce impacts to western pond turtle to a less-than-significant level.

**Subdivision Improvements and Future Residences**

The presence, use, and maintenance of the access roads, utilities, and the 25 residences would not impact habitat for western pond turtles. The presence of the proposed retaining walls would make it more difficult for western pond turtles to cross the road, and could reduce the transfer of individuals between populations of this species. However, it is unlikely that the inability of turtles to traverse the road sections with retaining walls or traversing around residences would affect many individuals, and no population-level effects are expected. The
likelihood of post-construction impacts on western pond turtles are not substantial and therefore these impacts are considered less than significant.

*Mammals – San Francisco Dusky-Footed Woodrat*

*Construction*

San Francisco dusky-footed woodrats occur in the oak woodland areas in the project area. Within the development area, woodrats could potentially occur where the proposed roads and other improvements cross through oak woodlands, especially along drainages. Construction within oak woodland habitat and the associated removal of 71 trees would result in the loss of potential breeding and foraging habitat for woodrats. Given the extent of suitable habitat available to the species regionally, the low density of woodrats that occur in the project area, and the very high densities of woodrats that occur in some parts of the region, the loss of habitat would have a less-than significant impact on regional populations of the species.

Construction activities are not expected to substantially affect the movement of dusky-footed woodrats between on-site and off-site habitats, as this is an extremely mobile species that would readily cross or circumvent work areas. Project impacts would result in only minimal indirect disturbance of this species, as many dusky-footed woodrats are tolerant of proximate activities (especially diurnal activities) that do not directly disturb their nest structures. Individual woodrats could potentially occur within the project area, particularly in nests located on the ground or in trees. Project activities within these areas could potentially impact woodrats, especially young in nests. Impacts could include direct injury or mortality of woodrats as a result of ground disturbing activities. The direct injury or mortality of woodrats would be a significant impact. The following mitigation measures would reduce this impact to a less-than-significant level:

**Mitigation Measure Biology-13:** Prior to any clearing of, or work within riparian, oak woodland, or scrub habitat, a qualified biologist shall conduct a survey for San Francisco dusky-footed woodrat nests. Where feasible, an exclusion buffer of approximately 10 feet around these nests shall be established to avoid moving or bumping the nests, or logs or branches on which the nests rest. If establishing a buffer and avoiding the nests is not feasible, Mitigation Measure Biology-14 shall be implemented.

**Mitigation Measure Biology-14:** If avoidance of nests is not feasible, the nests shall be dismantled and the nesting material moved to a new location outside the project’s impact areas so that it can be used by woodrats to construct new nests. Prior to nest deconstruction, each active nest shall be disturbed by a qualified wildlife biologist to the degree that all woodrats leave the nest and seek refuge out of the impact area. Whether the nest is on the ground or in a tree, the nest shall be nudged to cause the woodrats to flee. For tree nests, a tarp shall be placed below the nest and the nest dismantled using hand tools (either from the ground or from a lift). The nest material shall then be piled at the base of a nearby hardwood tree (preferably an oak with refuge sites among the tree roots or with dense vegetation or other refugia nearby) outside of the impact area.
Construction of the future residential development would not result in substantial habitat loss for dusky-footed woodrats as the residential lots are not located within suitable habitat for this species. Construction of these residences is not expected to substantially affect the movement of dusky-footed woodrats between on-site and off-site habitats, as this is an extremely mobile species that will readily cross or circumvent work areas (H.T. Harvey 2012). Dusky-footed woodrats are not expected to occur within construction areas during periods of active work. As a result, construction of the future residential development would have a less than significant impact on dusky-footed woodrats.

Subdivision Improvements and Future Residences
The proposed roadway and infrastructure is not located within habitat for dusky-footed woodrat and the roadway would not impede dusky-footed woodrat migration. The presence, use, and maintenance of the future residential development would not result in the direct loss of habitat for woodrats. No disturbance of nests of dusky-footed woodrats is expected to occur due to post-construction activities, as there would be limited human disturbance within the oak woodland habitat post-construction. Post-construction impacts on San Francisco dusky-footed woodrats would be less than significant.

Mammals – American Badger

Construction

Construction of the proposed project would result in the loss of oak woodland and grassland habitats that could be used by American badgers for denning and foraging. The loss of approximately 49 acres of grassland habitat and temporary impact to approximately 50 acres of grassland habitat as a result of the proposed project would reduce the potential foraging and denning habitat available to this species, while the loss of other habitat types (i.e., 0.6 acre of oak woodland habitats) represents a loss of potential dispersal or foraging habitat for badgers. The impact area represents a very small portion of suitable habitat available to this species regionally. Impacts to habitat of American badger from construction of the project would not be significant.

Construction could potentially result in the direct injury or mortality of badgers, especially pups, within an active den. If badgers have to be evicted from their dens, there is some potential that they would be exposed to greater predation risk or greater road mortality while they are seeking out new denning sites, especially if suitable habitat in adjacent areas is already occupied. The following mitigation measures would reduce the impact from injury or mortality of American badgers to a less-than-significant level:

Mitigation Measure Biology-15: A qualified biologist shall conduct pre-disturbance surveys for badger dens on and within 300 feet of the proposed area of new disturbance (as access permits), within 30 days prior to ground-breaking in any given area currently occupied by grassland. This survey shall need to be repeated every time natural grassland that has not been surveyed within the prior 30 days is disturbed. If the qualified biologist identifies any dens that appear suitable for this species (based on size, shape, or other features), such “potential dens” shall be monitored via tracking media or
camera for a period of at least three days to determine occupancy, and then excavated if no evidence of occupancy is detected. If the nest is found to be active, Mitigation Measure Biology-16 shall be implemented.

**Mitigation Measure Biology-16:** If an active maternity badger den is located, the qualified biologist shall determine the measures (e.g., buffers) that shall be taken to avoid impacts on the den during the pupping season (i.e., February 15 through July 1, or as otherwise determined through surveys and monitoring of the den), in consultation with CDFG. After the pupping season, if a den is located in an on-site impact area, the badgers shall be evicted by excavation of the den using hand tools, in consultation with CDFG and under the supervision of the qualified biologist.

**Subdivision Improvements and Future Residences**
The use and maintenance of the facilities and residences are not expected to directly or indirectly affect badgers that may occur in the vicinity of the project area. Post-construction activities would not result in new areas of ground disturbance and would not destroy badger dens. Activities associated with residential development may disturb an occasional foraging badger; however, this species is primarily nocturnal, and easily capable of moving to avoid the low levels of disturbance that would occur. No new areas would be disturbed post-construction thereby direct impacts to badgers within dens would be avoided. The access roads, utilities, and other associated structures would not substantially impede the dispersal of badgers, which are highly mobile and can navigate around impediments such as the proposed retaining walls. Badgers are likely to avoid disturbance associated with residences and agricultural areas, and will disperse through these developed areas at night when levels of disturbance are lower. Badgers could potentially be impacted by the presence of pets, noise, nighttime lighting, and other human-related factors after the residences are occupied. Traffic along the road would increase due to residential occupation, but the speeds of traffic along Maple Avenue are not expected to result in a substantial increase in the risk of road mortality or a reduction in regional populations of badgers. These impacts are not substantial and impacts to American badgers would be less than significant post-construction.

**Mammals – Bats**
**Construction**
Construction activities could result in the permanent loss of vegetated habitat that either provides foraging habitat, or that supports populations of prey, for bats, potentially including the Yuma myotis, big brown bat, Mexican free-tailed bat, hoary bat, long-eared myotis, western red bat, and pallid bat. Construction of the future residential development would result in the permanent loss of foraging habitat and habitat supporting prey for bats. Impacts from the proposed project on foraging habitat and prey populations these bats would be less than significant.

The removal of trees and modification of the barn located on the western edge of the project area could potentially affect bat roosts, if roosts are present in these areas. Construction of the proposed project could potentially result in the direct mortality of individual bats in day roosts,
and in the loss of bat day roosts and night roosts. If a non-breeding colony of bats is present in cavities in trees to be removed, these bats could be directly killed or injured during tree removal. If a maternity colony of bats is present in these trees, the young bats would be killed when the tree is removed or when the barn is altered, even if adults were allowed to escape. If an active bat roost occurs near the area of construction such that the colony is disturbed by active work, the bats may abandon the roost. If this is a maternity roost, this could result in the abandonment and mortality of young bats if they are not yet able to fly. The mortality of a population of special-status bats, loss of a maternity roost of 20 bats or more or any maternity roost of pallid bats, or abandonment of such a maternity roost, or loss of a day roost of pallid bats or of a large colony of non-special-status bats would be considered a significant impact. Impacts on bat roosts would be reduced to a less than significant level with implementation of the following mitigation measures:

**Recommended Measure Biology-17A:** A survey for roosting bats shall be conducted by a qualified biologist prior to removal of trees, demolition of buildings, modification of the on-site barn, or ground-breaking work. Any trees or buildings within or immediately adjacent to (i.e., within 100 feet of) the work areas shall be assessed to determine whether they provide high-potential roost sites. If suitable roost sites are found and a visual survey is not adequate to determine presence or absence of bats (i.e., in tree cavities), acoustic equipment shall be used to determine occupancy. This survey may serve as the pre-construction survey described in Mitigation Measure Biology-17B, or it may be conducted prior to the breeding season (i.e., April 1) in the year(s) in which removal of trees, demolition of buildings, modification of the barn, and/or ground-breaking disturbance are scheduled to occur so that adequate measures can be implemented, if feasible, to evict the bats during the non-breeding season.

**Mitigation Measure Biology-17B:** A pre-construction survey for roosting bats, following the methods described in Mitigation Measure Biology-17A, shall be conducted within 15 days prior to the commencement of construction activities in a given area to determine whether bats have occupied a roost in or near the proposed work areas. If bats are found Mitigation Measures Biology-18 through Biology-21 shall be implemented.

**Mitigation Measure Biology-18:** If a maternity roost supporting more than twenty individuals of non-special-status bats, or a pallid bat maternity roost of any size, is detected during the pre-construction survey, the qualified biologist shall determine the exclusion zone around the active roost that shall be maintained. This exclusion zone shall be maintained from April 1 until the young are flying, typically after August 31.

**Mitigation Measure Biology-19:** If a large day roost of common bat species or a pallid bat day roost is found in a building to be demolished or retrofitted, in a tree to be removed, or near planned work areas such that the colony could be disturbed by project activities to the point of abandoning the roost, the bats shall be safely evicted under the direction of a qualified biologist.
Eviction of bats shall occur at night to decrease the likelihood of predation (compared to eviction during the day). Eviction shall occur between September 1 and March 31, outside the maternity season, but shall not occur during long periods of inclement or cold weather (as determined by the bat biologist) when prey are not available or bats are hibernating. One-way doors shall be inserted into the crevices to allow bats to exit, but not re-enter, the crevices. These one-way doors shall be inspected regularly until work commences, and shall be removed the morning a tree is to be removed or building demolished. If a day roost is found within a building, eviction shall occur by opening the roosting area to allow airflow through the cavity. Demolition shall then follow no sooner than the following day (i.e., there shall be no less than one night between initial disturbance for airflow and the demolition).

If feasible, one-way doors shall also be used to evict bats from tree roosts. If use of a one-way door is not feasible, or the exact location of the roost entrance in a tree is not known, the trees with roosts that need to be removed shall first be disturbed by removal of some of the trees' limbs not containing the bats. Such disturbance shall occur at dusk to allow bats to escape during the darker hours. These trees would then be removed the following day. These activities shall be performed under the supervision of the qualified biologist.

**Mitigation Measure Biology-20:** If a day roost of pallid bats or of a large colony of non-special-status bats shall be impacted, an alternative bat roost structure shall be provided within the project area. One alternative roost structure shall be provided for each roost that is impacted. The design and placement of this structure shall be determined by a bat biologist, in consultation with CDFG, based on the species of bat to be displaced, the location of the original roost, and the habitat conditions in the vicinity. The roost structure shall be built to specifications as determined by a qualified biologist and CDFG, or it may be purchased from an appropriate vendor. The structure shall be placed outside the potential impact area (i.e., at least 100 feet from project impacts), but otherwise as close to the impacted roost site as feasible. This bat structure shall be erected prior to removal of the original roost structure to encourage bats to begin using the new structure.

**Mitigation Measure Biology-21:** If a tree or structure within or immediately adjacent to the work area is found to contain a day roost but it is not being removed or demolished, a qualified biologist (in consultation with CDFG) shall determine whether the bats shall be evicted or whether they shall remain in place. If it is determined that the risks to bats from eviction (e.g., increased predation or exposure, or competition for roost sites) are greater than the risk of colony abandonment, then the bats shall not be evicted.

*Subdivision Improvements and Future Residences*
Activities that occur following construction and occupation of the future residences and from maintenance and use of the proposed roadway and infrastructure could potentially impact bats through increased noise, nighttime lighting, human activity, and occurrence of pets in the
vicinity of bat roosts. These indirect effects could cause bats to relocate to other roost sites over time, rather than cause the immediate abandonment of a colony. Tree removal is not proposed post-construction, and ground disturbance due to residential activities, recreational activities, and agricultural activities would be minimal as it would not result in demolition of buildings or removal of trees that provide bat roosting habitat. Therefore, post-construction impacts on bats would be less than significant.

**Birds and Raptors – Migratory Birds**

**Construction**

Construction of the proposed roadway and infrastructure would result in the temporary construction disturbance of 29.8 acres of grassland, oak woodland, and other habitats within the project area that could potentially serve as nesting and/or foraging habitat for native birds, including the loggerhead shrike, white-tailed kite, and grasshopper sparrow. Replacement of these natural habitats with 49.9 acres of pavement or other constructed surface, and residences that removes natural habitat could result in the loss of nesting and foraging habitat for native birds. The development area represents a very small portion of suitable habitat available to these species regionally, and the loss of 49.9 acres of habitat would have a less than significant impact on regional populations of these species.

Based upon field studies, the habitat mosaic of the project area, and known breeding densities of these species, it is likely that no more than one pair of white-tailed kites, two pairs of loggerhead shrikes, and possibly two to four pairs of grasshopper sparrows could nest in or immediately adjacent to the development area. A number of non-special-status bird species could nest in the project area as well, and higher numbers of pairs of those species may occur in or adjacent to the construction area. Implementation of the proposed project could potentially result in the direct mortality of individuals due to the removal of one or more active nests. In addition, project activities that occur in the vicinity of an active nest could result in the indirect injury or mortality of individuals, particularly eggs or young in a nest, as a result of disturbance. Any activities resulting in a substantial increase in audible or visible disturbance could potentially result in nest abandonment, and the loss of eggs or young as a result. The following mitigation measures would reduce impacts to non-special-status birds and raptors, white-tailed kite, loggerhead shrike, and grasshopper sparrow to a less than significant level:

**Mitigation Measure Biology-22:** To the extent feasible, construction and demolition activities shall be scheduled to avoid the nesting season. The nesting season for most birds, including most raptors, in Santa Clara County extends from February 1 through August 31 (with the exception of golden eagle nesting). If construction must occur during the nesting season, Mitigation Measures Biology-23 and Biology-24 shall be implemented.

**Mitigation Measure Biology-23:** Pre-construction surveys for nesting birds shall be conducted by a qualified biologist prior to construction and demolition activities between. These surveys shall be conducted no more than 7 days prior to the initiation of construction and demolition activities. During this survey, the qualified biologist shall
3.4 BIOLOGICAL RESOURCES

inspect all potential nesting habitats (e.g., trees, shrubs, grasslands, and buildings) within 300 feet of impact areas for raptor nests and within 100 feet of impact areas for nests of non-raptors. If an active nest (i.e., a nest with eggs or young, or any completed raptor nest attended by adults) is found sufficiently close to work areas to be disturbed by these activities, the qualified biologist shall determine the extent of a disturbance-free buffer zone to be established around the nest (typically 250 feet for raptors and 50-100 feet for other species), to ensure that no nests of species protected by the MBTA and California Fish and Game Code shall be disturbed during project implementation.

Mitigation Measure Biology-24: If construction and demolition activities are not initiated until after the start of the nesting season, potential nesting substrate (e.g., bushes, trees, grasses, and other vegetation) that is scheduled to be removed by the project may be removed prior to the start of the nesting season (e.g., prior to February 1) to reduce the potential for initiation of nests.

Subdivision Improvements and Future Residences
The presence, use, and maintenance of the access roads, utilities, and future residential development would not result in the loss of additional habitat for loggerhead shrikes, grasshopper sparrows, white-tailed kites, or other protected birds. No direct take of individuals of these species would occur as a result of post-construction activities, as they are not expected to nest within developed areas. Post-construction activities of residents and guests that result in new, substantial increases in audible or visible disturbance near an active nest could potentially result in indirect impacts on nests of protected birds. Such activities include recreational activities, agricultural activities (maintaining vineyards or orchards, operating machinery), and residential activities (activity within yards and along roads) that occur within or immediately adjacent to the natural lands management areas. Any activities resulting in a new, substantial increase in audible or visible disturbance could potentially result in nest abandonment, and the loss of eggs or young as a result. However, birds that would choose to nest near the roadways, infrastructure, or residential development are expected to be habituated to these activities. Such birds would therefore tolerate the level of disturbance associated with residential human activities, thus reducing the number of nests that may be disturbed. As a result, post-construction impacts to migratory birds would be less than significant.

Birds and Raptors – Burrowing Owl
Construction
Construction of the infrastructure and future residential development would result in the permanent loss of grassland that could potentially provide winter roosting and foraging habitat for burrowing owls. The replacement of grassland habitat with pavement or other constructed surface that provides no foraging opportunities for burrowing owl would result in the permanent loss of potential habitat for burrowing owls. However, the 49.9 acres of impacted grassland habitat represents only a small portion of wintering and foraging habitats available to burrowing owls in southern Santa Clara County, as extensive contiguous areas of grasslands with ground squirrel burrows are present to the south and east of the project area. The loss of
winter roosting habitat would therefore not result in a decline in regional populations, and habitat loss itself would not result in a significant impact.

Construction could result in the destruction or compaction of burrows, potentially leading to injury or mortality of individual owls if burrowing owls are present within or immediately adjacent to the project area. Construction activities in or near occupied nest burrows could disturb adults to the point of nest abandonment, leading to the loss of eggs or young if burrowing owls were to breed in the project area. The injury or mortality of burrowing owls would be a significant impact. Implementation of the following mitigation measures would reduce the potential impacts of construction activities on burrowing owls to a less than significant level:

**Mitigation Measure Biology-25:** A qualified biologist shall conduct pre-construction surveys for burrowing owls on and within 300 feet of the proposed area of new disturbance prior to groundbreaking in grassland habitat. Surveys shall be conducted in conformance with the take avoidance surveys described in the current CDFG-approved protocols (CDFG 2012). The initial survey shall be conducted 2 to 4 weeks prior to the initiation of construction, and three additional surveys shall be conducted subsequently, with the final survey conducted within 24 hours prior to construction initiation. Surveys shall be conducted regardless of the time of year that work is scheduled to occur. This survey shall be repeated every time natural grassland habitat is disturbed, if the area has not been surveyed within the prior 2 weeks.

**Mitigation Measure Biology-26:** If ground-disturbing activities shall directly impact occupied burrows, the owls occupying burrows to be disturbed shall be passively relocated during the non-nesting season by a qualified biologist using one-way doors. No burrowing owls shall be evicted from burrows during the nesting season (February 1 through August 31) unless evidence indicates that nesting is not actively occurring.

**Mitigation Measure Biology-27:** If burrowing owls are found breeding on the site, a 300-foot exclusion buffer, within which no new construction activity shall be permissible, shall be maintained between construction activities and occupied burrows. This protected area shall remain in effect around any burrows occupied during the nesting season (February 1 through August 31) unless evidence indicates that nesting is not actively occurring.

**Subdivision Improvements and Future Residences**
Post-construction activities would not directly impact burrowing owls in burrows, as there would be no new areas of ground disturbance. The use and maintenance of the newly constructed facilities may have some potential to disturb and disrupt roosting and foraging burrowing owls that may occur within or adjacent to the development area. These few owls are expected to relocate to alternate burrows and avoid or acclimate to regular levels of disturbance within the developed areas. Post-construction use and maintenance of newly constructed facilities would not result in the mortality of burrowing owls or substantial indirect effects as
there would be no new areas of ground disturbance and the burrowing owls that would occur in the area would be habituated to the post-construction level of human disturbance; post-construction impacts to this species would be less than significant.

Activities associated with the occupation of residences are not expected to result in a substantial decline in regional populations of burrowing owls. Post-construction there would be no new areas of ground-disturbance that could destroy a burrow. The burrowing owls that would occur in the area would be habituated to the level of human disturbance. Post-construction maintenance activities and use of the residences may result in the occasional disturbance of small numbers of owls choosing to winter or forage in the vicinity of the residential lots, however, this level of disturbance would be minor and would not be a substantial adverse impact. The impact on burrowing owls post-construction would be less than significant.

**Birds and Raptors – Golden Eagle**

As previously stated on page 3.4-20 of the Environmental Setting discussion, the golden eagle is a fully protected species in California and is protected under the federal Bald and Golden Eagle Protection Act (BGEPA). Golden eagles nest in large sturdy trees and on cliffs, and forage widely over grasslands for rodents and other prey. They build large nests of sticks, and nest from early spring through summer. Suitable nesting habitat for golden eagles is present in large trees throughout the project area. Open habitats such as annual grasslands provide foraging habitat for this species. Golden eagles are relatively rare in the region; Bousman (2007b) suggests that there may only be 20 pairs in the Diablo Range portion of Santa Clara County, with approximately another five pairs on the western side of the County.

An active golden eagle nest was observed by H.T. Harvey in the Fischer Creek drainage, on the northwestern portion of the project area, on March 12 and 14, 2012. Other nest sites associated with this pair may be present in the project area or in adjacent areas because golden eagles may have multiple nest sites within their territories (Kochert et al. 2002). The grasslands and other open habitats throughout the project area provide suitable foraging habitat for this species. The home range size of the golden eagles in the project area is unknown, although there is evidence that golden eagles in the region may have substantially smaller home ranges than eagles in more arid regions. Golden eagles in the Altamont region of the Diablo Mountains appear to have home range sizes on the order of 1.5 – 4 square miles (Hunt 2002), and it is likely that golden eagles in Santa Clara County have similar home range sizes, as habitat conditions in the foothills and mountain areas of the county are relatively similar to those in the Altamont area. These home range estimates suggest that there is likely only one pair of eagles that occupy the project area and that these eagles likely forage across much of the project area and other adjacent areas.

**Construction**

Construction of the roadway and associated infrastructure could potentially result in the disturbance of an active golden eagle nest. Nesting golden eagles are susceptible to disturbance, and construction activities resulting in a substantial increase in noise or visible disturbance during their reproductive period would increase the probability of nest abandonment, and the
loss of eggs or young. It is possible that the eagles may move to an alternate nest site within the existing territory as a result of the disturbance, or they could potentially abandon their breeding territory.

The eagle nest that is currently active on site is approximately 120 feet from an existing ranch road. The nesting eagles are accustomed to the existing level of disturbance around their nest site, which includes intermittent traffic from farm vehicle and related equipment usage on the dirt farm road. New construction activities would result in an increased level of disturbance in the project area as a whole. Human disturbance to nesting eagles can be fatal to embryos or nestlings (H.T. Harvey 2012). Disturbance associated with construction during the nesting phase could cause the eagle pair to abandon their territory and if a new territory is not established, have reduced reproductive success. Given the rarity of the species in the region, any loss of eggs or chicks, or reduced reproductive success, due to construction disturbance during the reproductive stage, would be a significant impact.

The proposed construction activity that would occur closest to the existing eagle’s nest is the establishment of a trail southeast of the nest (within 0.2 mile of the nest). A hill would separate the proposed trail from the nest so that activities on the trail would not be visible to birds at the nest, although shortly after liftoff from the nest, eagles would be able to see human activity just on the other side of the hill. Viewshed buffers are a successful method for reducing the probability that the golden eagles will abandon their nest site due to construction disturbance (H.T. Harvey 2012). Implementation of Mitigation Measures Biology-3, and Biology-28 through Biology-30 would reduce impacts of construction on nesting eagles to a less-than-significant level.

**Mitigation Measure Biology-28**: No construction activities shall occur within a viewshed buffer zone within 0.5 mile of the nest, or within 1,000 feet (regardless of whether the construction is within the viewshed) around any eagle nest during the breeding season (January 15 to August 1, or as determined by a qualified biologist, as the breeding season may be shorter). The viewshed buffer, defined as all project areas that are within 0.5 mile of the nest and that can be seen by an eagle on the nest, shall be mapped by a qualified biologist in consultation with a civil engineer.

**Mitigation Measure Biology-29**: During construction periods for the subdivision improvements a qualified biologist shall monitor the active golden eagle nests from a suitable distance (i.e., as to not disturb nesting eagles) during the breeding season (January 15 to August 1, or as determined by a qualified biologist, as the breeding season may be shorter), at a survey frequency determined by the biologist. If the biologist determines that project activities are disturbing eagles to the point that the eagles’ reproductive activities could be abandoned, the biologist, in consultation with the Planning Office, shall have the authority to stop work anywhere in the project area that he/she believes may be disturbing the eagles. Work shall not start again until the biologist determines that the work can occur without disturbing the eagles. If the
Biologist determines that construction activity is not disturbing nesting eagles, the monitoring may cease, in consultation of the Planning office.

**Mitigation Measure Biology-30:** For each year in which new construction will occur (subdivision improvements, new residences, new trail) surveys shall be conducted by a qualified biologist of areas within 1,000 feet of the area of new construction or within a viewshed buffer (areas visible from the construction area up to 0.5 mile) to determine the location of any new (currently unknown) golden eagle nests. This survey shall determine if the known eagles are using other nests elsewhere within the territory or whether multiple pairs of eagles are breeding on the site. This information shall inform nesting-season avoidance and minimization measures for that year. If eagles are determined to occupy any areas, Mitigation Measures Biology-28 and Biology-29 shall also be implemented during construction, and Mitigation Measure Biology-31 shall be implemented during the post-construction period.

Construction of the future residential development could result in the abandonment of the eagle territory as a result of construction disturbance resulting in reduced reproductive success. As described above, construction activities would result in an increased level of disturbance in the project area, possibly resulting in a loss of eggs or chicks, or the abandonment of the breeding territory.

Because future residential construction could occur at any time over an approximately 10-year period, it is possible that the eagles could potentially use another nest location in the project area prior to the construction of all 25 residences. The eagles may move to a nest site that is closer to proposed residential construction, in which case the potential for disturbance of the nesting eagles would increase. It is also possible that the eagles could move to a nest site farther from proposed construction (or even off site), in which case the risk of disturbance would be reduced. The 25 proposed residence sites are currently outside the eagles’ viewshed as viewed from the ground at the nest site, due to the presence of hills between the nest and the proposed residential construction areas. However, if the eagles use an alternate nest site, the viewshed impact of residential construction may be greater. Construction of each residence would be subject to implementation of Mitigation Measures Biology-28 through Biology-30, which would minimize effects to less than significant levels.

The construction of the 25 residences could potentially result in the permanent loss of up to 41.7 acres and temporary disturbance of 22.3 acres of upland foraging habitat for golden eagles. Based on home range estimates, the proposed impact area during residential construction (64 acres) represents an area that is approximately 3 to 6 percent of an eagle’s home range (H.T. Harvey 2012).

The proposed residences may cut off the eagles from some foraging habitat. The eagles most likely forage in the open, undeveloped grasslands to the east and southeast of their nest site, although they may occasionally forage in agricultural fields to the west (H.T. Harvey 2012). The agricultural fields provide lower quality foraging habitat, as prey species are less abundant in
tilled fields than in grassland on the site, and the eagles may be deterred from the presence of humans in these areas. If the eagles typically forage to the east or southeast of the current nest site, it is possible that eagles may be reluctant or unwilling to fly over intervening active construction, or possibly completed development, associated with the proposed project. Reproductive success appears to be directly related to prey availability (H.T. Harvey 2012). The abundance of California ground squirrels (which likely constitute at least a portion of the eagles’ prey) appeared to be higher in the extensive grassland on the ridgetop, where the majority of residential construction is proposed, than on lower slopes; however, the proposed area is likely only 3 to 6 percent of the eagles’ home range, which would not be a significant amount of prey base. Mitigation Measure Biology-31 includes the creation of a 364-acre on-site conservation area, which would benefit the golden eagles through providing undisturbed foraging and nesting habitat onsite. The mitigation measure would reduce the potential impacts associated with reduced reproductive success of the golden eagles from ongoing project construction and residential development to less than significant levels.

Mitigation Measure Biology-31: The 364-acre on-site conservation shall be maintained with ongoing grazing (or similar measures for vegetation management) to ensure maintenance of golden eagle foraging and nesting habitat.

Subdivision Improvements and Future Residences

Post-construction activities related to the use and maintenance of newly constructed facilities are expected to be low-intensity. Post-construction activities would include habitat management measures in the natural lands in the western part of the site as well as recreational use of the trails on the site. Any new activities that are substantially different from past activities conducted in the vicinity of a golden eagle nest, particularly during the breeding season, could result in disturbance of the eagles and could result in a significant impact as a result of nest abandonment, the loss of eggs or young, or potential abandonment of their territory and reduced reproductive success. This impact would be reduced to a less-than-significant level with the implementation of Mitigation Measures Biology-4, Biology-5, and Biology-28 through Biology-32.

Mitigation Measure Biology-32. To reduce the potential for the golden eagles to abandon their nest or territory during post-construction periods with a resulting reduced reproductive success, new (i.e., not currently ongoing) maintenance activities and/or recreational trail use shall not occur within the 0.5-mile viewshed buffer zone (as determined under Mitigation Measure Biology 28) or 1,000 feet of the golden eagle nest between January 15 and August 1, or as determined by a qualified biologist based on nesting activity. Seasonal trail closures shall be implemented within these buffers.

The presence, use, and maintenance of the future residential development would not result in additional impacts on habitat for golden eagle. However, there would continue to be human disturbance associated with the residences, including an increase in night lighting and noise, and maintenance of the site, including vehicular traffic and pedestrian use of trails in the conservation area. Trail use would have a high potential to disturb nesting eagles as the
proposed trails are located near the existing eagle nest. There would likely be an increase in pets on the site, including dogs that may run loose on the site. The eagles are already habituated to some disturbance associated with residential development, as occupied homes are present within 0.2 mile to the north and west of the current nest site. Mitigation Measures Biology-4, Biology-5, and Biology-28 through Biology-32 would reduce the probability that the golden eagles would be impacted such as to have a reduced reproductive success to less than significant levels.

With incorporation of mitigation, the proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFG or USFWS. (Less than significant impact with mitigation incorporated)

Construction
Approximately 0.26 acre of creek channel would be directly impacted as a result of grading and construction of the main access road. In addition, the main access road would result in the permanent loss of approximately 0.72 acre of riparian habitat adjacent to the creek channel. The applicant would need to obtain a Streambed Alteration Agreement from CDFG for impacts to riparian habitat prior to construction within riparian areas. This loss of riparian habitat would be significant, if unmitigated. Implementation of the Mitigation Measures Hydrology-1, Hydrology-2, and Biology-33, as well as the following mitigation measure, would reduce the impacts of construction activities on riparian habitats to a less-than-significant level.

Mitigation Measure Biology-34. Impacts to riparian habitats shall be mitigated through the purchase of mitigation credits or through creation of riparian habitats on- or off-site. The intent of this mitigation measure is to require the project proponent to replace the functions and values associated with the existing habitats to be lost through implementation of the proposed site improvements through creation of replacement riparian habitats. In consideration of the spatial and temporal losses associated with the impacted creek and drainage channels, replacement aquatic habitat will be created at a minimum ratio of 1:1, and aquatic-upland transition areas will be created at a minimum ratio of 2:1 concurrent with or prior to impacts to existing riparian habitats.

Alternatively, the applicant shall supply the County with proof of purchase of credits from an approved mitigation bank with a service area that includes the Project site.

No direct impacts to creeks or riparian habitat would occur during construction of the 25 proposed residences or associated facilities. Implementation of standard erosion and sediment control measures during construction would minimize any indirect impacts due to erosion or sedimentation. Impacts to riparian habitats from residential construction activities would be less than significant.

Subdivision Improvements
Increased runoff from the addition of hardscape could result in increased erosion and water quality degradation within the riparian habitats in the project area. Degradation of water
quality downstream resulting from construction could impact aquatic wildlife species. Implementation of standard erosion and sediment control measures would minimize these impacts to riparian habitats. The fencing plan implemented for the agricultural areas would keep cattle out of riparian areas reducing impacts from the existing condition. Impacts to riparian habitats a result of post-construction activities would be less than significant.

**Future Residences**
The presence, use, and maintenance of the residences would not result in additional impacts to riparian habitats due to the distance between the residences and existing drainages. Therefore, residential occupation would have no impact on riparian habitats.

**With mitigation incorporated, the proposed project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) or tributary to an already impaired water body, as defined by Section 303(d) of the CWA through direct removal, filling, hydrological interruption, or other means. (Less than significant impact with mitigation incorporated)**

**Construction**
The construction of the main access road and a stormwater mitigation/biofiltration basin by the proposed project would result in permanent impacts to 0.16 acre of wetlands and temporary impacts to 0.10 acre of jurisdictional wetlands subject to federal protection under Section 404 of the CWA. The project applicant would obtain permits from ACOE and RWQCB for the discharge of fill material to waters of the U.S. These impacts would result from grading and installation and replacement of culverts. The impact would be reduced to a less than significant level through implementation of Mitigation Measure Biology-33 and the following mitigation measures:

- **Mitigation Measure Biology-35**: To the maximum extent practicable, all grading within and upslope from wetlands shall occur during the dry season. If grading is to occur during the rainy season, the primary BMP’s selected shall focus on erosion control. End-of-pipe sediment control measures (e.g., basins and traps) shall be used only as secondary measures.

- **Mitigation Measure Biology-36**: Unavoidable fill of wetlands shall be mitigated through the purchase of wetland mitigation credits or through creation of wetlands on-site or off-site. Replacement wetlands shall be created at a minimum ratio of 2:1 concurrent with or prior to impacts to existing wetlands. Alternatively, the applicant shall supply the County with proof of purchase of credits from an approved mitigation bank with a service area that includes the project area.

Construction of residences and associated features would not result in direct impacts to wetlands, and implementation of standard erosion and sediment control measures during construction would minimize any indirect impacts due to erosion or sedimentation. Impacts to wetlands due to construction of the future residential development would therefore be less than significant.
Subdivision Improvements
The presence, use, and maintenance of the newly constructed facilities could potentially result in minor impacts to wetlands through increased erosion resulting from increased runoff from hardscape, sedimentation from erosion of upslope areas, and minor changes in hydrology. However, these impacts would not substantial. Post-construction the proposed roadway and infrastructure would have a less than significant impact on wetlands.

Future Residences
The presence, use, and maintenance of the residences are not expected to result in additional impacts to wetlands due to the distance between the residences and existing wetlands. The future residential development would have no impact on wetlands post-construction.

With mitigation incorporated, the proposed project would not have a substantial adverse effect on oak woodland habitat as defined by Oak Woodlands Conservation Law (conversion/loss of oak woodlands) – Public Resources Code 21083.4. (Less than significant impact with mitigation incorporated)

Construction
Construction of the proposed roadway and infrastructure would require the removal of 68 living trees within approximately 0.60 acre of oak woodland habitat. Construction of the future residences would require removal of four additional trees to facilitate construction of a driveway. The majority of these trees are live oaks and valley oaks. Most of these trees would be removed to facilitate construction of the main access road, as well as to facilitate the proposed slide excavation plan. Because this impact exceeds 0.50 acre (the threshold for a significant impact according to County guidance), and because of the high ecological functions and values provided by oak woodland, this impact would be significant, if unmitigated. Implementation of the following mitigation measures would reduce the impact to oak woodland habitat to a less than significant level.

Mitigation Measure Biology-37: Impacted oak woodland trees shall be replaced by the planting of trees over an area at a replacement ratio of 2:1 for medium-quality oak woodland habitat, or 3:1 for high-quality oak woodland habitat, on an acreage basis and as determined by a qualified arborist. A tree planting and maintenance plan shall be prepared and submitted to the County for approval, and the County must approve the plan prior to initiation of impacts to oak woodland trees.

The minimum standard mitigation ratios (Table 3.4-5) shall be used unless otherwise agreed upon by the County.
### Table 3.4-5: Mitigation Ratios for Oak Woodland Trees

<table>
<thead>
<tr>
<th>Size of Tree to be Removed (inches DBH)</th>
<th>Number of 24-Inch-box Trees for Replacement</th>
<th>Number of 15-Gallon Trees for Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 – 18</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18 – 24</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>&gt; 24</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**NOTE:**

DBH = diameter at breast height

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**Subdivision Improvements and Future Residences**

The presence, use, and maintenance of the new subdivision improvements and future residences are not expected to result in additional impacts to oak woodlands, as the use of these facilities would not result in the loss or damage of oak woodlands. Post-construction presence, use, and maintenance of the new subdivision improvements and future residences would therefore have no impacts on oak woodlands.

**The proposed project would not have a substantial adverse effect on oak woodland habitat as defined by Oak Woodlands Conservation Law (conversion/loss of oak woodlands) – Public Resources Code 21083.4. (Less than significant impact)**

**Construction**

The construction of the roadway and infrastructure would result in the development of portions of the eastern and southern edges of the project area. Such development would result in a temporary reduction in wildlife migration within the construction areas. Movement by birds and bats would not be affected by activities during this phase due to their ability to fly over the impact area. Construction activities would have a greater impediment on smaller wildlife species, such as salamanders, snakes, and small mammals, while larger and more mobile animals such as bobcats and deer are expected to be able to circumvent the impact area more easily (especially at night). Construction would create an impediment to wildlife moving across the site in either a north-south or east-west direction as the roadway would cross both corridors. These impediments to wildlife movement would not result in a substantial adverse effect to wildlife connectivity and populations in the region, due to the limited extent of construction activities and the ability of most species to move over these areas. Construction would not result in a significant impact on wildlife movement.

During construction, disturbance by construction personnel and equipment and habitat loss would reduce dispersal through areas under active construction. However, as discussed for construction above, most species would be able to continue moving through (or at least around) residential lots areas during construction. Open space on and between the residential lots would allow species that currently occur on and move through the area to continue moving through, either within the larger open-space areas or between residences. Residential construction would not result in a significant impact on wildlife movement.
**Subdivision Improvements**
Many wildlife species, especially mammals, would be able to cross the facilities easily once they have been completed. Occasional disturbance by vehicles or humans, including the potential for vehicular mortality, would occur within these areas. Such effects are not expected to substantially reduce the ability for most of these species to disperse across the landscape.

The construction of retaining walls along Maple Avenue, both along the ridge and along the drainage, would act as an impediment to smaller wildlife species, such as amphibians and reptiles. As discussed in Section 4.4-1, CTS and CRLF would likely not be able to cross over areas having these retaining walls. Except in the case of CTS and CRLF, the impediment to wildlife movement would not result in a substantial adverse effect to wildlife connectivity and migration, as the project area is not located within an area that supports regionally important wildlife movement. Post-construction use and maintenance would have a less than significant impact on wildlife migration.

**Future Residences**
Human activities associated with the occupation of the 25 residences, including increased night lighting, noise, presence of pets, and movement by humans and vehicles, would result in disturbance of wildlife species that are averse to such human activity. Some species may avoid the residences, making it less likely that they would move through the future residential area. The residences themselves could also impede movement by wildlife. However, open space on and between the residential lots would allow species that currently occur on and move through the area to continue to move across the site, either within the larger open-space areas or between residences. Animals that are more averse to human activity, such as bobcats and mountain lions, are still likely to be able to move through the project area after residential construction occurs, using less developed areas. The project area does not support regionally important wildlife movement or migration corridors. Therefore, even though wildlife movement within and through the area may be impeded after residential construction occurs, residential occupation would not result in a significant impact on wildlife movement or migration.

**With incorporation of the identified mitigation measures, the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (Less than significant impact with mitigation incorporated)**
The Santa Clara Valley Habitat Plan (Habitat Plan), a joint HCP/NCCP, is being pursued by six local partners (the Santa Clara Valley Water District, the County of Santa Clara, the Santa Clara Valley Transportation Authority, and the cities of San Jose, Gilroy, and Morgan Hill) and two resource agencies (CDFG and USFWS). A number of plant and animal species are proposed for coverage under the Santa Clara Valley HCP/NCCP. Approval of impacts on species from project activities covered by the plan (i.e., projects that meet a number of criteria concerning location, proponent, and type) would be considerably expedited. Fees paid in accordance with the extent and nature of projects’ impacts would be used to further conservation efforts via the acquisition, creation, or enhancement, as well as the preservation and management, of habitat.
for these species. In addition, covered projects are subject to a number of measures concerning avoidance and minimization of impacts on covered species and habitats through project design and construction measures (such as pre-construction species surveys and seasonal restrictions on construction activities) to directly protect species. Several “no take” species also exist that, because of their rarity or regulatory status (e.g., state fully protected species), cannot be “taken” by a project that is covered by the plan. Both golden eagle and white-tailed kite are state fully-protected species that would not be covered by the HCP/NCCP.

The approval process for the Habitat Plan is scheduled to be completed in late 2012 or 2013. There is no other HCP or NCCP that has been adopted for the project area. If the HCP/NCCP is adopted by the time the proposed project is constructed, the proposed project may be permitted under the HCP/NCCP and would not conflict with the plan.

The Habitat Plan will provide a landscape level, programmatic process that provides regional mitigation for impacts to many of the special status plant and wildlife species identified in this EIR, in addition to impacts to sensitive natural habitat, such as riparian vegetation, streams, and wetlands. Depending upon the timing of the approval of the Habitat Plan, the proposed project may be required to obtain endangered species permits through the Habitat Plan. As such, many of the mitigation measures listed in this document may be superseded by the conditions and fees required through the Habitat Plan, if they address the same biological impact.

In addition, the proposed project would be required to obtain permits from several regulatory agencies (e.g., Regional Water Quality Control Board, California Department of Fish and Game). These agencies may require mitigation for impacts (e.g., impacts to wetlands and riparian habitat) that may be different from the ratios prescribed above, while providing the equivalent biological value. Mitigation Measure Biology-38 would address both the potential future permitting requirements of the Habitat Plan and the permit requirements of the various regulatory agencies that could supersede the biological mitigation measures identified in this EIR. This mitigation measure would reduce any potential impacts from conflicts with various habitat conservation plans to a less than significant level.

**Mitigation Measure Biology-38:** Mitigation Measures Biology-1 through Biology-12, Biology-25 through Biology-27, Biology-34, and Biology-36, which address special status species, riparian habitat, and wetlands, may be superseded or supplemented through the permitting requirements of the Santa Clara Valley Habitat Plan or via permits issued by the Regional Water Quality Control Board, California Department of Fish and Game, U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service when those permits address the same biological resource.
With mitigation incorporated, the proposed project would not conflict with any local policies or ordinances protecting biological resources: (i) Tree Preservation Ordinance [Section C16], (ii) Wetland Habitat [GP Policy, R-RC 25-30], (iii) Riparian Habitat [GP Policy, R-RC 31-41].

(Less than significant impact with mitigation incorporated)

Construction

Construction activities would result in removal of 72 ordinance-sized oak woodland trees (discussed previously) and impacts to three non-native eucalyptus trees. Impacts to oak woodland trees would be mitigated through implementation of Mitigation Measure Biology-38 and a tree removal permit would not be required for the project. Construction could potential result in indirect impacts to other living trees by impacting roots or altering hydrology. Because of the conflict of such indirect tree impacts with the County’s tree protection ordinance, these impacts are potentially significant. Implementation of Mitigation Measure Biology-39 would reduce the potential conflict from construction with the County’s tree protection ordinance to a less-than-significant level.

The proposed project would comply with the County General Plan policies regarding wetlands through implementation of mitigation measures to address wetlands impacts. Through implementation of Mitigation Measures Biology-35 and Biology-36, the proposed project would comply with wetland policies contained in the General Plan, specifically R-RC 27.

The proposed project would involve roadway improvements within 0.72 acre of riparian habitat. Construction of the roadway would also result in impacts within the riparian setback zone (150 feet from the riparian area). The future residential development would have no impacts to riparian areas or within riparian setback zones. Mitigation Measure Biology-39 would require replacement of impacted habitat and would reduce impacts to riparian habitat to a less-than-significant level.

Mitigation Measure Biology-39: In accordance with County requirements, the applicant shall have a qualified arborist prepare a tree protection plan describing the measures that shall be implemented to protect trees that are preserved in and near impact areas to minimize the potential for substantial long-term impairment of the health of the tree. The plan shall be submitted to the County for approval, and the County must approve the plan prior to initiation of impacts to the trees. Tree protection measures shall be implemented during construction in accordance with the plan.

Subdivision Improvements and Future Residences

The presence, use, and maintenance of the newly constructed facilities would not result in the removal of trees that would conflict with the tree protection ordinance. While there is the potential for indirect impacts to oak woodland understory vegetation due to increased foot traffic, and erosion resulting from increased runoff from hardscape and minor changes in drainage patterns, this impact is unlikely to result in the loss of trees and would not be significant. Therefore, post-construction use and maintenance of the roadways and infrastructure would not conflict with a local plan protecting biological resources and the impact would be less than significant.
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3.5 CULTURAL RESOURCES

This section addresses potential impacts to cultural resources, including historic and archaeological resources that could be affected through the implementation of the proposed project. The following information is based primarily on technical reports prepared by Basin Bridge Associates 2012: An Archeological Resources Assessment Report (ARAR) and a Historic Resource Evaluation: Coyote Highlands, 15420 Carey Lane, prepared by Archives and Architecture, LLC in August 2012. The Environmental Setting section provides information on the prehistory, ethnography and historical periods that are relevant to the project site. This section also provides information on geologic features of the site and its vicinity as the basis for evaluation of impacts to paleontological resources.

3.5.1 Environmental Setting

Prehistoric Era
The proposed project site is located in the unincorporated Santa Clara County outside the City of Morgan Hill. Native American occupation and use of the Santa Clara Valley appears to extend over at least 7,000 years. Prehistoric people who arrived during the late Pleistocene epoch appear to have occupied areas with watercourses within the Santa Clara Valley. Major climatic changes during this time, defined as Late Pleistocene, Early, Middle and Late Holocene, were influential in the development of the geography of the valley and the populations of the Native American people. These early native communities slowly increased in size as they were efficiently able to utilize the surrounding natural resources and develop politically complex cultures that focused more on permanent settlements.

The types of archaeological resources found in the region include habitation sites ranging from villages to temporary campsites, stone tool and other manufacturing areas, quarries for stone tool procurement, cemeteries usually associated with large villages, isolated burial sites, rock art locations, bedrock mortars or other milling feature sites, and trails (Basin Research Associates 2012).

Ethnography
The Native American inhabitants of the Santa Clara Valley belonged to a group known as the Ohlone people or “Costanoans”, who occupied the central California coast as far east as the Diablo Range. Language studies suggest that Costanoans moved into the Bay Area from the San Joaquin-Sacramento River region around 1,500 years ago and replaced the original Hokan-speaking population of the Bay Area. The Costanoan population is estimated to have been comprised of approximately 1,000 to 1,200 individuals in the Santa Clara Valley in 1770. These individuals would have belonged to smaller, politically autonomous tribelets with an average population of 200 individuals. The proposed project area appears to have been within the Mutsun tribelet territory of the Costanoan.
Historic Background

Spanish Founding (1769-1777)
In 1769, the Spanish explorer Juan Gaspar de Portolà and his company were the first non-indigenous peoples known to visit the place that is now known as Santa Clara Valley. Other expeditions followed including one led by Sergeant José Francisco Ortega (1769) and Juan Bautista de Anza (1774 and 1776). In 1777, José Joaquin Moraga established Mission Santa Clara in Santa Clara Valley that eventually led to a civilian settlement known as the “El Pueblo De San Jose,” in San Jose. Spain’s governance in the region lasted from 1770 to 1821. Little physical remains from this early development period are extant today within Santa Clara County.

Hispanic Era (1777-1846)
The decline of Spain in the 1800s combined with the Mexican War of Independence led to Mexico gaining independence from Spain in 1821. Under Spanish rule, land was settled under the official policy of presidios, pueblos, and missions, while the actual land was held in trust by the Spanish crown. After the Mexican War of Independence, the land previously held in trust was given over to individuals as land grants to be developed as ranchos. In 1824, Mexico passed a law that secularized the Franciscan missions and offered land grants to stimulate additional colonization of the territory. Between 1833 and 1845, 38 land grants were issued in the Santa Clara Valley and surrounding area.

The project area is located within two Mexican-era ranchos: Ojo de Agua de la Coche and San Francisco de las Llagas. San Francisco de las Llagas was granted to Carlos Castro in 1834 by Governor Figueroa. Ojo de Agua de la Coche was granted by Governor Figueroa to Juan María Hernandez in 1835 and in 1845 Hernandez sold the rancho to Irish immigrant settler Martin Murphy, Sr. The rancho was sold in 1848 to Irish immigrant settlers Daniel and James Murphy (sons of Martin Murphy) after Carlos Castro’s death. The nearest Hispanic Era feature, El Camino Real/Monterey Road/US-101, is located about 2.9 miles west of the project area (Archives and Architecture 2012).

Early American Era (1847-1875)
The United States declared war against Mexico in May 1846. The Battle of Santa Clara in 1847 resulted in Mexico conceding Alta California to the United States in 1848. The California Land Claims Commission was created to provide a process to validate the Mexican titles by determining legal ownership, and by establishing fixed boundaries for property granted under Spanish and Mexican authority.

In 1844, Martin Murphy Sr. brought his large immigrant family from Ireland and many eventually settled in Santa Clara Valley. In 1845, he purchased Ojo de Agua de la Coche from Governor Figueroa. With fortunes acquired during the early gold rush, several of the Murphy brothers purchased large parcels of land in Santa Clara County and elsewhere in the state. Daniel and James Murphy, the sons of Martin Murphy Sr., purchased San Francisco de las Llagas, a rancho that abutted the southern boundary of their father’s Rancho Ojo de Agua de la Coche. The two parcels bisect the proposed subdivision area (Archives and Architecture 2012).
In 1851, Martin Murphy Sr. transferred ownership of Ojo de Agua de la Coche to his son Bernard Murphy. That same year, Daniel Murphy sold Bernard half of his claim to the San Francisco de las Llagas rancho. Shortly after receiving ownership, Bernard married Canadian immigrant Catherine O’Toole. After Bernard Murphy’s death in 1853, Catherine remarried James Dunne and, following the death of her son in 1870, inherited ownership of the southern portion of Ojo de Agua de la Coche (Archives and Architecture 2012).

After Daniel Murphy’s death in 1881, his daughter Diana and son Daniel Jr. inherited the land grant to their father’s claim of the Ojo de Agua de la Coche rancho. Diana, who had inherited 4,500 acres of the rancho, married Hiram Morgan Hill in 1882 and eventually sold her portion of the Ojo de Agua de la Coche to developers Chauncey Hatch Phillips for real estate development. Development of the railroad in Santa Clara in late 1868 resulted in population growth in the Santa Clara Valley. This growth led to a significant increase in the value of land and encouraged landowners to subdivide their holdings into smaller plots to make quick money. Diana Murphy sold her portion of Ojo de Agua de la Coche to real estate developer Chauncey Hatch Phillips for development. By the late nineteenth century, most of the Catherine (Murphy) Dunne Rancho property had been subdivided into small ranchettes. The subdivision of the Catherine Dunne Rancho coincided with the founding of the community of Morgan Hill in 1897 and its incorporation as a city in 1906.

**Charles Kellogg (Period of Significance 1913-1949)**

Charles Dennison Kellogg (1868-1949) was an internationally renowned Vaudeville performer and naturalist. Known as the “California Nature Singer,” Kellogg was well known for his special talent in bird songs and gave lectures and performances throughout the country and abroad. He married Sarah Fuller-Burchard, also an accomplished musician, in 1911. In 1913, he initially purchased 88.76 acres of the Catherine Dunne Rancho, including lands within the project area, and named the estate Kellogg Springs. He eventually purchased additional lands and was possibly one of the largest landlords in South County (Archives and Architecture, 2012).

As a naturalist, Kellogg also had another mission – to protect and preserve the redwood forests of California. He spoke against the accelerated logging of California Redwoods and was a supporter of a then small organization known as the Save the Redwoods League. He even built a mobile home out of a fallen redwood tree and called it the “Travel Log.” He founded the Kellogg Springs Company in 1920, of which he was the President, that brought water from the foothills above Tennant Avenue using only trenches that were approximately 4 feet deep and 2 feet wide, and rocks that were stacked to three feet height. A San Jose Mercury News article in 1921 indicated that Kellogg had developed 35 such natural springs on the property thereby creating an extensive irrigation system for his property.

Prior to construction of his home (Charles Kellogg House) at 16010 Carey Avenue (located outside the subject property) built by his benefactor Gertrude Strong Achilles in 1927, Kellogg and his wife resided in a cabin on the property and called it the “Mushroom House” named...
after its shape like the mushroom, with a pagoda like roof and hat shaped eaves. He possibly constructed other ancillary structures on the property, none of which are extant today. In the early 1920s, Kellogg sold his lands to heiress Gertrude Strong Achilles, but continued to live on the property as its manager until his death in 1949 (Archives and Architecture, 2012).

**Gertrude Strong Achilles**

Sometime in 1920, Kellogg met the heiress Gertrude Strong Achilles. Daughter of Henry Strong, one of the founders of the Kodak Eastman Company, she married Henry L. Achilles in 1884. Following her divorce in 1910, Achilles moved to the valley after she met Kellogg. She acquired nearly 500 acres of land including that of Kellogg’s.

In 1927, upon the completion of her mansion (Fountain Oaks) on her property (now addressed as 2880 Tennant Avenue), she re-named the ranch Fountain Oaks after the oak trees on the ranch and the many springs Kellogg had created to draw water out of the ground. The same year Achilles also built for Kellogg a home (Charles Kellogg House), which is now addressed as 16010 Carey Avenue (located outside and just northwest of the subject property) (Archives and Architecture 2012).

She lived the rest of her life in the Santa Clara Valley until her death in 1955. Fountain Oaks ranch comprised nearly 600 acres in 1955 and included the project area and about 32 other buildings and structures on the ranch.

In 1955, the property was offered for sale by Fountain Oaks, Inc., and in early 1956, Peter and Laura Orlando purchased the lower hillside portion of the land covering approximately 489 acres, including the subject property; and the Chiala family purchased the remaining 100 acres of the Fountain Oaks Estate to the west of the project area.

**Cultural Resource Surveys**

**Overview**

An Archaeological Resources Assessment Report (ARAR) (Basin Research Associates 2012) and a Historic Resource Evaluation (HRE) (Archives and Architecture, LLC 2012, included in Appendix F) were prepared for the Coyote Highlands project. The ARAR provides the results of an archaeological resources records search and review of pertinent literature, the results of a review of the Sacred Sites file by the Native American Heritage Commission (NAHC), and an archaeological field inventory to determine the presence/absence of significant archaeological resources. The HRE provides the results of a historical resources records search and review of pertinent literature, review of prior survey information and a field inventory of the identified structures conducted on March 8, 2012, to determine the presence/absence of significant historical resources, an evaluation of impacts, and recommended mitigation measures.

**Record Search and Literature Review**

A prehistoric and historic sites records search was completed at the California Historical Resources Information System, Northwest Information Center (CHRIS/NWIC), and a search of the NAHC Sacred Lands Inventory was performed for any previous surveys that included
portions of the Coyote Highlands project area. Prior survey information was reviewed and considered as a part of the archival research.

No previous investigations covered the entire project area. The CHRIS/NWIC prehistoric and historic sites records search, however, identified six prior investigations that included portions of the Coyote Highlands project area:

- A Cultural Resource Evaluation of the Proposed Jackson Highlands Development in the City of Morgan Hill, County of Santa Clara, California (Cartier 1988/S-10193)
- A Cultural Resources Evaluation of the Lands of Chiala, near Morgan Hill, Santa Clara County, California (Evans 2006/S-32552)
- A Cultural Resources Evaluation of the Lands of Chiala, APN 825-29-005, Maple Avenue and Paseo Robles Drive, Morgan Hill, Santa Clara County, California (Archeological Resource Service 2006)
- Archaeological Impact Evaluation: San Felipe Division, Central Valley Project, Part I The Southern Santa Clara Valley, California: A General Plan for Archaeology (King and Hickman 1973/S-5222)
- Cultural Resources Supplement Archaeological Resources [City of] Morgan Hill General Plan (Basin Research Associates 2000/S-27985)
- Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4 (Meyer and Rosenthal 2007/S-33600)

Review of the six studies identified no previously recorded or reported prehistoric, combined prehistoric/historic era, or historic era archaeological sites in or adjacent to the Coyote Highlands project. One prehistoric archaeological site is present within 0.25 mile of the proposed project. The site is located within the Rancho Robles subdivision, south of the project site.

A search of the NAHC Sacred Lands Inventory yielded no Native American resources in or adjacent to the project location. Letters soliciting additional information were sent to ten Native American individuals and/or groups recommended by NAHC on March 22, 2012, and no concerns have been raised to-date.

The Archaeological Sensitivity Map for the City of Morgan Hill General Plan (Basin Research Associates 2000), which includes the City of Morgan Hill Sphere of Influence and the project site, was also reviewed. According to this map, the Coyote Highlands project area is located within a potentially sensitive archaeological area because it is located near several streams. Watercourses and immediately adjacent areas were common areas for prehistoric Native American occupation in the Santa Clara Valley. These areas have the potential for buried prehistoric resources.
Archaeological Resources Field Survey and Results
Basin Research Associates conducted an intensive archaeological field inventory of the Coyote Highlands project development area on February 16 and 21, 2012. No archaeologically (prehistoric) significant structures, landmarks, or points of interest were identified within or adjacent to the project area.

Historic Resources Evaluation and Results
Survey
Archives and Architecture, LLC, conducted a field survey on March 8, 2012 and prepared a Historic Resource Evaluation (HRE) report (dated August 2012) evaluating identified buildings and structures on the property for potential historic significance. The subject site and its buildings are not currently listed in any known local, state or national registers of historic resources. The site, as well as individual structures/features within the site, was evaluated under CEQA for the potential for listing in the California Register of Historic Places (CRHP), and as a Santa Clara County landmark site.

The investigation included a reconnaissance investigation of the two extant houses and horse barn located adjacent to Carey Lane and within the project area. Each of these structures was evaluated both for individual significance and as potential contributing structures to a potential multiple property historic site.

California Register of Historical Resources
The California Register of Historical Resources (CRHR) is the official state list of historic resources of “architectural, historical, archeological and cultural resources”, administered by the Office of Historic Preservation (OHP).

In order to be determined eligible for the CRHR, a property must meet one or more of the following four criteria for designation:

- Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States (Criterion 1).
- Associated with the lives of persons important to local, California or national history (Criterion 2).
- Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values (Criterion 3).
- Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation (Criterion 4).

Integrity
California Code of Regulation (CCR) Section 4852(c) defines “integrity” of an historic resource as the “authenticity of historical resource’s physical identity evidenced by the survival of characteristics that existed during the resources’ period of significance.” Resources deemed eligible for listing in the CRHR should also retain enough of their historic character or
3.5 CULTURAL RESOURCES

appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated as the ability to convey significance of the historic resource in location, workmanship, design, feeling, setting, associating and materials.

Santa Clara County Landmark Designation

The Board of Supervisors of Santa Clara County may designate those historic resources as "landmarks" which meet the following designation criteria under Division C17-5:

A. Fifty years or older. If less than 50 years old, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the historic resource and/or the historic resource is a distinctive or important example of its type or style; and

B. Retains historic integrity. If a historic resource was moved to prevent demolition at its former location, it may still be considered eligible if the new location is compatible with the original character of the property; and

C. Meets one or more of the following criteria of significance:
   1. Associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
   2. Associated with the lives of persons important to local, California or national history;
   3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
   4. Yielded or has the potential to yield information important to the pre-history or history of the local area, California, or the nation.

Results

The field survey of the subject property by Archives and Architecture on March 8, 2012 identified the following features:

- An early building site foundation on the property,
- Some rock features related to the natural springs,
- At least three water tank areas that are likely associated with Charles Kellogg,
- A horse barn located to the rear of two houses, possibly associated with Achilles, and
- The original subdivision road known as Santa Catherina Avenue.

The project site also contains other features, including the two extant houses on the subject property (15420A Carey Lane and 15420B Carey Lane) possibly built in 1920s with significant additions in 1950s, and a concrete bridge near the early building site foundation (Archives and Architecture, 2012).

The Charles Kellogg House (16010 Carey Avenue) and Fountain Oaks Ranch (circa 1927) (2880 Tennant Avenue), two extant historically significant houses, are located directly adjacent to the
west of the subject property on a parcel that was once joined to the subject property area. The Charles Kellogg House was first identified on the Santa Clara County Resource Inventory in 1979. The Charles Kellogg House and Fountain Oaks, including the main house and a guesthouse on the ranch, were recorded as HABS No.CA-2100 by the Historic American Building Survey in 1980. In 1999, both were listed in the Santa Clara County Heritage Resource Inventory, and subsequently formally evaluated and recorded as a part of the South Santa Clara County Heritage Resource Inventory Update in 2003.

The 2003 evaluation found both properties to be eligible for the California Register of Historical Resources (Archives and Architecture 2012). The Historic Resource Evaluation concluded that the subject property, along with the adjacent property to the west (not part of this project), constitutes a potential historic resource eligible as a multiple property listing under California Register Criterion 2 and would be eligible as a County of Santa Clara Historic Landmark site. The site is significant for its association with an important historic personage, Charles Kellogg. The following features have also been identified as contributing to the historic character of the larger site:

- Rock structures related to the natural springs
- Water-holding structures
- Santa Catharina Avenue
- Charles Kellogg early building site foundation
- The horse barn (or Achilles Barn)

The horse barn appears to be historically significant for its integrity and as a contributing element to the property’s historic significance.

Other buildings, including the two extant houses located at 15420a and 15240b Carey Lane, appear to have been relocated to the current property sometime mid-twentieth century or later. Both structures have been greatly altered and expanded and, therefore, are not considered eligible for listing and are not deemed significant contributors to the property’s historic significance.

Each of these features and their relationship to the project development areas is shown in Figure 3.5-1. The features are generally located away from the proposed development areas.

Paleontological Setting
Paleontology is a multidisciplinary science that combines elements of geology, biology, chemistry, and physics in an effort to understand the history of life on earth. Paleontological resources, or fossils, are the remains, imprints, or traces of once-living organisms preserved in rocks and sediments. They include mineralized, partially mineralized, or unmineralized bones and teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains. Fossils are considered nonrenewable resources because the organisms they represent no longer exist. Once destroyed, a fossil can never be replaced.
3.5 CULTURAL RESOURCES

Figure 3.5-1: Location of Contributing Historic Features


LEGEND

- Proposed Subdivision Area Boundary
- Proposed Roadway
- Historic Point Feature
- Lot Area Boundary
- Historic Roadway
The University of California Museum of Paleontology database of known paleontological sites in Santa Clara County indicates that 60 fossils ranging in age from the Tertiary to Quaternary Periods have been collected within Santa Clara County. The nearest known fossil discoveries include one vertebrate fossil recorded near Anderson Lake, 1 mile from the project area (University of California Museum of Paleontology [UCMP] 2012).

Paleontologic “sensitivity” is defined as the potential for a geologic unit to produce scientifically significant fossils. This sensitivity is determined by rock type, past history of the rock unit in producing significant fossils, and fossil localities that are recorded from that unit. Geologic units with “High” paleontologic sensitivity are known to contain paleontological localities with rare, well-preserved, critical fossil materials for stratigraphic or paleoenvironmental interpretation, and fossils providing important information about the paleobiology and evolutionary history (phylogeny) of animal and plant groups. The geologic formations that underlie the project area are identified in Table 3.5-1 and Figure 3.6-1 in Section 3.6: Geology and Soils. The Santa Clara Formation has the highest potential for recovery of fossil remains (UCMP 2012).

Unique Geologic Features
No unique geologic features have been identified within the project area.

<table>
<thead>
<tr>
<th>Table 3.5-1: Paleontological Sensitivity</th>
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<tbody>
<tr>
<td>Geologic Unit</td>
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<td>------------------------------------------</td>
</tr>
<tr>
<td>Artificial Fill</td>
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<tr>
<td>Younger Alluvium</td>
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<tr>
<td>Alluvial Fan Deposits</td>
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<tr>
<td>Older Alluvium</td>
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<tr>
<td>Santa Clara Formation: Interbedded Sandstone, Sandstone, and Conglomerate</td>
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<tr>
<td>Franciscan Complex: Basalt Member</td>
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<tr>
<td>Franciscan Complex: Sandstone and Shale</td>
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<tr>
<td>Serpentinite</td>
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<tr>
<td>Gabbro and Related Ultramafic Rocks</td>
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Source: Helley et al. 1994; Stoffer and Messina 2002

3.5.2 Regulatory Setting
Federal
National Historic Preservation Act of 1966, Section 106 (16 USC 470, as amended)
Section 106 of the NHPA regulates projects on federal land that may have an effect on historic properties that are listed or eligible for inclusion on the NRHP. Cultural properties that could be discovered at the project site as a result of implementation of the project would be subject to review under Section 106 of the NHPA. The lead agency is required to identify historic
properties within the APE, render determinations of eligibility and findings of effect, and consult with the State Historic Preservation Officer and the Advisory Council on Historic Preservation regarding agency determinations and findings. The criteria for determining eligibility for listing on the NRHP are:

The quality of significance in American history, architecture, archaeology, engineering, and culture as present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- Are associated with events that have made significant contribution to the broad patterns of our history;
- Are associated with the lives of persons significant in our past;
- Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Have yielded, or may be likely to yield, information important in prehistory or history.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) was approved on November 16, 1990, and provides for protection of Native American graves and all objects associated with ritual and burial. NAGPRA establishes conditions for the excavation and removal of Native American remains and artifacts, notification requirements for inadvertent discovery of Native American remains, and criminal penalties for illegal possession. NAGPRA directs federal agencies to identify the geographic and tribal origins of Native American remains and artifacts, and requires the repatriation of remains. NAGPRA would apply if there is a federal action related to the project.

Revisions were made to NAGPRA and made effective April 20, 2007. The revisions include procedures for the future applicability of NAGPRA to museums and federal agencies. The revisions provide museums and federal agencies with a uniform set of procedures to ensure that lineal descendants, Native American tribes, and Native Hawaiian organizations know of the existence and location of cultural items with which they are affiliated and that they may be able to repatriate.

State

California Environmental Quality Act (CEQA)

CEQA applies to discretionary projects undertaken by private parties requiring approvals or permits from a public agency. A significant archaeological or historical resource is defined as one that meets the criteria of the CRHR, is included in a local register of historic resources, or is determined by the lead agency to be historically significant.
Archeological and Historical resources listed in or determined to be eligible for listing in the California Register require consideration under provisions listed under the Public Resources Code (PRC) as listed below, and State CEQA Guidelines Section 15064.5.

**PRC Section 5020.1** establishes the threshold of “substantial adverse change” as demolition, relocation or alteration of a historic resource that would impair the significance of the resource.

**PRC Section 5024.1** defines the term “historic resources” as those resources either listed in or determined to be eligible for listing in CRHR as evaluated against the California Register criteria previously described.

**PRC Section 21084.1** stipulates that any resource listed in, or eligible for listing in, the CRHR is presumed to be historically or culturally significant. Resources listed in a local historic register or deemed significant in a historical resources survey (as provided under PRC Section 5024.1(g)) are presumed historically or culturally significant unless the preponderance of evidence demonstrates they are not. A resource that is not listed in or determined to be eligible for listing in the CRHR, not included in local register or historic resources, or not deemed significant in a historical resource survey may nonetheless be historically significant. This provision is intended to give the lead agency discretion to determine that a resource of historic significance exists where none had been identified before and to determine if a project may cause a substantial adverse change in the significance of the historical resource as defined under Section 5020.1.

**PRC Section 15064.5(b)(3)** of the State CEQA Guidelines indicates that if a proposed project complies with the *Secretary of Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, restoring and Reconstruction Historic Buildings (1995)*, the project shall be mitigated to less than significant levels under CEQA review.

**PRC Section 5097** specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal land. The disposition of Native American burial falls within the jurisdiction of the NAHC. Section 5097.5 of the Code states the following:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

> As used in this section, “public lands” means lands owned by, or under the jurisdiction of, the State or any city, county, district, authority or public corporation, or any agency thereof.

**PRC Section 21083.2** identifies “unique archeological resources” and stipulates that a project that may adversely affect a unique archaeological resource requires the lead agency to treat that effect as a significant environmental effect. When an archaeological resource is listed in or is eligible to be listed in the CRHR, PRC Section 21084.1 requires that any substantial adverse
effect to that resource be considered a significant environmental effect. PRC Sections 21083.2 and 21084.1 operate independently to ensure that potential effects on archaeological resources are considered as part of a project’s environmental analysis. Either of these benchmarks may indicate that a project may have a potential adverse effect on archaeological resources.

California Health and Safety Code

Section 7050.5. California Health and Safety Code Section 7050.5 states that in the event of the discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner’s authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission must identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Local

Santa Clara County General Plan

Santa Clara County will review future development of the proposed project in accordance with the County General Plan (1994) Rural Unincorporated Area Issues and Policies and the County Historic Preservation Ordinance (revised 2009). The following County General Plan Heritage Resource Policies (1994) are applicable to the proposed project:

R-RC 81 Cultural heritage resources within the rural unincorporated areas of Santa Clara County should be preserved, restored wherever possible, and commemorated as appropriate for their scientific, cultural, historic, and place values.

R-RC 85 The following strategies should provide overall direction to efforts to preserve heritage resources

1. Inventory and evaluate heritage resources.
2. Prevent, or minimize, adverse impacts on heritage resources.
3. Restore, enhance, and commemorate resources as appropriate.

R-RC 85 No heritage resource shall knowingly be allowed to be destroyed or lost through a discretionary action (zoning, subdivision, site approval, grading permit, building permit, etc.) of the County of Santa Clara unless:

(a) The site or resources has been reviewed by experts and the County Historic Heritage Commission and has been found to be of insignificant value; or

(b) There is an overriding public benefit from the project and compensating mitigation to offset the loss is made part of the project.
3.5 CULTURAL RESOURCES

**R-RC 86** Projects in areas found to have heritage resources shall be conditioned and designed to avoid loss or degradation of the resources. Where conflict with the resource is unavoidable mitigation measures that offset the impact may be imposed.

**R-RC 87** Land divisions in areas with heritage resources shall be encouraged to cluster building sites in locations, which will minimize the impacts to heritage resources.

**R-RC 88** For projects receiving environmental assessment, expert opinions and field reconnaissance may be required if needed at the applicant’s expense to determine the presence, extent and condition of suspected heritage resources and the likely impact of the project upon the resources.

*Santa Clara County Historic Preservation Ordinance*

Santa Clara County established a Historic Preservation Ordinance (Division C17) on October 17, 2006. The ordinance was established for the preservation, protection, enhancement, and perpetuation of resources of architectural, historical, and cultural merit within Santa Clara County and to benefit the social and cultural enrichment, and general welfare of the people.

The purpose and intent of Section C17-2 of the ordinance is to:

(a) Identify, protect, preserve, and enhance historic resources (as defined in Section C17-3(j) below) representing distinctive elements of the cultural, social, economic, political, and architectural history of Santa Clara County;

(b) Provide a mechanism to compile, update and maintain the heritage resource inventory;

(c) Enhance the visual identity of Santa Clara County by maintaining the scale and character of historic resources and their settings, and integrating the preservation of historic resources into public and private development;

(d) Encourage, through public and private action and collaboration with other organizations, the maintenance and rehabilitation of historic resources;

(e) Promote public knowledge, participation, understanding, and appreciation of Santa Clara County’s rich history and sense of place;

(f) Foster civic pride and a sense of identity based upon the recognition and use of Santa Clara County’s historic resources;

(g) Protect and enhance Santa Clara County’s attraction to tourists and visitors thereby stimulating business and industry;

(h) Promote awareness of the economic, social and cultural benefits of historic preservation in collaboration with other organizations;

(i) Provide for consistency with state and federal preservation standards, criteria, and practices; and

(j) Make available incentive opportunities to preserve Santa Clara County’s historic resources as provided in Article V.
Section C17-5 outlines the Designation Criteria for Landmarks, and the method and process for designating a site as a landmark, as previously described.

### 3.5.3 Thresholds of Significance

The proposed project would result in a significant impact if it would:

- Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5 of the CEQA Guidelines including physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings
- Cause a substantial adverse change in the significance of an archaeological resources as defined in §15064.5
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature
- Disturb any human remains, including those interred outside of formal cemeteries
- Change or affect any resource listed in the County Historic Resources Database

### 3.5.4 Impacts and Mitigation Measures for Cultural Resources

With implementation of the identified mitigation measures, the project would not cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5 of the CEQA Guidelines. *(Less than significant impact with mitigation incorporated)*

The proposed project includes the subdivision of eight existing parcels into 25 residential lots. The subject property has been identified as a potential historic resource for its association with a significant person, Charles Kellogg, and the property contains contributing resources that are eligible for listing in California Register as a multiple property listing.

**Construction**

*Historic Resources within Proposed Open Space Lots – Less than Significant Impact with Mitigation Incorporated*

Specific actions related to construction of the subdivision improvements and future residences could affect the onsite contributing historic resources. The following resources are located within the proposed open space lots and thus would not be impacted by the subdivision and future residential improvements.

- Santa Catherina Avenue
- Three water tanks
- Charles Kellogg early building site foundation

Santa Catherina Avenue, which is also identified in this EIR as the onsite Ranch Road, is currently used to access the property for ongoing maintenance and support existing cattle grazing. Although not currently proposed by the applicant, the road may be used in support of construction of the subdivision improvements (construction of the main access road and utilities). In addition, the road may be used in the future by the subdivision residences as a trail for hiking, riding horseback, and bicycling. Use of the road for either of these uses, which
corresponds with its historical and existing use, would not impair the integrity of this contributing historic resource.

**Rock Features related to Kellogg’s Natural Springs – Less than Significant Impact with Mitigation Measure**

The HRE identified the rock features related to Charles Kellogg’s natural springs as contributing historic resources. The HRE identified only one known rock feature within the area of the proposed residential lots, and that rock feature was identified as occurring in the vicinity of Lot 16 and Lot 17; however, although the HRE identified the rock feature as occurring in this area, its exact size and location was not specified.¹ If the rock feature is located within a future residential lot, there is a possibility that residential construction activities by a future homeowner could result in damage to or removal of the rock feature. Any removal, relocation, or alteration of the rock feature could result in a significant impact to the historic resource. The mitigation measure listed below would prevent this potentially significant impact and would reduce potential impacts to this rock feature to a less than significant level.

**Mitigation Measure Cultural Resources-1:** Prior to recordation of the Final Tract Map, a survey shall be conducted by a qualified architectural historian of the rock feature identified in the HRE, and results submitted to the County of Santa Clara Planning Office. The County may require peer review of the survey by a qualified architectural historian to verify the results and location.

If the rock feature is identified as a historic resource and is determined to be located within any of the residential lots, the property owner/developer shall submit to the Planning Office a deed restriction with legal description(s) for all affected parcels of real property that contain the rock feature identified in the HRE as a potential historical resource, to be recorded with the Final Tract Map. The Deed Restriction shall read: “Tract Map No. ____ (insert #) for Coyote Highlands Subdivision, Lot No. ____ (insert #), contains rock features related to Kellogg’s Natural Springs, which are considered a potentially historic resource. These rock features shall remain in place and shall not be removed, relocated, or altered without prior approval from the County of Santa Clara.” The property owner shall be responsible for all reasonable costs associated with recording said deed restriction.

**Proposed Rehabilitation of Horse Barn (Lot 1) – Less than Significant Impact with Mitigation Measure**

The existing horse barn is located within proposed residential Lot 1. The HRE identified the horse barn as a contributing historic feature with significant integrity. The proposed project

¹The HRE did not identify the exact location of this rock formation. The survey required as part of mitigation measure Cultural Resources-1 would confirm the precise location of the rock feature.
includes rehabilitation of the barn; however, plans have not yet been submitted regarding the nature of the proposed rehabilitation. If proposed rehabilitation of the barn resulted in significant alterations or modifications to the structure, then it would affect the integrity of the structure and result in a potentially significant impact. The following mitigation measure would ensure that future rehabilitation of the barn does not result in a significant impact.

**Mitigation Measure Cultural Resources-2:** Proposed rehabilitation of the barn shall adhere to *The Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.*

_Demolition of two extant residences at 15420A Carey Lane and 15420B Carey Lane – No Impact_

The HRE evaluated the two existing residences located at 15420A and 15420B Carey Lane for historic significance and concluded that neither residence is eligible for listing in the CRHR. The demolition of these two structures would therefore not result in an impact to historic resources, and no mitigation is necessary.

**Subdivision Improvements and Future Residences**

The presence, use, and maintenance of the new subdivision improvements and future residences are not expected to result in additional impacts to historical resources, as the use of these facilities would not result in any changes to historical resources. Post-construction presence, use, and maintenance of the new subdivision improvements and future residences would therefore have no impacts on historical resources.

With implementation of the identified mitigation measures, the project would not cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5 of the CEQA Guidelines. *(Less than significant impact with mitigation incorporated)*

No archaeological resources have been identified within or adjacent to the proposed project area. However, the general project area is located within a potentially sensitive archaeological area based on the presence of several streams, where prehistoric people may have lived.

Previously undiscovered buried archaeological resources could be exposed during ground-disturbing activities for construction of roadway, utility, private recreation, and drainage improvements and the development of future residences. Construction activities in areas of native soil could result in the inadvertent exposure of and damage to buried archaeological materials that could be eligible for inclusion on the NRHP, the CRHR (PRC Section 5024.1), and/or meet the definition of a unique archeological resource as defined in §15064.5 of the CEQA Guidelines.

Effects to previously undiscovered, significant archaeological resources would be mitigated through implementation of Mitigation Measure Cultural Resources-3 and Mitigation Measure Cultural Resources-4.

**Mitigation Measure Cultural Resources-3:** The applicant shall note on any plans that require ground-disturbing excavation that there is a potential for exposing buried cultural resources. The project proponent shall retain a Professional Archaeologist to
provide a preconstruction briefing to supervisory personnel of the excavation contractor to alert them to the possibility of exposing significant historical and archaeological resources within the property. The briefing shall discuss any archaeological objects that could be exposed, the need to stop excavation at the discovery, and the procedures to follow regarding discovery protection and notification of the project proponent and archaeological team.

**Mitigation Measure Cultural Resources-4:** In the event that historic or cultural materials are exposed or discovered during subsurface construction activities, operations shall stop all work within 30 feet of the find and a qualified Professional Archaeologist shall be contacted for evaluation and further recommendations. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) under CEQA and/or unique archaeological resources. If the Professional Archaeologist determines that any cultural resources exposed during construction constitute a significant archaeological resource, he/she shall notify the project proponent and the Santa Clara County Planning Department of the evaluation and recommended mitigation measures to mitigate to a less-than-significant level. If a discovery is determined to be a significant archaeological resource, and if avoidance of the resource is not possible, the archaeological or cultural resource consultant shall prepare and implement a Cultural Resources Management Plan acceptable to the County of Santa Clara to treat the resource. Potential recommendations could include evaluation, collection, recordation, and analysis of any significant cultural materials. Treatment of any significant cultural resources shall be undertaken with the approval of Santa Clara County.

With implementation of the identified mitigation measures, the project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. *(Less than significant impact with mitigation incorporated)*

The project area includes sediments of the Santa Clara Formation as shown in Figure 3.5-2, which are known to contain significant paleontological resources. The project would include ground-disturbing activities during construction and during the development of future residential properties that could potentially impact previously undiscovered paleontological resources. Impacts would be reduced to less-than-significant levels with implementation of Mitigation Measure Cultural Resources-5 to be implemented in the event of a paleontological find during project construction.

**Mitigation Measure Cultural Resources-5:** In the event that paleontological resources are discovered during project construction, construction shall cease in the immediate vicinity of the find until a qualified paleontologist is consulted to determine the significance of the find, and has recommended appropriate measures to protect the resource. Further disturbance of the resource shall not be allowed until those recommendations are approved by the Santa Clara County Planning Department and the recommendations for protection of the resource have been implemented.
The project would not disturb any human remains, including those interred outside of formal cemeteries. (*Less than significant impact*)

Previously unknown Native American human remains could be exposed during ground-disturbing construction operations associated with roadway, utility, private recreation, drainage improvements and/or residential development. Construction operations could result in the inadvertent exposure of buried Native American human remains. In the event human remains were unearthed, the Santa Clara County Coroner would be contacted and disposition of Native American remains would comply with CEQA Guidelines Section 15064.5(e) and 43 CFR 10, Native American Graves Protection and Repatriation Regulations. Impacts would be less than significant.

**With implementation of the identified mitigation measures, the proposed project would not change or affect any cultural resources listed in or eligible for listing in the CRHR or the County’s Heritage Resource Inventory. (*Less than significant impact with mitigation incorporated*)**

The project would not have an impact on any currently listed Historic Resources, as there are no resources listed in the County Database for the project site. The property as a whole is eligible, however, as previously described as a Santa Clara County Landmark Site. Impacts to the contributing features would be avoided and/or minimized through implementation of Mitigation Measures Cultural Resources-1 and Cultural Resources-2. Cultural Resources-1 requires avoidance of the rock structures related to the natural springs. Cultural Resources-2 requires the rehabilitation of the existing horse barn per the Secretary of the Interior’s Standards to avoid significant impacts to the barn.
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3.6 GEOLOGY AND SOILS

3.6.1 Environmental Setting

Topography

Regional Setting
The proposed project area is located in the foothills of the 30-mile-wide Diablo Range, which extends almost 100 miles from Pacheco Pass in the south to the Sacramento River to the north, and rises above Santa Clara Valley east of the cities of Gilroy, Morgan Hill, San Martin, Milpitas, and San Jose.

Local Setting
The ground surface within most of the proposed project area slopes westward. Site elevations range from approximately 450 feet AMSL in the west to approximately 1,300 feet AMSL in the east, along the ridgeline. The project vicinity is characterized by rolling hills and relatively steep hillsides dissected by steep ravines and west-flowing drainages.

Locally, upland terrain consists of rounded hilltops and knolls. A relatively flat-topped ridge is located along the eastern boundary of the project area and is separated from the Diablo Range by the northwest-trending valley of Coyote Creek, which has been eroded along the active trace of the Calaveras fault on the eastern side of the ridge.

The project area includes three natural creeks in deeply incised valleys that drain westward and carry seasonal surface runoff from higher elevations into the eastern floor of the Santa Clara Valley: Fischer Creek, along the northern boundary; Foothill Creek, in the center of the project area; and Corralitos Creek, along the southern boundary. Other water features in the project area include four wetlands (three seeps and one seasonal wetland near Corralitos Creek), three primary watersheds, and several secondary, intermittent, and ephemeral tributary drainages that are associated with the three creeks. All three creeks drain into Llagas Creek, less than 1 mile southwest of the project area. The property contains a large canyon formed by Foothill Creek.

Geology

Regional Geology
The project region is dominated by the southeast-trending southern Santa Clara Valley and the Diablo Range of the California Coast Ranges to the east. The structural valley trough is filled with unconsolidated alluvial sediments on the valley floor and coarser-grained deposits along the edges where upper parts of alluvial fans and outwash deposits derived from the adjacent mountains have merged. Cretaceous and younger rocks, draped over a core of Franciscan rocks, characterize the Diablo Range. These rocks have been uplifted and folded across the convergent plate margin of California into a series of parallel, northwest-trending systems of ridges and valleys. Range-front thrust faults and reverse faults run along the base of the frontal foothills of the mountain range, producing range-front scarps that expose Mesozoic bedrock.
3.6 GEOLOGY AND SOILS

Local Geology
Area bedrock consists of a complex suite of deep seafloor deposits, continental marine basin deposits, intrusive or sheeted dikes of volcanic rocks, and altered ultramafic serpentinite rock, all of which have been deformed, faulted, and uplifted along the convergent plate margin of California. Bedrock is mostly composed of Cretaceous to Jurassic (70 to 180 million years) sedimentary rocks of the Great Valley Sequence and a mélange of various rocks of the Franciscan Assemblage containing a suite of rocks known as an ophiolite complex, which forms at plate boundaries. Bedrock is largely overlain by the much younger Pleistocene to Pliocene (11,000 to 7 million years) Santa Clara Formation, a unit of weakly consolidated sand, gravel, silt, and clay, locally bounding dikes and sills of basaltic volcanic rocks. The area foothills have been uplifted along a dip-slip system of faults within the regional Coast Range thrust fault belt in the northeastern Diablo Range. Natural rock outcrops composed of basalt, sandstone, and serpentinite, as well as volcanic colluvium containing basalt boulders and rubble, are present in several portions of the project area. Landslides of various size and thickness have occurred in the assorted bedrock and colluvial units. Geological units in the project area are shown on Figure 3.6-1.

Soils
Soil Types
NRCS has mapped soils in the project area. A summary of the properties of the major soil types in the project area, as identified by NRCS (2012), is presented in Table 3.6-1.

Subsurface exploration by BAGG Engineers (Appendix F) indicates that the proposed project area is underlain by colluvial soils consisting predominantly of fat clay, both with and without basaltic cobbles, extending to depths of approximately 1 to 17 feet below ground surface. The fat clay colluvium generally is underlain by either interbedded and highly weathered claystone, sandstone, and siltstone, or basalt cobbles in a clay matrix. Some boring locations also encountered weathered olivine basalt and serpentinite at depth.

Expansive and Collapsible Soils
Expansive soils contain significant amounts of clays that expand when wetted and contract after drying out. Expansive soils can cause damage to foundations if moisture collects beneath structures.

In its 2010 geotechnical investigation, BAGG noted that relatively expansive soils blanket the project area (Appendix F). Deep and wide shrinkage cracks were observed during the site reconnaissance performed in late summer, and the project area was difficult to access during wet weather conditions (BAGG 2010). Additionally, the majority of the soil types underlying the project area, as mapped by NRCS, have moderate to high shrink-swell potentials, which indicates a high potential for expansion and shrinkage.
3.6 GEOLOGY AND SOILS

Figure 3.6-1: Project Area Geology Legend

- **Qf**: Artificial fill
- **Qa**: Younger alluvium
- **Qfd**: Alluvial fan deposits
- **Qoa**: Older alluvium
- **Qcl**: Colluvium: Poorly consolidated mixture of thick soil, slope wash, debris, and fragments of weathered bedrock

**SANTA CLARA FORMATION**
- **Qts**: Interbedded sandstone, siltstone and conglomerate
- **Qtsb**: Basalt member

**FRANCISCAN COMPLEX**
- **krs**: Sandstone and shale
- **sp**: Serpentinite
- **gb**: Gabbro and related ultramafic rocks

- **Qls**: Active Landslide: Deposits of soil, colluvium, and in places bedrock that are presently moving or have moved within the last few years. Unstable.
- **Qlr**: Recent Landslide: Deposits of soil, colluvium, and in places bedrock that have moved within the last 10 to 20 years. Unstable.
- **Qzf**: Debris Flow: Old debris flow. Deposits of soil and colluvium usually less than a few feet thick that has occurred as a rapidly flowing, viscous slurry.
- **Qdf**: Dermant Landslide: Previously moving deposits of soil, colluvium, and in places, bedrock debris, and have been relatively stabilized over the last several decades. Potentially unstable.
- **Qls**: Static Landslide: Deposits of soil, colluvium, and in places, bedrock debris that have not moved within hundreds or thousands of years. Relatively stable and not likely to be reactivated under existing conditions.

- **▲▲**: Thrust Faults: Dotted where covered, queried where uncertain, barbe on upper plate.
- **▲**: Faults: Dotted where covered, queried where uncertain.
- **Geologic Contacts**: Dotted where covered, queried where uncertain.
- **Landslides & Debris flows**
- **Strike and Dip**: Bedding
- **Strike and Dip**: Shear zone

### Table 3.6-1: Characteristics of Major Soil Units in the Project Area

<table>
<thead>
<tr>
<th>Soil Series</th>
<th>Description</th>
<th>Slope</th>
<th>Runoff Rate</th>
<th>Shrink-Swell Potential</th>
<th>Erosion Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altamont clay (AcF)</td>
<td>Well-drained soils formed in material weathered from fine-grained sandstone and shale</td>
<td>30 to 50 percent</td>
<td>High</td>
<td>High</td>
<td>Low to Moderate</td>
</tr>
<tr>
<td>Altamont clay (AcG2)</td>
<td>Well-drained soils formed in material weathered from fine-grained sandstone and shale</td>
<td>50 to 75 percent</td>
<td>High</td>
<td>High</td>
<td>Low to Moderate</td>
</tr>
<tr>
<td>Climara clay (CID)</td>
<td>Well-drained soils on mountains and uplands formed in mass movement deposits derived from Franciscan mélange serpentinite, graywacke, chert, gabbro, and blue schist and other ultrabasic rocks</td>
<td>9 to 30 percent</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Climara stony clay (CmE)</td>
<td>Well-drained soils on mountains and uplands formed in mass movement deposits derived from Franciscan mélange serpentinite, graywacke, chert, gabbro, and blue schist and other ultrabasic rocks</td>
<td>15 to 50 percent</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Gilroy clay loam (GoD)</td>
<td>Well-drained soils formed in material weathered from basic igneous and metamorphic rocks</td>
<td>5 to 30 percent</td>
<td>Moderate to High</td>
<td>Moderate</td>
<td>Low to Moderate</td>
</tr>
<tr>
<td>Gilroy clay loam (GoF)</td>
<td>Well-drained soils formed in material weathered from basic igneous and metamorphic rocks</td>
<td>30 to 50 percent</td>
<td>Moderate to High</td>
<td>Moderate</td>
<td>Low to Moderate</td>
</tr>
<tr>
<td>Gilroy clay loam (GoG)</td>
<td>Well-drained soils formed in material weathered from basic igneous and metamorphic rocks</td>
<td>50 to 75 percent</td>
<td>Moderate to High</td>
<td>Moderate</td>
<td>Low to Moderate</td>
</tr>
<tr>
<td>Inks rocky clay loam (InG2)</td>
<td>Somewhat excessively drained soils on undulating to hilly tubular volcanic ridges and steep side slopes formed in material weathered from consolidated or cemented sediments from volcanic rocks</td>
<td>50 to 75 percent</td>
<td>High</td>
<td>Moderate</td>
<td>Low to Moderate</td>
</tr>
<tr>
<td>Rincon clay loam (RaC2)</td>
<td>Well-drained soils on old alluvial fans and both stream and marine terraces formed in alluvium from sedimentary rocks</td>
<td>2 to 9 percent</td>
<td>High</td>
<td>Moderate to High</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

Source: NRCS 2012
Soil collapse occurs when increased moisture causes chemical or physical bonds between soil particles to weaken, which allows the structure of the soil to collapse and the ground surface to subside. Collapsible soils are generally low-density, fine-grained combinations of clay and sand left by mudflows that have dried, leaving tiny air pockets. When the soil is dry, the clay is strong enough to bond the sand particles together. When the clay becomes wet, moisture alters the cementation structure and soil strength is compromised, causing collapse or subsidence.

The potential for mudflows in the proposed project area is low and would be restricted to specific areas that are located downslope from steep canyons in which a mudflow could originate. It is possible that collapsible soil deposits may be present in these portions of the project area; however, in its 2010 geotechnical report, BAGG did not note the presence of any mudflow deposits in the project area (BAGG 2010).

**Erosion**
Erosion is the process by which rocks, soil, and other land materials are abraded or worn away from the earth’s surface over time. The erosion rate depends on many factors, including soil type, geologic parent material, slope, soil placement, vegetation, and human activity.

Erosion rates for the major soil types present in the project area, as mapped by NRCS, are low to moderate (Table 3.6-1). During its 2010 geotechnical investigation, BAGG noted that smaller slope failures in the project area generally represent active or relatively recently active features that are part of the natural erosion process of oversteepened slopes and hillsides that are composed of loosely consolidated, easily saturated material (BAGG 2010). The smaller slope failures were noted in many areas and indicate that erosion is an ongoing process in the project area.

**Subsidence**
Subsidence can occur as a result of deep-seated settlement due to the withdrawal of fluid (oil, natural gas, or groundwater), dissolution of subsurface carbonate rocks, and mining. Subsidence can sometimes be measured in tens of feet and typically occurs in broad valleys underlain by thick sequences of alluvial sediments.

Some areas of northern Santa Clara County historically have subsided by up to 13 feet due to excessive groundwater pumping. The Santa Clara Valley Water District (SCVWD) reduces the demand on groundwater and minimizes subsidence through the conjunctive use of surface water and groundwater. The District recharges the groundwater basin to replenish groundwater that is withdrawn and monitors for land subsidence through benchmark surveying, groundwater elevation monitoring, and data collection and analysis from compaction wells. Accordingly, subsidence in the County has stabilized. The project area is not underlain by either carbonate material or subsurface mining operations, and is within the jurisdiction of SCVWD; therefore, the potential for land subsidence to occur in the project area is low.
3.6 GEOLGY AND SOILS

Landslides
A landslide is defined as the slipping down or flowing of a mass of land (rock, soil, and debris) from a mountain or hill. Landslide potential is high in steeply sloped areas underlain by alluvial soils, thinly bedded shale, or bedrock where the bedding planes are oriented in an out-of-slope direction (bedding plane dip angles that are greater than horizontal, but less than the slope face).

Extensive portions of the project area are within landslide hazard zones that have been mapped by the County of Santa Clara (Santa Clara County Planning Department 2012) and the California Geological Survey (CGS). CGS has issued a Seismic Hazard Map for the part of the project area within the Mt. Sizer quadrangle and is in the process of developing a Seismic Hazard Map for the Gilroy quadrangle, in which the southern portion of the project area is located. The portion of a large landslide area, the Paseo Robles Landslide Complex, located within the Mt. Sizer quadrangle, has been zoned by the State as an area of potential earthquake-induced landsliding that requires site-specific investigation prior to development. The Santa Clara County landslide hazard maps include most of the project area as areas susceptible to landsliding, generally excluding the main ridge area along the eastern property line and several local ridge lines within the property. County Landslide Hazard Zones within the project boundaries are shown on Figure 3.6-2.

The younger, smaller slope failures in the project area generally have developed primarily through the continual process of surface erosion and down-cutting on oversteepened slopes and hillsides. Some of the younger landslides have been active in the past 15 to 20 years (BAGG 2010). The large bedrock block slides, such as the Paseo Robles complex, likely occurred during considerably wetter times of the Pleistocene Epoch (over 11,000 years ago). With the exception of smaller slides that are superimposed on them, the large slides appear to be dormant (Wagner 1978). This state of equilibrium, however, can be locally upset by manmade changes (e.g., grading) or natural means (e.g., seismic shaking).

Proposed Lots C1 and C2 are below the headscarp area at the northern edge of the Paseo Robles Landslide Complex and are entirely within an area identified as static landslide deposits that have apparently not moved for hundreds or thousands of years (BAGG 2010).

Additionally, the proposed access road for the project area would cross Corralitos Creek in the south-central portion of the project area, near the southern edge of a mapped group of landslides that has been referred to in previous investigations as “Landslide Complex A” (Figure 3.6-2). This area generally is underlain by basalt and sedimentary rocks of the Santa Clara Formation, which are separated by a fault-bounded unit of serpentinite rock. Several overlapping rotational slumps and debris landslides exist on steep, south-facing slopes that flank the upper reaches of the Corralitos Creek drainage through this area. These landslides generally are dormant, but are potentially unstable and could be reactivated under certain conditions, either natural or manmade.
Figure 3.6-2: Landslide Hazard Areas

Important - Please Note:
1. This map may not show all faults that have the potential for surface fault rupture, either within the Fault Hazard Zone or outside their boundaries.
2. The identification and location of these faults are based on the level available data. However, the quality of data is varied. Fault traces have been drawn as accurately as possible at the 1:24,000 (7.5 minute) scale.
3. Fault information on this map is not sufficient to serve as a substitute for the geohazard site investigations required under Chapter 7.3 of Division 3 of the California Public Resources Code.
4. Please refer to the latest Official Maps of Seismic Hazard Zones for disclosures and other actions that are required by the Seismic Hazard Mapping Act.

Legend:
- Proposed Subdivision Area Boundary
- Lot Area Boundary
- Water Pipeline
- Proposed Well
- Proposed Water Tank
- County Landslide Hazard Zone
- County Fault Rupture Hazard Zone

Scale: 1:14,000
Potential water supply well location ETS-18, located in the northeastern portion of the project area is potentially located on a dormant landslide (Wagner 1978). Moreover, both of the easternmost potential water well locations (ETS-11 and ETS-18) are located in landslide hazard areas mapped by the County. However, none of the potential water supply well locations were specifically investigated by BAGG during its 2010 investigation.

Additional details regarding landslides and landslide potential in the project area are included in BAGG’s Preliminary Geologic, Geotechnical Investigation & Slope Stability Analyses report (BAGG 2010), included in Appendix F of this EIR.

**Seismicity and Faults**

The Alquist-Priolo Earthquake Fault Zoning Act (A-P Act) designates Earthquake Fault Zones based on the presence of a “sufficiently active and well-defined” fault. CGS has developed criteria to classify fault activity for the A-P Act. By definition, an active fault is one with evidence of surface displacement within Holocene time (about the last 11,000 years) (Hart and Bryant 2007). A potentially active fault displaces Quaternary deposits (last 1.6 million years) but lacks specific evidence of Holocene displacement. Potentially active faults also represent possible surface rupture hazards, although probably to a lesser degree. In contrast to active or potentially active faults, faults considered inactive have no evidence of movement more recent than 1.6 million years ago.

Southern Santa Clara County, encompassing the City of Morgan Hill and the adjacent foothills, is within a seismically active, broad zone of faulting that extends eastward from the Pacific Coast through the Basin and Range Province of Nevada. The majority of the active fault movement and most of the large earthquakes that have impacted the region during historic time (since 1789) are associated with the northwest-trending San Andreas and related faults (BAGG 2010).

The San Andreas fault passes within about 12.5 miles southwest of the project area (Figure 3.6-3). It generated major earthquakes in 1836, 1906, and 1989, and is an A-P zoned fault. The Calaveras fault (Figure 3.6-3), also an A-P zoned fault and an active branch of the San Andreas fault system, passes within about 1 to 1.5 miles northeast of the project area within the valley of Coyote Creek and Coyote Reservoir. Fault creep of 0.47 to 0.67 inch (12 to 17 millimeters) per year has been measured within this zone.

The regional 30-year earthquake probability of an occurrence of a magnitude 6.7 or larger earthquake is 93 percent in northern California and 63 percent in the greater San Francisco Bay Area. The probability of occurrence of a magnitude 6.7 or greater earthquake on the Calaveras fault during the next 30 years is 7 percent (2007 Working Group on California Earthquake Probabilities 2008).

In the project vicinity, a network of east-dipping thrust faults in a zone known as the Coyote Creek thrust fault winds through the area foothills west of the Calaveras fault. Older Franciscan, Great Valley sequence, and serpentinite bedrock has been thrust westward over younger Santa Clara Formation materials along this fault system. A range-front thrust fault has
Figure 3.6-3: Regional Faults

Legend:
- Proposed Subdivision Area Boundary
- U.S. Highway
- State Route
- Fault with Historic Displacement (< 150 years)
- Fault with Holocene Displacement (< 15,000 years)
- Fault with Late Quaternary Displacement (< 130,000 years)
- Fault with Quaternary Displacement (< 1,600,000 years)
3.6 GEOLOGY AND SOILS

also been mapped across the western side of the subdivision area along the western edge of the
foothills. This range-front thrust fault has been named the Range Front fault, and is part of the
Coyote Creek thrust fault system. Santa Clara County has delineated a Fault Rupture Hazard
Zone along the Range Front fault. Other thrust faults in the area may move only
“sympathetically” in reaction to large earthquakes originating on the nearby Calaveras fault.

County Fault Rupture Hazard Zones have been established to ensure that structures for human
occupancy will not be built on active faults. Faults are to be identified and evaluated by a
geologic investigation, usually incorporating subsurface exploration, such as trenching. In 2009,
BAGG conducted an investigation of the Range Front fault within Lot 1 by excavating and
logging a 270-foot-long trench. There was no evidence of past fault displacements observed
anywhere in the trench wall materials that would indicate that the Range Front fault traverses
the explored portion of the subdivision area (BAGG 2010). However, the surface trace of the
fault may be present just east of the east end of the trench. Therefore, as a precaution, BAGG
recommended a 50-foot building setback zone extending west from the east end of the trench.

Local instances of subtle surface distress and compressional surface features have been
documented in and around range-front faults elsewhere in the Bay Area (i.e., Los Gatos,
Saratoga, and Los Altos Hills) after the major 1989 earthquake; however, none have been
reported at the project locality (BAGG 2010). Additional details regarding the fault investigation
performed on Lot 1 are included in BAGG’s Geologic Fault Investigation report (BAGG 2009),
included in Appendix F of this EIR.

Ground Motion
An earthquake along any of the fault zones discussed above is capable of generating moderate
to strong ground motion or shaking in the proposed project area. Approximate ground motion
parameters were estimated for the project area. The parameters presented in Table 3.6-2
represent a 10 percent probability of being exceeded during a 50-year period. They are
expressed as a fraction of the acceleration due to gravity (g). Three ground motion values are
shown: peak ground acceleration (PGA), short-period (0.2-second) spectral acceleration (Sa),
and moderately long-period (1.0-second) Sa. PGA is a measure of earthquake acceleration
experienced by a particle located on the ground. Sa is an approximation of the earthquake
acceleration experienced by a building. Each ground motion value is shown for three site
conditions: firm rock, soft rock, and alluvium.

<table>
<thead>
<tr>
<th>Ground Motion</th>
<th>Firm Rock</th>
<th>Soft Rock</th>
<th>Alluvium</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGA</td>
<td>0.779g</td>
<td>0.779g</td>
<td>0.779g</td>
</tr>
<tr>
<td>Sa (0.2-second)</td>
<td>1.82g</td>
<td>1.82g</td>
<td>1.82g</td>
</tr>
<tr>
<td>Sa (1.0-second)</td>
<td>0.600g</td>
<td>0.678g</td>
<td>0.783g</td>
</tr>
</tbody>
</table>

Source: CGS 2008
The proximity of the project area to the Calaveras fault, an active branch of the San Andreas fault system, indicates that significant seismic shaking will occur in the project area when earthquakes originate on this active fault (BAGG 2010).

**Liquefaction**

Liquefaction is a seismic phenomenon in which water-saturated, cohesionless sediments, such as sand and silt, temporarily lose their strength and behave like a fluid. Liquefaction occurs when saturated sediments are subjected to dynamic forces, such as intense and prolonged ground-shaking during an earthquake. Liquefaction typically occurs when groundwater is shallow (i.e., less than 30 feet below ground surface) and soils are predominantly granular and unconsolidated.

Depth to groundwater in the project area ranges from 20 to 56 feet below ground surface, with the majority of measurements deeper than 30 feet below ground surface (BAGG 2010). Soil types in the project area are not conducive to liquefaction because they are very dense, silty, and gravel- and cobble-rich; therefore, the potential for liquefaction to occur in the project area is low.

**Lateral Spreading**

Lateral spreading is a phenomenon that involves lateral displacement of large, intact blocks of soil down gentle slopes or toward a steep free face such as a stream bank. Lateral spreading occurs as a result of liquefaction of a shallow underlying deposit during an earthquake. It typically occurs on slopes of 0.3 to 5 percent underlain by loose sands and a shallow water table. Conditions conducive to lateral spreading include gentle surface slope, a shallow water table, and liquefiable cohesionless soil. These conditions commonly are found along streams banks, canals, or cut slopes in recent alluvial or deltaic deposits. Soils located at the head of the slide may be pulled apart and those at the toe of the slide may buckle or compress. The potential for lateral spreading in the project area is associated with that for liquefaction and is low.

### 3.6.2 Regulatory Setting

**Federal**

There are no federal laws or regulations pertaining to geology and soils that are applicable to the proposed project.

**State**

*The Alquist-Priolo Earthquake Fault Zoning Act*

The A-P Act was passed in 1972 to mitigate the hazard of surface faulting to structures intended for human occupancy. The main purpose of the A-P Act is to prevent the construction of buildings used for human occupancy on the surface traces of active faults. The A-P Act requires the State Geologist to delineate Earthquake Fault Zones along active faults within the state and to issue appropriate maps. Setbacks from active faults are required within the specified zones. For the purpose of the A-P Act, an active fault is one that has moved in the last 11,000 years (CDMG 1998). The A-P Act permits local jurisdictions to adopt more stringent requirements. Santa Clara County has incorporated the State Earthquake Fault Zones into the County Fault...
Rupture Hazards Zones. For projects located within those areas, the State’s Guidelines for Evaluating the Hazard of Surface Fault Rupture (CGS Note 49) must be followed by the engineering geologists who prepare fault rupture hazard investigation reports that are required and reviewed by the County Geologist.

**Seismic Hazard Mapping Act**
The Seismic Hazard Mapping (SHM) Act was passed in 1990 following the 1989 Loma-Prieta earthquake to reduce the potential impacts of earthquakes on public health and safety and to minimize property damage caused by earthquakes related to ground deformation. The SHM Act established a requirement for the identification and mapping of areas prone to the earthquake hazards of liquefaction, earthquake-induced landslides, and amplified ground-shaking. The SHM Act requires site-specific geotechnical investigations be conducted to identify potential seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy within the Zones of Required Investigation. The SHM Act permits local jurisdictions to adopt more stringent requirements. Santa Clara County has incorporated the State Seismic Hazard Zones of Required Investigation of potential earthquake-induced landsliding into the County Landslide Hazard Zones and the State Seismic Hazard Zones of Required Investigation of potential liquefaction into the County Liquefaction Hazard Zones. For projects located within those areas, the State’s guidelines for investigation (Special Report 117A, updated in 2008) must be followed by the engineering geologists and geotechnical engineers who prepare landslide and liquefaction hazard investigation reports that are required and reviewed by the County Geologist.

**California Building Code**
The 2010 California Building Code (CBC) is based on the 2009 International Building Code with the addition of more extensive structural seismic provisions. The CBC was adopted by the California Building Standards Commission on January 1, 2011, and became effective July 1, 2011. The CBC is included in the Title 24 of the California Code of Regulations, California Building Standards Code, and is a compilation of three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions
- Building standards authorized by the California legislature that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns
Seismic sources and the procedures used to calculate seismic forces on structures are defined in Section 1613 of the CBC. The code requires that all structures and permanently attached nonstructural components be designed and built to resist the effects of earthquakes. The code also includes grading and other geotechnical issues, building specifications, and non-building structures. The proposed project would include these types of improvements and, therefore, the building code would be applicable.

The State Fire Marshal has authority to implement and enforce the provisions of the pipeline safety standards codified in Section 51010 to 51019 of the California Code of Regulations. These regulations require pipeline inspection and assessment for improvements, replacement, or construction of pipelines. The regulations additionally require that pipelines be designed and constructed in accordance with federal standards. The design of new pipelines shall accommodate the passage of instrumented internal inspection devices. Leak mitigation systems and emergency response plans are also required.

Local
The Santa Clara County General Plan (Santa Clara County 1994) Land Use and Health and Safety policies relevant to geology and soils of the proposed project are listed below.

Land Use, Resource Conservation Areas
R-LU 16 Hillsides: Mountainous lands and foothills unsuitable and/or unplanned for annexation and urban development. Lands so designated shall be preserved largely in natural resource related and open space uses in order to:

(a) support and enhance rural character;
(b) protect and promote wise management of natural resources;
(c) avoid risks associated with the natural hazards characteristic of those areas; and
(d) protect the quality of reservoir watersheds critical to the region’s water supply.

Health and Safety
R-HS 16 No new building site shall be approved on a hazardous fault trace, active landslide, or other geologic or seismic hazard area that poses a significant risk.

R-HS 17 Subdivisions shall be designed to minimize placement of road and other improvements on unstable lands and shall demonstrate suitable, stable building sites approved by the County Geologist.

R-HS 19 In areas of high potential for activation of landslides, there shall be no avoidable alteration of the land or hydrology which is likely to increase the hazard potential, including:

(a) saturation due to drainage or septic systems;
(b) removal of vegetative cover; and
(c) steepening of slopes or undercutting the base of a slope.
3.6 GEOLOGY AND SOILS

R-HS 20 Lands where soils are in a continually saturated condition should not be used for structural purposes or filled with heavy earth fills due to their inherently weak and unstable nature. Uses requiring septic systems in such areas should not be allowed.

R-HS 21 Proposals involving potential geologic or seismic hazards shall be referred to the County Geologist for review and recommendations.

Additionally, Santa Clara County added a County Geologic Hazard Zones provision to its Code of Ordinances in 2002 (Title C, Division C12, Chapter IV, Article 2). The ordinance directs that the official Santa Clara County geologic hazard zones and maps be kept on file with the County Geologist and the County Planning Office, and are a major basis for determination by the County Geologist as to whether a geologic report will be required for proposed development.

3.6.3 Thresholds of Significance
The proposed project would result in a significant impact if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault [refer to Division of Mines and Geology Special Publication 42]; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides
- Result in substantial soil erosion or the loss of topsoil
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse
- Be located on expansive soil, as defined in the report, Soils of Santa Clara County, creating substantial risks to life or property
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater
- Cause substantial compaction or over-covering of soil either on site or off site
- Cause substantial change in topography or unstable soil conditions from excavation, grading, or filling
3.6 GEOLOGY AND SOILS

3.6.4 Impacts and Mitigation

With the implementation of identified mitigation measures, the project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. (*Less than significant impact with incorporation of mitigation measures*)

Construction

The proposed project area is not underlain by any known active or potentially active faults zoned by the State Geologist (CGS 2010). The nearest known active faults and designated A-P Fault Hazard Zones are the Calaveras fault and its A-P zone, located approximately 1 to 1.5 miles northeast of the project area, and the San Andreas fault and its A-P zone, located approximately 12.5 miles southwest of the project area (Figure 3.6-3). No known active or potentially active faults underlie the project area; therefore, impacts from fault rupture during construction of roadways, utility trenches, private recreation development, and drainage improvements, including the water supply wells, water supply pipeline, and water storage tanks, would be less than significant.

A 2009 fault investigation on Lot 1 did not reveal any evidence that the Range Front fault traverses the area of the lot that was explored (BAGG 2009). However, there is a possibility that a fault exists in the nearby hillside area east of the trench location.

The risk of fault rupture is greatest in the immediate vicinity of active faults. Local instances of subtle surface distress and compressional surface features have been documented in and around range-front faults elsewhere in the Bay Area after large earthquakes, although none have been reported at the project locality. If movement occurs on the nearby Range Front fault trace, it likely would be a coseismic response to movement on the closest segment of the Calaveras fault.

The recommendations provided by BAGG in its 2009 and 2010 reports for the entire subdivision area were based on preliminary development plans prepared for the proposed subdivision. Future, site-specific, engineering-level geotechnical studies would be performed for each proposed residential lot prior to the finalization of development plans.

Implementation of Mitigation Measures Geology-1, Geology-2, Geology-3, and Geology-4 would reduce potential impacts associated with surface fault rupture to a less-than-significant level.

**Mitigation Measure Geology-1:** A building setback of 50 feet westward from the unexplored area east of the eastern end of the exploration trench and extending north and south parallel to the mapped trace of the fault on Lot 1 shall be adopted to reduce potential hazards from the effects of distributed ground deformation that might result...
from instances of nearby fault rupture and to reduce potential hazards from local instances of slope failure.

Mitigation Measure Geology-2: Improvements that are to be constructed in the proximity of the Range Front fault, or within any zones of potential distributed ground deformation around the fault, shall incorporate a sufficient level of design to accommodate or mitigate some ground displacement or deformation. Design measures shall be developed by a licensed geotechnical engineer and may include, but not be limited to, the following:

(a) Use of ductile materials
(b) Use of bracing/seismic resistant components
(c) Weight distribution to lower floors
(d) Redundancy in the design
(e) Stiffening floors
(f) Use of stronger foundations (e.g., mat foundations)

Mitigation Measure Geology-3: A design-level geotechnical investigation shall be completed for each lot prior to finalization of development plans. The geotechnical investigation shall include the following:

(a) Evaluation of the layout of proposed underground utilities, exterior hardscape, retaining walls, and septic leach fields to evaluate the presence of any soil stability issues that could impact these structures;
(b) Detailed subsurface explorations;
(c) Consideration of the need for extra steel reinforcement of piers and grade beams, voids beneath grade beams to mitigate uplift distress to the structures, perimeter subdrains and moisture barriers, and construction precautions for concrete over-pours at the tops of the drilled piers;
(d) Consideration of impacts from drilling piers for foundations; and
(e) Preparation of a geotechnical investigation report summarizing results of the investigation, including information on the items listed above, as well as recommendations to be implemented during future residential development.

Recommendations in the geotechnical investigation report shall be implemented, as approved by Santa Clara County. The recommendations shall include the following:

(a) Recommendations for preventing soil creep and landslides during construction, if necessary, such as temporary excavation support systems;
(b) Recommendations for grading of engineered fill that replaces undocumented fill (i.e., fill of unknown origin that may or may not have been placed in accordance with engineering BMPs);
3.6 GEOLOGY AND SOILS

(c) Recommendations to reduce impacts to utility lines related to expansive soils;
(d) Recommendations to reduce impacts to foundations related to expansive soils;
(e) Recommendations to reduce impacts to the planned drainage improvements related to expansive soils;
(f) Recommendations to reduce the probability of landslide and soil creep after construction;
(g) Recommendations for placement and compaction of any fill or replacement soils;
(h) Recommendations for stabilizing slopes during the drilling of piers for foundations; and
(i) Recommendations for foundation design.

Mitigation Measure Geology-4: Additional mitigation recommended by licensed professionals (based on the performance of future site-specific, engineering-level geotechnical studies) shall be incorporated into the project. Any mitigation measures in this EIR that conflict with additional mitigation recommended based on the results of the engineering-level geotechnical studies shall be superseded by the new recommended measures. Conflicts shall be resolved by the County Geologist.

Subdivision Improvements and Future Residences
A fault may exist in the nearby hillside area east of the Lot 1 trench. No other active or potentially active faults are known to exist in the project area. Implementation of Mitigation Measures Geology-1 through Geology-4 would reduce impacts from surface fault rupture to a less-than-significant level after construction of the homes is complete.

(ii) Strong seismic ground shaking. (Less than significant impact with incorporation of mitigation measures)

Construction
Several regional active faults are capable of generating earthquakes that could cause strong seismic shaking in the project area. Project construction could expose construction workers to hazards from strong seismic ground shaking, should an earthquake capable of producing the level of ground acceleration occur during construction. Adherence to all applicable building code and Occupational Safety and Health Administration (OSHA) regulations would reduce this impact to a less-than-significant level.

Subdivision Improvements and Future Residences
The CGS ground motion predictions presented in Table 3.6-2 indicate that a PGA of 0.779g in the project area has a 10 percent probability of exceedance in 50 years (CGS 2008). Any ground shaking over 0.20g is considered significant. All structures would be built to the standards of the CBC and/or Uniform Building Code to reduce impacts to humans to less-than-significant levels; however, earthquakes located on traces of the nearby Calaveras fault could generate very
3.6 GEOLOGY AND SOILS

strong ground motions, oriented both horizontally and vertically, that may exceed normal building code standards. All structures would be appropriately designed for any anticipated seismic loading and forces. Implementation of Mitigation Measures Geology-3 and Geology-4 would reduce potential impacts from strong seismic ground shaking to a less-than-significant level.

(iii) Seismic-related ground failure, including liquefaction. (Less than significant impact)
Depth to groundwater in the project area ranges from 20 to 56 feet below ground surface, with the majority of measurements deeper than 30 feet below ground surface. Soil types in the project area are not conducive to liquefaction because they are very dense and gravel- and cobble-rich. Therefore, the potential for liquefaction to occur in the project area is low and the potential impact would be less than significant.

(iv) Landslides. (Less than significant impact with incorporation of mitigation measures)
Due to the variable nature of Santa Clara Formation soils, minor slope sloughing or shallow failures may occur in the project area during wet weather conditions. These minor slope failures would be readily repaired with remedial grading. Impacts to utility corridors would be reduced to a less-than-significant level with the implementation of Mitigation Measure Geology-3.

Most of the primary and secondary access roadways would be constructed on slopes of 15 percent or less. An approximately 300-foot-long section of the primary roadway through the Fountain Oaks property would have a less than 20 percent grade, and another approximately 200-foot-long section of the primary roadway elsewhere on the property would have an approximately 19 percent grade. Retaining walls up to 7.8 feet high would be constructed to contain an area of slope failure. The project includes approximately 1,800 linear feet of retaining walls throughout the subdivision area, with the longest section of wall totaling 690 linear feet (Buffington 2012).

The main access road for the development would cross Corralitos Creek in the south-central portion of the subdivision area, near the southern edge of Landslide Complex A. The landslides comprising Landslide Complex A generally are dormant, but are potentially unstable and could be reactivated as a result of either natural or manmade disturbances. Implementation of Mitigation Measures Geology-5, Geology-6, and Geology-7 would reduce impacts from landslides related to construction activities.

Mitigation Measure Geology-5: Where the access road crosses Landslide Complex A, landslide material of Landslide Complex A shall be over-excavated to a depth of approximately 36 feet or deeper, as deemed necessary by an on-site Certified Engineering Geologist observing excavation exposures. The excavated material shall be replaced with engineered fill compacted as recommended in Mitigation Measure Geology-7. The depth of excavation required to intercept the soft soils along the potential slide plane shall be confirmed by the project engineering geologist at the time of construction. Temporary cut slopes on the uphill side of the excavation shall be maintained at a gradient of 1.5:1 (horizontal to vertical). Mitigation shall also include the
installation of under-drains to collect subsurface seepage, which will discharge into the creek on the downhill side of the repair.

**Mitigation Measure Geology-6:** Final grading plans for the access road and building pads shall be reviewed by a licensed geotechnical engineer prior to construction to confirm that the intent of the recommendations presented in the 2010 geotechnical report is reflected in the plans, as well as to confirm that the recommendations properly address the proposed project in its final form. A Plan Review letter confirming compliance shall be submitted to the County Geologist. In addition, geotechnical aspects of grading and foundation construction shall be observed by a designated representative of the project geotechnical engineer, and a letter documenting those observations shall be submitted to the County prior to final inspections.

**Mitigation Measure Geology-7:** Soil compaction and/or importation shall be subjected to the following requirements:

(a) Native clayey soils in the project area shall be compacted to between 88 to 92 percent of maximum dry density, as determined by ASTM Method D1557, while at a moisture content that is at least 3 percent over optimum moisture content as determined by the same test method.

(b) Any imported fill or backfill soils shall be non-expansive material and compacted to at least 95 percent of maximum dry density within the upper 2 feet in pavement areas and to 90 percent in all other areas, while at a moisture content that is slightly over optimum. Each lift shall be thoroughly moisture-conditioned and compacted before subsequent lifts are placed.

(c) In areas to receive fill and/or pavements, near-surface soil rich in organic content shall be removed. The underlying subgrade shall be scarified to a depth of 6 to 8 inches, thoroughly moisture-conditioned, and re-compacted as specified above. Any area still containing weak and/or yielding (pumping) soils, as determined in the field by the geotechnical engineer, shall be further over-excavated as necessary. Where necessary, fill can then be placed on the over-excavated surfaces and in the holes/depressions created by the above actions in uniformly moisture-conditioned and compacted lifts not exceeding 8 inches in loose thickness.

(d) All aspects of site grading including clearing/stripping, demolition, and placement of fills or backfills shall be performed under the observation of a geotechnical engineer.

(e) Imported fill soils, if required, shall be non-expansive, predominantly granular, and approved by the geotechnical engineer before importing to the site. The material shall have a plasticity index less than 15, a minimum R-value of 15, a fines content between 15 and 65 percent, and no more than 5 percent by weight of material greater than 2 inches in size.
3.6 GEOLOGY AND SOILS

Rocks or cobbles larger than 4 inches in maximum dimension shall not be allowed to remain within fill areas, unless they can be crushed in place by the construction equipment.

(f) It shall be the Contractor’s responsibility to select equipment and procedures that will accomplish the grading as described above. The Contractor shall organize his work in such a manner that a geotechnical engineer can observe and test the grading operations, including demolition, excavation, compaction of fill and backfill, and preparation of subgrades. The Contractor shall coordinate with the project geotechnical engineer to ensure that required observations can be made when and where necessary.

(g) The project geotechnical engineer shall prepare a letter confirming that grading was done in compliance with the requirements presented in the approved reports.

During its 2010 geotechnical investigation, BAGG did not investigate the potential water supply well locations. The well to be located on Lot 1, as well as proposed well locations ETS-5 and ETS-7, are located within the subdivision area that was evaluated by BAGG in 2010. None of these three well locations would be located near a mapped landslide (Figure 3.6-1). However, well locations ETS-5 and ETS-7 are located adjacent to landslide hazard areas, and easternmost well locations ETS-11 and ETS-18 are located within County Landslide Hazard Zones (Figure 3.6-2). Furthermore, well ETS-18 may be located on a dormant landslide (Wagner 1978). Although the geology of potential well location ETS-18 has been mapped at a larger scale as a dormant landslide, the age of movement of the landslide is not known with certainty. Proposed well locations ETS-11 and ETS-18 are outside the area that was evaluated by BAGG in 2010. All new wells would be required to obtain permits from the Santa Clara County Waster Department and undergo review by the Santa Clara County Department of Environmental Health. The County’s review and permitting process for wells would ensure that wells would not be located on areas of landslide hazard, and would ensure that impacts of landslide hazards on wells would be less than significant.

Trenching for utility extensions onto future residential home sites would not significantly destabilize slopes because it would be relatively shallow and extend a relatively short distance into each lot to stub out the utility improvements. Landslide impacts associated with trenching for utility extensions would be less than significant with the implementation of Mitigation Measures Geology-3 and Geology-4.

Excavation required for residence construction could potentially result in landslides due to ground-disturbing activities (e.g., grading). Impacts would be less than significant with the implementation of Mitigation Measure Geology-3, which requires a geotechnical study, report, and implementation of measures to avoid the risk of landslides. Impacts would also be reduced with the implementation of Mitigation Measure Geology-4, which provides for adoption of additional measures that may be recommended in the future.
Multiple landslide features were identified on several proposed residential lots, as described in the 2010 BAGG geotechnical report, included in Appendix F of this EIR. Construction of the project would place residential homes and associated structures within County Landslide Hazard Zones. Implementation of Mitigation Measure Geology-8 would reduce landslide impacts associated with the construction of future residences to a less-than-significant level.

**Mitigation Measure Geology-8:** For structures that would be constructed in a landslide hazard area, the applicant shall retain a licensed geotechnical engineer and Certified Engineering Geologist to prepare a landslide mitigation design. The landslide mitigation design may include, but not be limited to, removal and/or rebuilding of the landslide feature, over-excavation of unstable material, installation of subdrains, replacement of material as engineered fill, or installation of below-grade stitch pier walls. The mitigation plan must include slope stability analyses (both static and pseudostatic) that comply with State guidelines (i.e., CGS Special Publication 117A). The landslide mitigation design shall be submitted to the County for review and approval prior to construction within landslide hazard areas. Plan review and construction observation letters shall be required prior to permit issuance and final inspection, respectively.

Implementation of Mitigation Measures Geology-5 through Geology-8 would reduce the potential landslide impacts associated with construction activities to a less-than-significant level. These mitigation measures would also ensure that landslide impacts on the subdivision improvements and future residences would remain less than significant.

**With implementation of identified mitigation measures, the proposed project would not result in substantial soil erosion or the loss of topsoil. (Less than significant impact with incorporation of mitigation measures)**

An estimated 61,170 $y^3$ of cut and 62,506 $y^3$ of fill are proposed for the project. The combined effects of moderate to steep slopes, prolonged heavy rainfall, and slopes denuded from grading for the roadway could present a temporary potential for increased soil erosion and subsequent siltation in the natural drainage channels. After project construction, the roadway would result in additional impervious surface area that would be sloped to accommodate drainage. Erosion from runoff could result in significant impacts if a proper drainage plan is not instituted.

Increased soil erosion during construction and as a result of construction of the proposed roadway would be a significant impact. Mitigation Measure Hydrology-1 specifies BMPs that would be used during construction as a part of the project Erosion Control Plan. Post-construction BMPs would also be implemented in accordance with Mitigation Measure Hydrology-3.

Lot 1 is relatively flat with a gentle eastward slope. Seasonally flowing Foothill Creek, on the southern periphery of the project area, drains a local canyon that emerges from the eastern foothills near the southeast corner of the project area. Overbank deposits were observed at the western end of the fault exploration trench, indicating historical flooding from the creek to the south. To reduce impacts from flooding and potential removal of topsoil in this area to a less-than-significant level, Mitigation Measure Geology-9 would be implemented.
Mitigation Measure Geology-9: Final site design shall incorporate the installation of drainage control measures on Lot 1 to mitigate potential impacts from overbank flooding of nearby Foothill Creek during times of heavy precipitation. Drainage control measures may include an earthen berm of sufficient height along the northern bank of the creek on the southern side of the project area.

During construction of future residences and associated structures, adherence to Mitigation Measures Geology-9, Hydrology-1, and Hydrology-3 would reduce erosion impacts to a less-than-significant level.

With incorporation of identified mitigation measures, the project would have a less than significant impact related to being located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. (Less than significant with incorporation of mitigation measures)

Construction
Due to the variable nature of Santa Clara Formation soils, minor slope sloughing or shallow failures may occur in the project area during wet weather conditions. These minor slope failures could be readily repaired with remedial grading. Impacts to utility corridors would be reduced to a less-than-significant level with the implementation of Mitigation Measures Geology-3 and Geology-4.

The main access road for the development would cross Corralitos Creek in the south-central portion of the subdivision area, near the southern edge of Landslide Complex A. The landslides comprising Landslide Complex A generally are dormant, but are potentially unstable and could be reactivated as a result of either natural or manmade disturbance. Implementation of BAGG-recommended Mitigation Measures Geology-5, Geology-6, and Geology-7 would reduce impacts from landslides in this area to a less-than-significant level during construction.

The potential for land subsidence, liquefaction, lateral spreading, and soil collapse in the project area is low. Impacts associated with these hazards would be less than significant.

Construction of the 25 proposed future residences would place residential homes on a geologic unit that is potentially unstable. Landslide hazard areas are identified on Figure 3.6-2. Excavation required for residence construction could potentially cause landslides. Locating residences within an area of unstable soils would be a significant impact. Impacts would be less than significant with the implementation of Mitigation Measure Geology-3, which requires a geotechnical study, report, and implementation of mitigation measures outlined in the report. Impacts would also be reduced with the implementation of Mitigation Measure Geology-4, which provides for adoption of additional measures that may be recommended in the future. Impacts would be further reduced to a less-than-significant level through implementation of Mitigation Measure Geology-8.
Trenching for utility extensions onto future residential home sites would not significantly destabilize slopes because it would extend a relatively short distance into each lot to stub out the utility improvements. Impacts would be less than significant with the implementation of Mitigation Measures Geology-3 and Geology-4. The potential for land subsidence, liquefaction, lateral spreading, and soil collapse in the project area is low. Impacts associated with these hazards would be less than significant.

Subdivision Improvements
The retention wall that would be built for the main roadway construction could be affected by soil creep and landslides. Mitigation Measures Geology-3 and Geology-4 would reduce post-construction impacts on this feature to a less-than-significant level.

All of the utility improvements would be located under the newly constructed roadways. All of the new utility lines would be bedded and shaded with imported granular backfill that could trap groundwater and thereby decrease slope stability. Impacts from landslides on utilities under the roadways would be less than significant with the implementation of Mitigation Measures Geology-3 and Geology-4.

The potential for land subsidence, liquefaction, lateral spreading, and soil collapse at the site is low. Impacts associated with these hazards would be less than significant.

Future Residences
Post-construction, the presence, use, and maintenance of the residential subdivision would not place additional structures within a geologic soil unit that is potentially unstable.

With the incorporation of identified mitigation measures, the project would have a less than significant potential to be located on expansive soil, as defined in the report, Soils of Santa Clara County, creating substantial risks to life or property. (Less than significant with incorporation of mitigation measures)
Relatively expansive soils blanket the project area. Fat clayey soils encountered in the project area are difficult to moisture-condition because of their intrinsic low permeability, and are cumbersome to grade. Structures constructed on expansive soil with improper subsurface drainage facilities and structures constructed atop expansive fill soils that are not properly engineered and placed may be damaged by shrink-swell earth movement. Shrinkage, swelling, and creep of expansive soils by moisture variation can cause structural distress to the proposed roadway pavements, concrete slab-on-grade, curbs and gutters, driveways, and other flatwork.

Implementation of the Mitigation Measure Geology-10 would reduce potential impacts of roadway and associated infrastructure construction to less-than-significant levels.

Mitigation Measure Geology-10: The applicant shall submit for review and approval by the County Geologist geotechnical specifications in the construction plans that provide measures to minimize impacts from expansive soil conditions. Measures shall be based on the geotechnical report recommendations and may include:
3.6 GEOLOGY AND SOILS

(a) Treatment or replacement of expansive or soft soils encountered in project development areas with non-expansive material (plasticity index of 12 or less)

(b) Design of retaining walls to resist anticipated earth pressures from expansive soil and bedrock

Based on the results of BAGG’s 2010 geotechnical investigation, the area where the two new water tanks would be constructed is also underlain by expansive soils. With implementation of Mitigation Measure Geology-11, impacts from expansive soils in this area would be less than significant.

**Mitigation Measure Geology-11:** Final foundation design recommendations for the water tank site shall be provided for County review and approval when details of the proposed water tank (e.g., size and type) are available. It is anticipated that the perimeter ring footing should be founded at least 3 feet below adjacent final grade because of the presence of highly expansive soils.

During its 2010 geotechnical investigation, BAGG did not investigate the potential water supply well locations. The well to be located on Lot 1, as well as proposed well locations ETS-5 and ETS-7, are located within the subdivision area that was evaluated by BAGG in 2010. As discussed above, the entire project area that was evaluated by BAGG was determined to be underlain by expansive soils. Proposed well locations ETS-11 and ETS-18 are located within the eastern portion of the project area and are outside the area that was evaluated by BAGG in 2010. Although this area was not specifically evaluated for the presence of expansive soils, NRCS soils data for the easternmost portion of the project area where these wells would be located, as well as its contiguous location, suggest that it likely also is underlain by expansive soils. All proposed water supply well locations would be susceptible to soil shrinking and swelling, which could result in damage to surface completions and associated aboveground features, including water conveyance piping. All new wells would be required to obtain permits from the Santa Clara County Waster Department and undergo review by the Santa Clara County Department of Environmental Health. The County’s review and permitting process for wells would ensure that wells located on areas of expansive soils would be properly engineered to address shrink-swell concerns, and would ensure that impacts of expansive soil hazards on wells would be less than significant.

Residential development construction may also be affected by expansive soils. Soils have the potential to swell when saturated, which could damage structures such as concrete. House foundations would be built in the beginning stages of construction, and could be affected by expansive soils while house construction is occurring if these activities take place in the rainy season. Recommendations from the BAGG geotechnical report have been included as Mitigation Measures Geology-12 and Geology-13, and would address residential and garage foundations on expansive soils. Implementation of Mitigation Measures Geology-3, Geology-4, Geology-12, and Geology-13 would reduce impacts of residential construction to a less-than-significant level.
Mitigation Measure Geology-12: Due to the presence of sloping site conditions and the presence of highly expansive soils at shallow depths, the proposed residential structures shall be founded on drilled, cast-in-place, reinforced concrete pier-and-grade-beam-type foundation systems. Sites with highly expansive soils require piers at least 15 feet in depth to obtain skin friction support from soils below the seasonal moisture variations, expected to be on the order of 4 to 6 feet. Skin friction would be on the order of 400 pounds per square foot, and grade beams should be underlain by a void or compressible materials.

Mitigation Measure Geology-13: Garage slabs-on-grade generally shall be structurally independent and supported on 12 inches of non-expansive soils.

The proposed project would have a less than significant potential to have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. (Less than significant impact)

Construction
No septic tanks or alternative waste disposal systems would be constructed as part of the proposed roadway, utility, private recreation, and infrastructure improvements, and no impacts to septic systems or alternative wastewater disposal systems would occur.

Each residence would be constructed with its own septic system and associated leach field. The leach fields would be restricted to areas within mapped septic zones for each residential lot. An On-site Sewage Feasibility Report was prepared for the proposed project. The On-site Sewage Feasibility Report and results of percolation tests (Brooks 2010) indicate that there are suitable soils for septic leach fields associated with each lot. Through implementation of the recommendations in the On-site Sewage Feasibility Report, impacts from construction of the future residential development on wastewater disposal would be less than significant.

Subdivision Improvements
No septic tanks or alternative waste disposal systems would be constructed for the proposed roadway, utility, private recreation, and drainage aspects of the project. Therefore, no impacts to septic systems or alternative wastewater disposal systems would occur once this infrastructure has been installed.

Future Residences
The presence, use, and maintenance of the 25 residences could require construction of new or expanded septic leach fields in the future. Future septic leach fields could potentially be constructed in an area with inadequate soil conditions for the septic system. Future septic leach fields would have to comply with County requirements for septic systems. Due to the presence of suitable conditions on site for septic leach fields, suitable soils would be available for a replacement septic system.
With the incorporation of identified mitigation measures, the project would not cause substantial compaction or over-covering of soil either on site or off site. *(Less than significant impact with incorporation of mitigation measures)*
All grading, filling, compaction, and associated activities would be conducted consistent with construction BMPs for such work. Implementation of Mitigation Measure Geology-7 would further ensure that any potential impacts from soil compaction or over-covering are reduced to a less-than-significant level.

With the incorporation of identified mitigation measures, the project would not cause substantial change in topography or unstable soil conditions from excavation, grading, or filling. *(Less than significant impact with incorporation of mitigation measures)*
All excavation, grading, filling, and associated earth-moving activities would be conducted consistent with construction BMPs for such work. Minor slope failures within the project area would be repaired with remedial grading, and retaining walls up to 7.8 feet high would be constructed to contain areas of slope failure. Implementation of Mitigation Measure Geology-6, which requires review of final grading plans for the access road, and Mitigation Measure Geology-7, which includes specifications for soil placement, would reduce impacts on topography and soil instability from earth-moving activities to a less-than-significant level.
3.7 GREENHOUSE GAS EMISSIONS

3.7.1 Environmental Setting
Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of greenhouse gases (GHGs) that contribute to global warming or global climate change have a broader, global impact. Global warming is a process whereby GHGs accumulating in the atmosphere contribute to an increase in the temperature of the earth’s atmosphere. The principal GHGs contributing to global warming are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated compounds. These gases allow visible and ultraviolet light from the sun to pass through the atmosphere, but they prevent heat from escaping back out into space. Among the potential implications of global warming are rising sea levels and adverse impacts to water supply, water quality, agriculture, forestry, and habitats. In addition, global warming may increase electricity demand for cooling, decrease the availability of hydroelectric power, and affect regional air quality and public health. Energy conservation measures also can contribute to reductions in GHG emissions.

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Emissions of CO₂ are byproducts of fossil fuel combustion. CH₄, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) is largely associated with agricultural practices and landfills. N₂O is also largely attributable to agricultural practices and soil management. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution, respectively, two of the most common processes of CO₂ sequestration.

Combustion of fossil fuels in the transportation sector was the single largest source of California’s GHG emissions in 2002-2004, accounting for 38 percent of total GHG emissions in the state. The electric power sector (including both in-state and out-of-state sources) accounted for 18 percent of emissions and the industrial sector accounted for 21 percent (BAAQMD 2011).

3.7.2 Regulatory Setting

Federal

Supreme Court Ruling
The EPA is the federal agency responsible for implementing the Clean Air Act (CAA). The U.S. Supreme Court ruled in its decision in Massachusetts et al. v. Environmental Protection Agency et al. ([2007] 549 U.S. 05-1120), issued on April 2, 2007, that CO₂ is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs.
**Mandatory Greenhouse Gas Reporting Rule**

On September 22, 2009, the EPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the United States. In general, this national reporting requirement will provide EPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO\(_2\) per year. These publically available data will allow reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost-effective opportunities to reduce emissions in the future. Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial GHGs, along with vehicle and engine manufacturers, will report at the corporate level. An estimated 85 percent of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule. This reporting rule does not apply to residential developments.

**State**

**Executive Order S-3-05**

Signed by the California Governor in 2005, Executive Order S-3-05 asserts that California is vulnerable to the impacts of climate change. The Executive Order states that increased temperatures could reduce the Sierra snowpack, further exacerbate California’s air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total GHG emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050. The Executive Order directed the Secretary of the California Environmental Protection Agency (CalEPA) to initiate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary is responsible for submitting biannual reports to the Governor and state legislature that outline: (1) progress made toward reaching the emission targets, (2) impacts of global warming on California's resources, and (3) measures and adaptation plans to mitigate these impacts. To comply with the Executive Order, the Secretary of Cal-EPA created a Climate Act Team (CAT) composed of members from various state agencies and commissions. CAT released its first report in March 2006. The report contained a proposal to achieve the targets by building on voluntary actions of California businesses, local governments, and community actions, in addition to adopting state incentive and regulatory programs.

**Global Warming Solutions Act of 2006**

In September 2006, the Governor of California signed Assembly Bill (AB) 32 (Chapter 488, Statutes of 2006), the California Global Warming Solutions Act of 2006, which enacted Sections 38500–38599 of the California Health and Safety Code. AB 32 requires the reduction of statewide GHG emissions to 1990 levels by 2020. This requirement equates to an approximately 15 percent reduction compared to existing statewide GHG emission levels, or a 30 percent reduction from projected 2020 emissions (i.e., “business-as-usual” emission levels). The required reduction will be accomplished through an enforceable statewide cap on GHG emissions beginning in 2012.
To effectively implement the statewide cap on GHG emissions, AB 32 directs CARB to develop and implement regulations that reduce statewide GHG emissions generated by stationary sources. Specific actions required of CARB under AB 32 include adoption of a quantified cap on GHG emissions that represent 1990 emissions levels along with disclosing how the cap was quantified, instituting a schedule to meet the emissions cap, and developing tracking, reporting, and enforcement mechanisms to ensure that the state achieves the reductions in GHG emissions needed to meet the cap.

In addition, AB 32 states that if any regulations established under AB 1493 (2002) cannot be implemented, then CARB is required to develop new, additional regulations to control GHG emissions from vehicles as part of AB 32.

**AB 32 Climate Change Scoping Plan**

In December 2008, CARB adopted its Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 169 million metric tons (MMT) of CO₂ equivalent (CO₂e), or approximately 30 percent, from the state’s projected 2020 emissions level of 596 MMT of CO₂e under a business-as-usual scenario (a reduction of 42 MMT CO₂e, or almost 10 percent, from 2002-2004 average emissions). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of the state’s GHG inventory. The Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document was approved by CARB on August 24, 2011.

CARB has not yet determined what amount of GHG reductions it will recommend from local government operations. The Scoping Plan does, however, state that land use planning and urban growth decisions will play an important role in the state’s GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. CARB is also developing an additional protocol for community emissions. CARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors.

Energy efficiency is a significant strategy for reducing greenhouse gas emissions in the electricity and natural gas sectors. The Scoping Plan includes energy efficiency provisions (Measure GB-1). This measure would be voluntary/incentive-based, but the implementation date has yet to be determined. The California Building Standards Commission adopted the first state mandatory green building standards in January 2011. The Scoping Plan considered the energy and water conservation components of these standards to be a building block for implementation of Measure GB-1.

**Regional and Local**

**BAAQMD Climate Protection Program**

BAAQMD established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the SFBAAB. The climate protection program includes measures that promote energy efficiency, reduce vehicle miles traveled, and develop
alternative sources of energy, all of which assist in reducing emissions of GHGs and in reducing air pollutants that affect the health of residents. BAAQMD also seeks to support current climate protection programs in the region and to stimulate additional efforts through public education and outreach, technical assistance to local governments and other interested parties, and promotion of collaborative efforts among stakeholders.

**BAAQMD Bay Area Clean Air Plan 2010**
Bay Area plans are prepared with the cooperation of the Metropolitan Transportation Commission (MTC), and the Association of Bay Area Governments (ABAG). On September 15, 2010, the BAAQMD adopted the most recent revision to the Clean Air Plan - the Bay Area 2010 Clean Air Plan (BAAQMD, 2010). The Bay Area 2010 Clean Air Plan serves to:

- Update the Bay Area 2005 Ozone Strategy in accordance with the requirements of the California Clean Air Act to implement “all feasible measures” to reduce ozone;
- Consider the impacts of ozone control measures on particulate matter, air toxics, and greenhouse gases in a single, integrated plan;
- Review progress in improving air quality in recent years; and
- Establish emission control measures to be adopted or implemented in the 2010 – 2012 timeframe.

**BAAQMD CEQA Guidelines**
BAAQMD’s has developed their own approach and criteria for CEQA analysis of GHG emissions (BAAQMD 2011). BAAQMD’s approach includes identifying the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move us towards climate stabilization. If a project would generate GHG emissions above the threshold level, it would be considered to contribute substantially to a cumulative impact, and would be considered significant. There are no thresholds for construction related activities. The thresholds of significance for operational-related GHG emissions are:

- For land use development projects, the threshold is compliance with a qualified GHG Reduction Strategy; or annual emissions less than 1,100 metric tons per year (MT/yr) of CO₂e, or 4.6 MT CO₂e/SP/yr (residents + employees). Land use development projects include residential, commercial, industrial, and public land uses and facilities.
- For stationary-source projects, the threshold is 10,000 metric tons per year (MT/yr) of CO₂e. Stationary-source projects include land uses that would accommodate processes and equipment that emit GHG emissions and would require an Air District permit to operate. BAAQMD’s GHG threshold is defined in terms of carbon dioxide equivalent (CO₂e), a metric that accounts for the emissions from various greenhouse gases based on their global warming potential.
3.7 GREENHOUSE GAS EMISSIONS

Santa Clara County Climate Action Plan (CAP) for County Operations
In 2007, the Santa Clara County Board of Supervisors signed the Cool Counties Climate Stabilization Declaration and established a set of aggressive goals for GHG emission reductions for the County:

- Stop increasing the amount of emissions by 2010
- Decrease emissions by 10% every 5 years from 2010 – 2050
- Reach an 80% reduction by 2050

The Climate Action Plan was prepared in order to develop the guidelines and measures necessary for meeting these goals. The Santa Clara County Board of Supervisors adopted the CAP on September 29, 2009. The CAP predominantly applies to County operations, facilities, and employee actions; however, it is issued in the context of legislative and regulatory action at the federal and state level and California’s climate change goals set forth in AB 32. The plan includes a County GHG emissions inventory. The plan provides good data on GHG emissions in the County. The requirements of the plan, however, would not be applicable to the proposed project because it is a private development.

3.7.3 Thresholds of Significance
The proposed project would result in a significant impact if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment
- Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs

3.7.4 Impacts and Mitigation
The project would not have the potential to generate significant GHG emissions, either directly or indirectly, that may have a significant impact on the environment. (Less than significant impact)

Construction
BAAQMD does not have an adopted Threshold of Significance for construction-related GHG emissions. BAAQMD encourages the lead agency to quantify and disclose GHG emissions that would occur during construction, and make a determination on the significance of these construction generated GHG emission impacts in relation to meeting AB 32 GHG reduction goals, as required by the Public Resources Code, Section 21082.2. The lead agency is encouraged to incorporate best management practices to reduce GHG emissions during construction, as feasible and applicable. BMPs could include but are not limited to:

- Using alternative-fueled (e.g., biodiesel or electric) construction vehicles/equipment for at least 15 percent of the fleet;
- Using at least 10 percent of building materials from local sources; and
- Recycling or reusing at least 50 percent of construction waste or demolition materials.
3.7 GREENHOUSE GAS EMISSIONS

Emissions estimates were generated for the project using Urbemis 2007 Version 9.2.4. Model assumptions and results are shown in Appendix F. Total construction emissions by year are shown in Table 3.7-1. Emissions per year would range from an estimated 400 metric tons per year to 600 metric tons per year. Due to the relatively small amount of GHG emissions from project construction per year, construction would not have a significant impact in relation to meeting AB 32 reduction goals.

Table 3.7-1: Greenhouse Gas Emissions Estimates from Construction of the Coyote Highlands Project

<table>
<thead>
<tr>
<th>Year</th>
<th>Short tons(^1)/year</th>
<th>Metric tons/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>488.93</td>
<td>443.55</td>
</tr>
<tr>
<td>2014</td>
<td>443.54</td>
<td>402.37</td>
</tr>
<tr>
<td>2015</td>
<td>661.54</td>
<td>600.14</td>
</tr>
<tr>
<td>2016</td>
<td>552.56</td>
<td>501.27</td>
</tr>
<tr>
<td>Total</td>
<td>2,146.57</td>
<td>1,947.34</td>
</tr>
</tbody>
</table>

NOTE:
\(^1\) Short ton = 0.907 metric tons

Subdivision Improvements and Future Residences
The project would be considered a residential land use development project and therefore is subject to BAAQMD’s annual emissions criteria of 1,100 metric tons of CO\(_2\)e after the subdivision is built. The results of the Urbemis model (Appendix F) showed that the residential development would have GHG emissions of 343 metric tons (378 short tons) per year. This amount would be considerably less than the threshold of significance of 1,100 metric tons per year and the project would have a less than significant impact on global climate change. Therefore, the proposed project, a subdivision that would be developed with 25 new residences, also falls below BAAQMD’s screening size for operational GHG emissions for single-family residential land uses, which is 56 dwelling units.

The project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. (Less than significant impact)

Consistency with Local Plans, Policies, or Regulations
The County released its County of Santa Clara CAP for Operations and Facilities, which presents a number of solutions and policies that focus on County operations, facilities and employee actions that will reduce GHG emissions associated with energy and water consumption, solid waste and fuel consumption (Santa Clara County 2009). Since this plan applies to County operations and facilities only, it does not pertain to the project. Therefore, the project would not conflict with any local plans, policies, or regulations pertaining to GHGs.


**3.7 GREENHOUSE GAS EMISSIONS**

*Consistency with the AB 32 Climate Change Scoping Plan*
CARB has not yet determined what amount of GHG reductions it will recommend from local government operations. The *Scoping Plan* does, however, state that land use planning and urban growth decisions will play an important role in the state’s GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. Since the project will have GHG emissions less than the CEQA thresholds established by BAAQMD, which were in part established to meet the goals of AB 32, the project would be consistent with the *Scoping Plan*.

*Consistency with the Bay Area 2010 Clean Air Plan*
The 2010 Clean Air Plan performance objectives, consistent with the state’s climate protection goals, are to reduce emissions of GHGs to 1990 levels by 2020 and 40 percent below 1990 levels by 2035 (BAAQMD, 2010). Because, as discussed above, the project’s GHG emissions would be well below the BAAQMD’s criteria for land use developments, the project is also consistent with the 2010 Clean Air Plan performance objectives.
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3.8 HAZARDS AND HAZARDOUS MATERIALS

3.8.1 Environmental Setting

Fire Hazards
Wildfires are a public safety concern within Santa Clara County. The proposed project area is located within the urban-wildland interface fire area, the area where houses intermingle with undeveloped wildland vegetation (Santa Clara County Planning Department 2008).

The California Department of Forestry and Fire Protection (CAL FIRE) has identified moderate, high, and very high fire hazard areas and fire threatened communities at the wildland-urban interface (Santa Clara County 2012). The project area is located in a CAL FIRE State Responsibility Area (SRA). CAL FIRE rates the project area as “High” for fire hazard severity (CAL FIRE 2011). The parcels adjacent to the west of the project area are located in a Local Responsibility Area (LRA).

Hazardous Materials
Hazardous materials are chemical and non-chemical substances and hazardous wastes that can pose a threat to the environment or human health if released or misused. Hazardous materials occur in various forms and can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Hazardous materials are used in industry, agriculture, medicine, research, and consumer goods. Many products containing hazardous chemicals are routinely used and stored in homes. Hazardous materials come in the form of explosives, flammable and combustible substances, poisons, radioactive materials, pesticides, and petroleum products. These substances are most often released as a result of motor vehicle or equipment accidents or because of chemical accidents during industrial use. These substances have the potential to leach into soils, surface water, and groundwater during spills if not properly contained.

National Priority List
The National Priority List (NPL) is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. There are no NPL listings in the nearby cities of Morgan Hill or Gilroy and no NPL listings in the rural, incorporated areas within at least 2 miles of the proposed project area (USEPA 2012).

EnviroStor Database
The California EPA (Cal-EPA) maintains an online geographical information systems (GIS) service, called EnviroStor, that provides online access to environmental data for sites overseen by Cal-EPA (Department of Toxic Substances Control [DTSC]). There are no open DTSC cases within 1 mile of the proposed project area (Cal-EPA 2012).
GeoTracker Database
California’s State Water Resources Control Board (SWRCB) offers an online GIS service, called GeoTracker, that provides online access to environmental data for sites overseen by RWQCBs. GeoTracker is the interface for the Geographic Environmental Information Management System (GEIMS), which is a data warehouse that tracks regulatory data about underground storage tanks, fuel pipelines, and public drinking water supplies. There are no open RWQCB cases within 1 mile of the proposed project site (SWRCB 2012).

Herbicide Use
The property owner conducted an assessment of the presence of noxious plants in the project area in 2008. As a result of the assessment, mature noxious plants were mechanically removed and burned to limit further infestation. The property owner has periodically applied a herbicide to the grazing lands in the project area since 2009 to combat the further growth of invasive and noxious weeds. The herbicide is considered to be non-toxic to humans and wildlife and is safe for grazing livestock (DB Morgan Hill LLC 2012).

Geologic and Natural Hazards
A complete discussion of geologic and natural hazards is included in Section 3.6: Geology and Soils. The section contains discussions on seismic, soil, subsidence, and landslide hazards.

3.8.2 Regulatory Setting
Federal
Occupational Safety and Health Administration (OSHA)
OSHA regulations contained in Title 29 CFR and Cal/OSHA regulations codified in Title 8 contain employee safety provisions that are designed to minimize the hazards for employees in the workplace.

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)
The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), amended in 1996, authorizes the USEPA to register or license pesticides (including herbicides) for use in the United States. Pesticides must be registered both with the USEPA and the state before distribution. Pesticides used in the project area must comply with applicable federal requirements.

Under the FIFRA, the California Department of Pesticide Regulation (CDPR) is vested with primary responsibility to enforce pesticide laws and regulations in California. Pesticide rules are found in different sections of California codes and regulations, including: the Food and Agriculture Code, Business and Professions Code, Health and Safety Code, and the Labor Code.

In general, the CDPR regulates pesticide sales and use statewide, while local use is enforced through the County Agricultural Commissioners. Many agricultural pesticides require a permit from the County Agricultural Commissioner before they may be purchased or used. The Agricultural Commissioner also enforces regulations to protect both ground and surface water from pesticide contamination. In the County, the Integrated Pest Management Division monitors pesticide applications to ensure they are performed in a safe and effective manner and
that worker safety requirements are followed; inspects application equipment, pesticide storage sites, employee training documents, and business pesticide use records; and investigates complaints and pesticide-related illnesses.

State

**California Water Code (CWC)**
The CWC includes provisions of the federal CWA and water quality programs specific to California. The CWC requires reporting, investigation, and cleanup of hazardous materials releases that could affect waters of the State, including stormwater.

**California Air Resources Board**
The California Air Resources Board maintains regulations regarding the release of airborne asbestos. These regulations are designed to control and minimize exposure to airborne asbestos. Section 93105 of the CARB regulations specifically addresses airborne asbestos produced through grading and construction activities, and requires that the applicant prepare and submit an Asbestos Dust Mitigation Plan to the BAAQMD prior to initiating construction of infrastructure and residences.

**California Public Resources Code**
The California Public Resources Code includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors\(^1\) on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas. These regulations include the following:

- Earthmoving and portable equipment with internal combustion engines would be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (Public Resources Code § 4442);
- Appropriate fire suppression equipment would be maintained during the highest fire danger period – from April 1 to December 1 (Public Resources Code §4428);
- On days when a burning permit is required, flammable materials would be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor would maintain the appropriate fire suppression equipment (Public Resources Code §4427); and
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines would not be used within 25 feet of any flammable materials (Public Resources Code §4431).

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\(^1\) A spark arrestor is a device that prohibits exhaust gases from an internal combustion engine from passing through the impeller blades where they could cause a spark. A carbon trap is commonly used to retain carbon particles from the exhaust.
3.8 HAZARDS AND HAZARDOUS MATERIALS

Local
The County of Santa Clara maintains a Weed Abatement Program that is intended to protect lives, property, and the environment by providing hazard abatement and minimum fire safety standards. These standards include maintaining vegetation in the vicinity of roads, structures, and property lines to reduce the risk of wildfire hazards.

The Santa Clara County Vector Control District is a County public health program that controls and monitors disease carrying insects such as mosquito and ticks, and other harmful pests such as rats and yellow jackets.

The Santa Clara County General Plan (Santa Clara County 1994) Resource Conservation and Health and Safety policies relevant to hazards and hazardous materials analysis for the proposed project are listed below.

Resource Conservation
R-RC 103 Development in rural areas should be landscaped with fire resistant and/or native plants which are ecologically compatible with the area.

Health and Safety
R-HS 7 Areas of significant natural hazards, especially high or extreme fire hazard, shall be designated in the County’s General Plan as Resource Conservation Areas, with generally low development densities in order to minimize public exposure to risks associated with natural hazards and limit unplanned public costs to maintain and repair public infrastructure.

R-HS 10 In all hazard areas, projects shall be designed and conditioned to avoid placement of structures and improvements where they would:

(a) be directly jeopardized by hazards;
(b) increase the hazard potential; and/or
(c) increase risks to neighboring properties.

R-HS 22 Adequate access and water supplies for fire safety shall be required for all new development, including building sites, subdivisions, and clustered development.

R-HS 23 Areas for which inadequate access is a general concern, either due to lack of secondary access, dead-end roads of excessive length, and substandard road design or conditions, should be examined to determine if there are means by which to remedy the inadequacies. Such means may include:

(a) specific local area circulation plans to establish alternative access;
(b) specific roadway improvements to remedy hazardous situations, financed by those most benefited by the improvements; and
(c) traffic routing and controls to discourage the use of such roads by non-residents.
### 3.8 Hazards and Hazardous Materials

**R-HS 24** Dead-end roads shall not be extended unless in the judgment of the Fire Authority, such extensions will serve to reduce the risks from fire hazards in the affected area.

**R-HS 26** For communities in areas of high or extreme fire hazard that have developed under development densities greater than generally allowed under current General Plan policies, water systems with hydrants should be provided wherever feasible.

**R-HS 27** The County should encourage the use of fire retardant building materials and landscaping not already required by County development and building codes when new development and rebuilding are proposed in areas of high or extreme fire hazard.

**R-HS 28** Development projects shall be reviewed by the County Fire Marshall’s Office for safety code compliance and should also be referred if necessary to the appropriate fire protection authority or district for further review and recommendations.

**R-HS 33** For areas where it may be appropriate, fire protection agencies and districts should utilize controlled burns and other forms of vegetation management to reduce the build up of vegetative matter and the potential fire hazard within an area.

Some impacts related to hazards and health and safety are addressed in other sections of this EIR, including geological and seismic hazards in Section 3.6: Geology and Soils, and flood hazards in Section 3.10: Hydrology and Water Quality.

#### 3.8.3 Thresholds of Significance

The proposed project would result in a significant impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area
• Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
• Expose individuals or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas and where residences are intermixed with wildlands
• Provide breeding grounds for vectors
• Result in a safety hazard (e.g., parking layout, access, or closed community) due to the proposed site plan
• Involve construction of a building, road, or septic system on a slope of 30 percent or greater
• Involve construction of a roadway greater than 20 percent slope for a distance of 300 feet or more

3.8.4 Impacts and Mitigation
With the implementation of identified mitigation measures, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Less than significant with incorporation of mitigation measures)

Construction
Construction of the proposed project would involve the routine use, transport, storage, and disposal of hazardous materials such as small quantities of gasoline, diesel, oil, grease, and paint. These short-term activities would be subject to federal, state, and local health and safety requirements. All unused hazardous materials would be removed from the project site and disposed of pursuant to applicable federal, state, and local regulations. Health hazards from construction activities would be less than significant because the construction activities would be required to comply with the applicable regulations and laws pertaining to the transport, storage, use, and disposal of potentially hazardous materials associated with the project. A Spill Prevention Control and Countermeasure (SPCC) plan would be prepared to minimize the risks associated with spill of fuels or other hazardous materials to less than significant levels. The proposed project and area of construction is located within an ultramafic rock unit as described in Section 3.6: Geology and Soils. The release of airborne asbestos from construction operations would be a significant exposure hazard to the public. This impact would be less than significant with implementation of Mitigation Measure Air Quality-1.

Subdivision Improvements and Future Residences
The post-construction phase of the proposed project would not result in the routine transport, use, storage, or disposal of hazardous materials except those involved in normal household activities. Impacts associated with hazardous materials would not occur.
The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. (No impact)

There are no existing or proposed schools within 0.25 mile of the proposed project. The nearest school to the project area is Jackson Elementary School located approximately 0.65 mile northwest of the project area. Project construction would not have the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school and, as a result, no impact would occur.

The project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment. (No impact)

The proposed project area is not located on a hazardous materials site list compiled pursuant to Government Code Section 65962.5. No impact would occur.

The project would not be located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, and would therefore not have the potential to result in a safety hazard for people residing or working in the project area. (No impact)

There are no public or public use airports or airstrips within a 2-mile radius of the proposed project. The nearest airport to the project area is the South County Airport located approximately 2.5 miles south-southwest of the project area. The project area would also not be located within any airport land use plan area. The project would have no impact on safety hazards in relation to public airports or airport land use plans.

The project would not be located within the vicinity of a private airstrip, and therefore the project would not have the potential to result in a safety hazard for people residing or working in the project area. (No impact)

There are no private airstrips within a 2-mile radius of the proposed project. The project would have no impact on safety hazards in relation to private airstrips.

The project would not significantly impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Less than significant impact)

The project would include the construction of a primary roadway, several secondary roadways, and the extension of Carey Lane, a County-owned road, to provide access to the new subdivision. The entry to the project site would include an electronic gate for access to 24 of the 25 proposed residential lots, and multiple lanes for the staging of inbound traffic to minimize congestion and traffic hazards. The entry at the intersection of Maple Avenue and Paseo Robles Avenue would have a turnaround of sufficient radius to accommodate large emergency vehicles.
The terminus of the new primary roadway at Oak Canyon Drive would not allow for regular through traffic, but would provide emergency vehicle access and emergency ingress and egress for residents of both the proposed Coyote Highlands subdivision and the existing residences on the East Dunne Avenue corridor north of the project area. The new roadway would allow an alternate route for emergency ingress and egress in the event that East Dunne Avenue is closed in a fire, earthquake, or other event. An emergency access breakaway gate would prevent regular traffic to pass between Oak Canyon Drive and the new primary roadway.

The proposed project would not impair or interfere with any adopted emergency response plan or emergency evacuation plan, and would result in a positive impact by providing additional emergency vehicle access and emergency ingress and egress where access is currently limited. No mitigation would be required.

With the incorporation of identified mitigation measures, the project would not have the potential to expose individuals or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas and where residences are intermixed with wildlands. (Less than significant with incorporation of mitigation measures)

Construction
Construction of the proposed project could require the use of tools or equipment, such as soldering equipment or blowtorches, that would present a fire threat if the work is performed near dry grass or other natural fuels. Construction workers could also cause wildfires by dropping cigarettes into dry vegetation or smoking near combustible materials. Impacts would be less than significant with the implementation of Mitigation Measures Hazards-1 through Hazards-3, and by following all applicable building codes and regulations, including preparation of a Fuel Management Plan.

Mitigation Measure Hazards-1: Smoking during project construction shall be prohibited except in designated areas, shall be at least 20 feet away from any combustible chemicals or materials, and shall not occur on dry vegetation.

Mitigation Measure Hazards-2: All heavy equipment and rubber-tired construction vehicles shall be equipped with fire extinguishers. All rubber-tired construction vehicles shall be equipped with appropriate firefighting equipment, such as shovels, axes, or pulaskis², to aid in the prevention or spread of fires. All construction equipment shall be equipped with the appropriate spark arrestors and functioning mufflers.

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² A pulaski is a hand tool used in wildland firefighting. The tool combines an axe and a mattock in one head, with a rigid handle of wood, plastic, or fiberglass. The pulaski is considered one of the most versatile tools for constructing firebreaks, as it can be used to both dig soil and chop wood.
Mitigation Measure Hazards-3: Soldering or welding shall not be performed within 15 feet of dry grass or other natural fuels. A fire extinguisher shall be available at the project site at all times when welding or performing other activities that can generate sparks.

Subdivision Improvements and Future Residences
The fire hydrants, water storage requirements, and compliance with the County Weed Abatement Program and all applicable building code and fire code regulations would ensure that wildfire impacts to the 25 proposed residences would remain at a less-than-significant level.

With the incorporation of identified mitigation measures, the project would not provide significant breeding grounds for vectors. (Less than significant impact with incorporation of mitigation measures)
Two of the proposed drainage improvements could provide a breeding ground for vectors. The proposed detention basin and bio-filter basin would temporarily contain water during and shortly after storm events, as these two basins are designed to collect stormwater, reduce erosion, and increase onsite percolation. Most storm events would take place in the winter and spring, while the mosquito breeding season is in the summer, so there would likely be limited times when there would be water in either basin during the mosquito breeding season. The water collected in these two basins could provide a temporary breeding ground for mosquitoes, which could result in a significant impact. Implementation of Mitigation Measure Hazards-4 would reduce this impact to a less than significant level by maintaining the outflow and percolation rates of these basins, and minimizing the time that standing water remains in either basin.

Mitigation Measure Hazards-4: The detention basin and bio-filter basin shall be inspected and maintained annually. Annual inspections shall include observance of sediment deposition and function of outflow pipes. Maintenance shall include removal of sediment deposition greater than 6 inches in depth and clearing of outflow pipes as necessary.

The project would not result in a significant safety hazard (i.e., parking layout, access, closed community, etc.) due to the proposed site plan. (Less than significant impact)
The project involves the construction of a private roadway and a gated residential community. The main entry to the development and the primary and secondary access roadways would all be constructed to meet County standards. The proposed extension of Maple Avenue would connect with the current terminus of Oak Canyon Drive, and would be separated by a breakaway gate that would allow a secondary means of access and egress for emergency vehicles and residents in both the Jackson Estates neighborhood and proposed residential development. The new primary access road would be equipped with fire hydrants, and the proposed residences would be equipped with fire sprinkler systems per all applicable County fire codes. The project would therefore have a less than significant safety hazard impact.
The project would not involve construction of a building, road, or septic system on a slope of 30 percent or greater. *(Less than significant impact)*

All homesite zones, septic zones, and primary and secondary access roadways would be located on areas with slopes of less than 30 percent, while the steeper portions of the property would be located within the dedicated open space lands, or within the natural lands and transition zones of the 25 proposed residential lots. The only uses that could be located on lands with slopes of greater than 30 percent would be passive recreational uses and livestock grazing, both of which would be compatible with steeper slopes. The project would therefore have a less than significant impact on areas with slopes of greater than 30 percent.

The project would not involve construction of a roadway greater than 20 percent slope for a distance of 300 feet or more. *(No impact)*

The majority of the primary and secondary access roadways would be on slopes of less than 15 percent. Two approximately 300-foot-long portions of the primary roadway would be on slopes of greater than 15 percent, but the slopes of both of these roadway segments would be under 20 percent. The project would therefore have no impact on roadway slopes of greater than 20 percent.
3.9 HYDROLOGY AND WATER QUALITY

3.9.1 Environmental Setting

Climate
The meteorological station nearest to the project area is in Morgan Hill (WRCC 2012). Average annual rainfall for the area is 21.68 inches. The majority of the annual precipitation falls between November and March. Average maximum daily temperatures range from a high of 87°F in September to a low of 60°F in February (WRCC 2012). The area experiences a year-round growing season.

Surface Water
A wetland delineation was conducted by Olberding Environmental (Olberding) on April 9, May 5, and June 23, 2010 (Olberding 2010). The surface water features identified in that report (creeks, ponds, wetlands and other waters) are depicted on Figure 3.4-1. These wetlands and water resources are described below.

Creeks
Fischer Creek occurs along the northern boundary of the project area, Foothill Creek occurs near the center of the project area, and Corralitos Creek occurs along the southern boundary, at Maple Avenue. All three of these creeks are in the upper reaches of the Pajaro and Llagas watershed and drain into Llagas Creek, less than 1 mile southwest of the project area. The creeks range from 4 to 12 feet in width and are characterized by rocky, muddy substrates. Several secondary drainage channels convey water to the main channel along each of these creeks.

Ponds
Two ponds occur within the project area. Pond 1 is an unvegetated stock pond located near the northeastern portion of the project area along Foothill Creek. Pond 2 is a stock pond located along a tributary to Fischer Creek. This pond has hydrophytic vegetation along its fringe.

Wetlands
Wetland 1
Wetland 1 is located near the southern project area boundary along Maple Avenue. This wetland has formed along Corralitos Creek where it flows into a culvert underneath Maple Avenue. The hydrologic source for this approximately 0.06-acre wetland is water from Corralitos Creek that pools prior to entering the concrete roadway culvert.

Wetland 2
Wetland 2 is located in the southeast portion of the project area along a hill slope. This approximately 0.17-acre wetland is a natural seep that also collects runoff from a vineyard located southeast of the project area and conveys water to Corralitos Creek.
Wetland 3
Wetland 3 is located adjacent to Pond 2 and consists of a wetland seep that periodically has flowing water. This approximately 0.09-acre wetland conveys water to Pond 2, located along a tributary to Fischer Creek.

Wetland 4
Wetland 4 is a wetland seep that occurs in the northern portion of the project area. This approximately 0.33-acre wetland drains down the hill slope and conveys water to a drainage channel that is a tributary of Fischer Creek.

Wetlands 5 and 6
Wetlands 5 and 6 are located on the east side of the project area. Wetlands 5 and 6 are swales that have formed as a result of scouring from surface water runoff from nearby water tanks. These features occur in areas that would otherwise be uplands in the absence of runoff. Wetlands 5 and 6 are approximately 0.28 acres and 0.01 acres, respectively.

Wetland 7
Wetland 7 is located in the northern portion of the project area and is adjacent to a tributary of Fischer Creek. This approximately 0.02-acre wetland is fed by an underground spring and is used for stock watering.

Site Soils
Soils within the project area have been mapped by NRCS, and are classified as NRCS Hydrologic Soil Groups C and D (NRCS 2012) (Figure 3.9-1). Within the project area, Hydrologic Soil Group C consists of clay loams with moderate to high runoff potential and slow infiltration rates. Hydrologic Soil Group D within the project area consists of clay and stone clay loams, and are characterized as having high runoff potential and very slow infiltration rates. The areas underlain by Group D soils experience greater peak runoff values and faster times of concentration (i.e., quicker peak runoff) than those areas underlain by Group C soils.

According to the Landslide Inventory Map (CDC 2006), the project area is located within the limits of existing or known landslides adjacent to Fischer Creek and Foothill Creek (Figure 3.6-2). Landslides have also been mapped around Anderson Lake and Coyote Creek to the northeast. Additional information regarding landslide deposits is presented in Section 3.6: Geology and Soils.

Site Drainage
The project area contains five separate localized drainage basins. Four of the drainage basins drain to Llagas Creek within the Pajaro River Watershed. One of the drainage basins drains to the Coyote Creek watershed. Lands in the northwest portion of the project area drain to Fischer Creek, the middle portion of the project area drains to Foothill Creek, and the southern portion of the project area drains to Corralitos or South Corralitos Creek, all tributaries to Llagas Creek. A small part of the
Figure 3.9-1: NRCS Soils

3.9 HYDROLOGY AND WATER QUALITY
northeast portion of the project area drains to an off-site tributary of Coyote Creek, which ultimately drains north into San Francisco Bay. These drainage basins are delineated on Figure 3.9-2. The upper boundary of each drainage basin lies approximately on the ridgeline (Schaaf & Wheeler 2012; Appendix F).

**Fischer Creek Drainage Basin**
The approximately 154-acre Fischer Creek drainage basin ranges in elevation from 1,220 feet AMSL in the east to 460 feet AMSL in the west where the creek exits the project area. This drainage basin drains through the project area and includes lands outside the project area. The Fischer Creek drainage basin slopes from the northeast to the southwest. Fischer Creek drains under Carey Avenue and Foothill Avenue into an engineered channel before converging with Tennant Creek near Hill Road.

**Foothill Creek Drainage Basin**
The central drainage basin within the project area includes Foothill Creek. The approximately 277-acre Foothill Creek drainage basin ranges in elevation from 1,230 feet AMSL on the off-site property to the northeast to 420 feet AMSL at Carey Lane. The basin includes only a small portion of off-site lands west of the project area. Near the top of the drainage basin, at elevation 1,054 feet AMSL, there is a small detention pond, capable of holding approximately 18,000 cubic feet of runoff. Foothill Creek flows from west to east beneath Ranch Road, Carey Lane, and Foothill Avenue before converging with Tennant Creek near the intersection of Hill Road and Maple Avenue. Existing drainage improvements constructed within the on-site reach of Foothill Creek are a 36-inch-diameter culvert beneath the existing Ranch Road and a 42-inch-diameter culvert beneath Carey Lane.

**Corralitos Creek Drainage Basin**
The approximately 194-acre Corralitos Creek drainage basin includes the southern portion of the project area and off-site lands to the south and east. The drainage basin ranges in elevation from 1,490 feet AMSL in the east to 410 feet AMSL in the west at Maple and Paseo Robles Avenues. Surface water runoff on this portion of the project area flows to the south and west, beneath Paseo Robles Avenue, before the confluence of Corralitos Creek with Tennant Avenue. The creek channel remains natural until just upstream of the East Little Llagas junction. The only known, existing, on-site drainage facilities are an 18-inch-diameter culvert beneath a dirt access path and a 42-inch-diameter culvert beneath Paseo Robles Avenue.

**South Corralitos Creek Drainage Basin**
The South Corralitos Creek drainage basin accepts runoff from the southwest corner of the project area, as well as off-site areas. South Corralitos Creek is not located within the project area (Figure 3.9-3). Runoff from this drainage basin flows south to South Corralitos Creek and beneath Paseo Robles Avenue before merging with Corralitos Creek.

**Coyote Creek Basin**
Approximately 4.6 acres of the northwest portion of the project area sheet-flows east to a tributary of Coyote Creek. Coyote Creek then flows north and west, eventually discharging to San Francisco Bay. This drainage basin begins at an elevation of 1,240 feet AMSL.
Figure 3.9-3: FEMA Flood Zone Designations

Source: Schaaf & Wheeler 2012 and Panorama Environmental, Inc. 2012
Peak Flow Rates
The Hydrograph Method was used to estimate peak flow rates for the 2-year, 10-year, and 100-year storm events under existing conditions. Existing peak flow rates are presented in Table 3.9-1.

Flooding
A Special Flood Hazard Area (SFHA), as defined by the Federal Emergency Management Agency (FEMA), is an area of land that has a 1 percent or greater probability of being inundated by a flood during any year. The SFHA is also referred to as a 100-year flood zone. Federal Insurance Rate Maps (FIRM) are developed by FEMA to identify flooding hazard zones. FIRM identify the project area within Zone D, designating an area in which flood hazards are undetermined, but possible (Schaaf & Wheeler 2012). The FEMA FIRM designations for the project area and vicinity are shown on Figure 3.9-3. Zone D is outside of the designated 100-year SFHA.

The dam failure inundation hazard map for Morgan Hill identifies areas that could be inundated or flooded as a result of failure of a dam. The project area does not occur within the inundation area for any dams. Downgradient areas from the project area would be subject to inundation by up to 13.5 feet of water in the event of failure of Anderson Dam (SCVWD 2003).

<table>
<thead>
<tr>
<th>Drainage Basin</th>
<th>2-Year Storm</th>
<th>10-Year Storm</th>
<th>100-Year Storm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fischer Creek</td>
<td>26.7</td>
<td>75.6</td>
<td>170.0</td>
</tr>
<tr>
<td>Foothill Creek</td>
<td>32.1</td>
<td>106.4</td>
<td>259.8</td>
</tr>
<tr>
<td>Coyote Creek</td>
<td>0.6</td>
<td>2.5</td>
<td>6.8</td>
</tr>
<tr>
<td>Corralitos Creek</td>
<td>28.4</td>
<td>79.3</td>
<td>176.9</td>
</tr>
<tr>
<td>South Corralitos Creek</td>
<td>5.2</td>
<td>14.9</td>
<td>33.6</td>
</tr>
</tbody>
</table>

Source: Schaaf & Wheeler 2012

Groundwater Supply
The Coyote Highlands subdivision area is located within the approximately 56,000-acre Llagas groundwater basin (Figure 3.9-4). A majority of the subdivision area is located within hillsides above the alluvium of the Santa Clara valley floor and is underlain with semi-consolidated to consolidated materials assigned to the Santa Clara foundation. Groundwater within the site occurs within fissures and cracks within the underlying basaltic rock and also within onsite deposits of clay, sand, and gravel. The water supply wells are proposed to be located within both the valley or bedrock portion of the groundwater basin.
Figure 3.9-4: Groundwater Basins
3.9 HYDROLOGY AND WATER QUALITY

Recharge of the Llagas groundwater basin is achieved through an equal combination of natural recharge and recharge activities of SCVWD (23,000 acre-feet/year [AFY] each). The estimated infiltration rate for the overall basin is 0.4 acre-feet. The Llagas basin is estimated to have storage capacity between 150,000 and 165,000 acre-feet. Groundwater pumping within the basin between 2001 and 2009 ranged from 44,000 AFY to 50,000 AFY (Schaaf & Wheeler 2012).

The availability of groundwater within the project area was evaluated by Geoconsultants (May 21, 2012), which included an analysis of onsite rainfall and runoff. The project area receives approximately 20 inches of rainfall per year and approximately 5.5 inches of rainfall percolates into onsite soils, with the remaining rainfall becoming surface water runoff (3.5 inches) or lost to evapotranspiration (11 inches) (Geoconsultants 2012). It is therefore estimated that approximately 261 acre-feet of water per year recharges the groundwater underlying the site. The safe yield to avoid overdraft of existing groundwater resources is estimated as two-thirds of the recharge or 174 AFY (Geoconsultants 2012).

Water Quality

Surface Water

Llagas Creek below Chesbro Reservoir is designated by Central Coast Regional Water Quality Control Board (CCRWQCB) as an impaired water body pursuant to Section 303(d) of the Clean Water Act for the following pollutants:

- Chloride
- Chlorpyrifos
- Electrical conductivity
- *E. coli*
- Fecal coliform
- Low dissolved oxygen
- Nutrients
- Sediment
- Sodium
- Total dissolved solids (TDS)
- Turbidity

Sources of impairment in this segment of Llagas Creek include the following (CCRWQCB 2010):

- Agriculture
- Pasture grazing
- Irrigated crop production
- Municipal wastewater
- Habitat modification
- Agricultural tailwater
- Agricultural return flows
- Hydromodification
- Unspecified point and non-point sources
The State Water Quality Control Board (SWRCB) has established a total maximum daily load (TMDL) for sediment, fecal coliform, and nitrate within Llagas Creek.

Numeric water quality objectives for surface water and groundwater within the Llagas Creek drainage basin are established in the Water Quality Control Plan (Basin Plan) and are identified in Table 3.9-2.

<table>
<thead>
<tr>
<th>Water Source</th>
<th>TDS</th>
<th>Cl</th>
<th>SO₄</th>
<th>B</th>
<th>Na</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water</td>
<td>200</td>
<td>10</td>
<td>20</td>
<td>0.2</td>
<td>20</td>
<td>-</td>
</tr>
<tr>
<td>Groundwater</td>
<td>300</td>
<td>20</td>
<td>50</td>
<td>0.2</td>
<td>20</td>
<td>5</td>
</tr>
</tbody>
</table>

NOTES:
- TDS = total dissolved solids
- Cl = chlorine
- SO₄ = sulfate
- B = boron
- Na = sodium
- N = nitrogen
- mg/L = milligrams per liter

Source: CCRWQCB 2010

Groundwater
Known groundwater contaminants in the Llagas Creek and Coyote Creek groundwater basins include nitrate and perchlorate. The drinking water maximum contaminant level (MCL) for nitrate is 45 mg/L¹ (CCRWQCB 2005). The 2009 median nitrate concentration for the Llagas groundwater aquifer is 30 mg/L, with a maximum value of 155 mg/L (SCVWD 2010). The median 2009 nitrate concentration for the Coyote Creek basin is 22 mg/L, and wells within the southern half of the basin had recorded exceedances of the drinking water standard (Schaaf & Wheeler 2012). In areas of high nitrate, drinking water from wells are blended or treated by well owners to meet water quality standards. The SCVWD has implemented a nitrate management program since 1992. Over half of the 600 private wells tested in the Llagas and Coyote Creek basins between 1997 and 2001 exceeded the federal safe drinking standard for nitrate (SCVWD 2010).

The State of California has a perchlorate Public Health Goal (PHG) and notification level of 6 parts per billion (ppb). Perchlorate is a chemical used in rocket fuel and highway flares. It has been detected in the Llagas groundwater basin south of Coyote Valley, and has contaminated wells in southeast Morgan Hill, San Martin, and north Gilroy. The source of contamination is a former highway flare manufacturing plant on Tennant Avenue in Morgan Hill that was operated by Olin Corporation from 1956 to 1997 (Schaaf & Wheeler 2012). Perchlorate affects the

¹ Equivalent to 10 mg/L nitrate as nitrogen (NO₃-N).
function of the thyroid gland (pregnant women and infants are most at risk), and water contaminated with the chemical should be avoided for drinking and cooking. The initial area of plume investigation was bounded by Tennant Avenue on the north, Masten Avenue on the south, Monterey Highway on the west, and Center Avenue on the east. CCRWQCB has issued a Cleanup and Abatement Order to Olin Corporation, and has ordered the company to provide an alternate water supply to water users with wells containing perchlorate at or above the PHG. Since 2005, natural and active removal of perchlorate has resulted in a decline in concentrations such that only eight wells had perchlorate above 6 ppb in November 2010.

3.9.2 Regulatory Setting

Federal

Environmental Protection Agency

Clean Water Act

The CWA has regulated the discharge of pollutants to waters of the United States from any point source since it was enacted in 1972. Amendments to the CWA in 1987 added section 402(p), which established a framework for regulating non-point source stormwater discharges under NPDES. The NPDES stormwater program is described below. Water resources, including wetlands, occurring within the project area are potentially subject to federal jurisdiction under Sections 401 and 404 of the CWA.

Drinking Water Standards

The National Primary Drinking Water Regulations (NPDWR) MCLs are derived from regulations set forth by EPA. The regulations are enforceable federal standards for public water systems. Secondary MCLs are derived from the National Secondary Drinking Water Regulations (NSDWR) and are not enforceable, but EPA recommends adherence to secondary standards. NSDWR act as a guideline to avoid contaminants that potentially lead to cosmetic or aesthetic effects.

Federal Emergency Management Agency

National Flood Insurance Act

The National Flood Insurance Act (1968) makes available federally subsidized flood insurance to owners of flood-prone properties. To facilitate identifying areas with flood potential, FEMA has developed FIRMs that can be used for planning purposes. Federal regulations governing development in a 100-year floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations, enabling FEMA to require municipalities that participate in the National Flood Insurance Program (NFIP) to adopt certain flood hazard reduction standards for construction and development in 100-year floodplains.

State

State Water Resources Control Board

Porter-Cologne Water Quality Control Act

SWRCB administers both the Porter-Cologne Water Quality Control Act and Section 401 of the CWA. The Porter-Cologne Water Quality Control Act, Water Code Section 13260, requires that “any person discharging waste, or proposing to discharge waste, within any region that could
affect the ‘waters of the State’ to file a report of discharge” with RWQCB. Waters of the State as defined in the Porter-Cologne Act (Water Code Section 13050 (e)) are “any surface water or groundwater, including saline waters, within the boundaries of the state.”

Section 401 of the Clean Water Act
Pursuant to Section 401 of the CWA, SWRCB consider waters of the State to include, but not be limited to, rivers, streams, lakes, bays, marshes, mudflats, unvegetated seasonally ponded areas, drainage swales, sloughs, wet meadows, natural ponds, vernal pools, diked bay lands, seasonal wetlands, and riparian woodlands. SWRCB has also claimed jurisdiction and exercised discretionary authority over “isolated waters.”

Section 303(d) of the Clean Water Act
Section 303(d) of the CWA requires states to identify water bodies that do not meet water quality objectives and are not supporting their beneficial uses. Each state must submit an updated list, called the 303(d) list, to EPA every 2 years. In addition to identifying the water bodies that are not supporting beneficial uses, the list also identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. States are required to prioritize 303(d) water bodies for development of TMDL levels.

Central Coast and San Francisco Regional Water Quality Control Boards
The proposed project is located primarily in the watersheds under the jurisdiction of CCRWQCB. A portion of the project area drains to the Coyote Creek watershed, which is under the jurisdiction of the San Francisco Bay RWQCB. Runoff water quality is regulated by the NPDES program (established through the CWA, as described above). The objective of the NPDES program is to control and reduce pollutant discharge to water bodies. SWRCB recently adopted a statewide policy on compliance schedules in NPDES permits that would require a discharger seeking a compliance schedule to provide the following documentation:

- Diligent efforts made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream, and the results of those efforts
- Source control efforts that are currently underway or completed
- A proposed schedule for additional source control measures or waste treatment
- Data demonstrating current treatment facility performance
- The highest discharge quality that can reasonably be achieved until final compliance is attained
- A proposed schedule that is as short as practicable
- Additional information and analyses as determined by the RWQCB on a case-by-case basis (SWRCB 2008)

Projects disturbing more than 1 acre of land during construction are required to file a Notice of Intent (NOI) with RWQCB to be covered under the state NPDES General Construction Permit (SGCP) for discharges of stormwater associated with construction activity. The project is located within the jurisdictional area of two RWQCBs. Therefore, two NOIs would be required be filed for the project, and each would cover the total area of ground disturbance under jurisdiction of
the respective RWQCB. A Stormwater Pollution Prevention Plan (SWPPP) must be developed and implemented for the project area covered by the SGCP, and would include BMPs that would reduce impacts to surface water quality.

The Basin Plans for the Central Coast and San Francisco Bay RWQCBs present the beneficial uses that each RWQCB has specifically designated for local aquifers, streams, marshes, and rivers, as well as the water quality objectives and criteria that must be met to protect these uses.

**California Department of Fish and Game**

*Section 1602 of the State Fish and Game Code*

Section 1602 of the State Fish and Game Code requires any person, governmental agency, or public utility proposing any activity that will divert or obstruct the natural flow or change the bed, channel, or bank of any river, stream, or lake or proposing to use any material from a streambed, to first notify CDFG of such activity. Based on information contained in the notification form and a possible field inspection, CDFG may propose reasonable modification in the proposed construction as would allow for the protection of fish and wildlife resources. The notification requirement generally applies to any work undertaken within the annual high water mark of a wash, stream, or lake that contains or once contained fish and wildlife, or supports riparian vegetation.

**Local**

The Santa Clara County General Plan (Santa Clara County 1994) Land Use and Health and Safety policies relevant to hydrology and water quality of the proposed project are listed below.

**Health and Safety**

- **R-RC 8** Development in rural unincorporated areas shall be required to demonstrate adequate quantity and quality of water supply prior to receiving development approval.

- **R-RC 10** For lands designated as Resource Conservation Areas (Hillsides, Ranchlands, Agriculture, and Baylands) and for Rural Residential areas, water resources shall be protected by encouraging land uses compatible and consistent with maintenance of surface and ground water quality.

- **R-RC(i) 3** Integrate storm water quality protection requirements into development site plan and construction permit approvals.

- **R-HS 41** To minimize the likelihood of surface or groundwater contamination, density of development in the rural unincorporated area will be maintained at very low density.
3.9 HYDROLOGY AND WATER QUALITY

3.9.3 Thresholds of Significance
Potential project impacts to hydrology and water quality were evaluated by determining the sensitivity, significance, or rarity of each resource that could be adversely affected (either directly or indirectly) by the proposed project, and by using thresholds of significance to evaluate the significance of potential impacts. Guidance for evaluating significance thresholds is based on the CEQA Environmental Checklist (CEQA Guidelines, Appendix G). Using these guidelines, the proposed project would result in a significant impact if it would:

- Violate any water quality standards or waste discharge requirements.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or off site.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site.
- Create or contribute increased impervious surfaces and associated runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Otherwise substantially degrade water quality.
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows.
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
- Be located in an area of special water quality concern (e.g., Los Gatos or Guadalupe Watershed).
- Be located in an area known to have high levels of nitrates in well water.
- Result in a septic field being constructed on soil where a high water table extends close to the natural land surface.
- Result in a septic field being located within 50 feet of a drainage swale; 100 feet of any well, water course, or water body; or 200 feet of a reservoir at capacity.
3.9 HYDROLOGY AND WATER QUALITY

3.9.4 Impacts and Mitigation

With mitigation incorporated, the proposed project would not violate any water quality standards or waste discharge requirements. (Less than significant impact with mitigation incorporated)

Construction

During project construction, disturbed soils would be increasingly susceptible to sediment erosion. The grading, land clearing, and soil stockpiling required for construction of the proposed roadway, utilities, private recreation, infrastructure improvements, and future residential development could result in increased bank erosion and sedimentation to area waterways. The proposed roadway, subdivision improvements, and the construction of creek crossings have the potential to cause increased erosion and cause soil to enter local creeks. The applicant must comply with the requirements of the Statewide Construction General Permit (SCGP) issued by SWRCB to minimize erosion to the maximum extent practicable.

Onsite creeks within the project area are tributary to Llagas Creek, which is listed by CCRWQCB as an impaired water body not meeting water quality standards for sediment, fecal coliform, and nitrate. The Pajaro River TMDL for sediment and nitrate applies to Llagas Creek (CCRWQCB Resolution R3-2005-0132). The TMDL limits for sediment requires owners and operators of rural properties and roads to comply with the land disturbance prohibition of the Basin Plan (CCRWQCB Resolution R3-2005-0132). The Central Coast Basin Plan prohibits the discharge of soil, silt, or earthen material to waters of the State, or to an area where it could pass into waters of the State unless it is otherwise regulated by an NPDES permit, waste discharge requirements, or waiver of waste discharge requirements (CCRWQCB 2010).

Construction activities would use heavy equipment that uses petroleum products, hydraulic oil, and other chemicals. Potential impacts to stormwater runoff from the use of these materials would be minimized through using BMPs during construction and containing any releases before they can impact stormwater. Proposed work within and near area waterways could result in the accidental release of petroleum products or other chemicals, which would be a significant impact. A Spill Containment and Countermeasures Program would be developed as required by the County and would reduce or avoid the potential for spills of chemicals and products used in construction; the potential impact would be reduced to a less than significant level. Appropriate practices and procedures would be documented in the SWPPP and submitted for review and approval with the SCGP submittal materials. The following mitigation measures would reduce project construction impacts on water quality to a less than significant level.

Mitigation Measure Hydrology-1: Prior to recording the Tract Map, the applicant shall submit Erosion Control Plans with subdivision improvement plans as required by the County Grading Ordinance. Said plan shall be approved as part of the subdivision improvements. The plans shall also prescribe construction-phase BMPs to adequately contain sediment on site and prevent construction activities from degrading surface runoff and surface waters. The Erosion Control Plan shall include components for erosion control, such as phasing of grading, limiting areas of disturbance, designating
restricted-entry zones, diverting runoff away from disturbed areas, implementing protective measures for sensitive areas, protecting outlets, and providing for revegetation or mulching.

This Erosion Control Plan shall also include annual hydroseeding of the proposed temporary soil storage area located east of the subdivision area, with the goal of achieving both erosion control and a natural-appearing slope between October 15 and April 15 each year, or as required by the County. Hydroseeding activities shall use a native erosion control seed mix.

**Mitigation Measure Hydrology-2:** Prior to the approval of the subdivision improvement plans, the applicant shall submit a SWPPP and all other required materials to SWRCB for the issuance of coverage under the SCGP. The applicant shall demonstrate the acceptance of the materials for review by SWRCB by demonstration of a copy of the Waste Discharge Identification (WDID) Number issued by SWRCB.

**Mitigation Measure Hydrology-3:** Prior to the recording of the Tract Map, Final subdivision improvement plans shall include Grading and Drainage Plans that demonstrate that the flow rate and flow volume shall conform to the requirements of the 2007 Santa Clara County Drainage Manual.

**Subdivision Improvements**
The roadway and drainage improvements would create new impervious surfaces and could thereby result in increased runoff and sedimentation to area waterways. This increase in runoff could cause increased erosion and sedimentation to downstream waters, which are already impaired by sediment loading. The following mitigation measures would reduce the potential for impacts to water quality from the roadway and drainage improvements to a less than significant level.

**Mitigation Measure Hydrology-4:** Prior to recording the Tract Map, in accordance with Regional Water Quality Control Board requirements, the applicant shall prepare a Stormwater Management Plan (SWMP) that identifies permanent water quality BMPs that control pollutant levels to pre-development levels, or to the maximum extent practicable (MEP) for both infrastructure and the future residential development for review and approval by the County. The plans shall emphasize neighborhood- and lot-level BMPs to promote infiltration or “green” treatment of storm runoff, consistent with RWQCB guidance for NPDES Phase 2 permit compliance. BMPs shall be designed in accordance with engineering criteria in the California Stormwater BMP Handbook for New and Redevelopment, or other accepted guidance.

**Mitigation Measure Hydrology-5:** Prior to recording the Tract Map, the applicant shall prepare a clearly defined operations and maintenance plan for water quality control measures, including vector control measures and the identification of responsible parties with adequate funding to operate and maintain stormwater improvements.
Future Residences
Waters within the project area are tributary to Llagas Creek, which has impaired water quality and is 303(d)-listed as an impaired water body with established TMDLs for nitrate, fecal coliform, and sediment. Sources of nitrate from typical residential development can include septic tank disposal systems, fertilizer application, landscape maintenance, and pet and/or backyard livestock wastes (CCRWQCB 2005).

Urban land uses do not contribute nitrates above the target of 10 mg/L and, therefore, are not considered as sources of nitrates (CCRWQCB 2005). The TMDL for fecal coliform applies to municipal wastewater systems and does not consider septic systems to be a source of significant loading to area waterways. An On-site Sewage Disposal Feasibility Report has been prepared for the site in accordance with Santa Clara County Requirements. The report provides recommendations for leach field and septic tank sizing and locations (Brooks 2010). In addition, the report provides percolation test results for each potential leach field location. Proposed leach field locations have been set back from all creek banks by a minimum of 150 feet and from tributary swale banks by a minimum of 50 feet in compliance with County requirements. The impact to water quality from the proposed septic system would be less than significant through implementation of the recommendations in the On-site Sewage Feasibility Report.

The proposed residential development would create new impervious surfaces and could thereby result in increased runoff to area waterways. This increase in runoff could cause increased erosion and sedimentation to downstream waters, which are already impaired by sediment loading. As required per the Santa Clara County Grading Ordinance and Drainage Ordinance, any proposal to create new impervious surfaces of 2,000 square feet or greater in size requires a Drainage Permit from the County. It is almost certain that all of the future residences on each of the subdivision lots would include improvements requiring a Drainage Permit, and this process would evaluate drainage impacts from each new residence, with the application of control measures to address surface water runoff, if necessary. Implementation of Mitigation Measures Hydrology-4 and Hydrology-5 would avoid violation of water quality standards for sediment; the impact would therefore be less than significant.

The groundwater quality may not meet drinking water standards established in the Safe Drinking Water Act. Water quality in the Llagas Creek groundwater basin is known to have elevated levels of nitrate that exceed drinking water standards (Schaaf & Wheeler 2012). The quality of the water at the location of the proposed wells is currently unknown and may not meet drinking water standards due to current and historical grazing use of the area. Use of water that exceeds drinking water standards would be a significant impact. The following mitigation measure is required to reduce impacts to a less than significant level. In accordance with State and County requirements, all new groundwater wells used for drinking water shall be tested to ensure that potable water will meet applicable water quality standards. This testing includes a testing for a variety of constituents, including nitrates.
The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted). (Less than significant impact)

Construction

Construction of the subdivision improvements (roadway, utility, private recreation, and drainage improvements) would not require the use of groundwater. Sources of construction water would include municipal water from the City of Morgan Hill or another water vendor. The amount of water used during construction of the roadway and associated infrastructure would be limited to approximately 4 acre-feet. The proposed construction would require the use of impervious or partially impervious surfaces in the staging areas and would create impervious surfaces where there is currently undisturbed natural landscape. The change in groundwater recharge would be minimal during construction of the roadway; therefore, there would be a less than significant impact on groundwater supplies or groundwater recharge.

During future residential development, construction watering would be less than 1 acre-foot due to the limited construction required. While groundwater could be a source of future construction water, future construction would not substantially deplete groundwater supplies.

Subdivision Improvements

The project area is located entirely within the Llagas groundwater basin. Recharge of the Llagas groundwater basin is achieved through natural recharge and recharge activities of SCVWD. The subdivision improvements would have no impact on SCVWD recharge activities for the Llagas groundwater basin. Natural recharge of the Llagas groundwater basin is estimated to be 23,000 AFY. The surface area of the Llagas groundwater basin is 56,000 acres. Although infiltration rates vary over the basin, the average annual infiltration volume is 0.4 acre-feet. The total impervious surface of the proposed development is about 56 acres. The project would result in a decrease of about 16 AFY of infiltration, a less than 0.1 percent decrease from existing conditions, and less than 0.05 percent of the historical groundwater withdrawals (applying the average annual infiltration volume [0.4 acre-feet] and the most conservative assumption [i.e., that no rainfall onto post-project impervious surfaces is able to percolate into the groundwater basin]). This groundwater withdrawal does not represent a substantial interference with groundwater recharge. Therefore, the impact of the infrastructure and roadways on groundwater supply and recharge would be less than significant.

Future Residences

As evaluated in the Geoconsultants groundwater study, under normal rainfall conditions recharge of the groundwater resources at the project site is approximately 261 acre feet per year. Geoconsultants recommended a “safe” extraction rate two-thirds of the annual recharge rate, or 174 acre feet per year, equivalent to approximately 108 gallons per minute. Groundwater extraction beyond this safe extraction rate could result in downdraft of the existing groundwater aquifer beyond sustainable levels, which could result in impacts to off-site groundwater wells.
3.9 HYDROLOGY AND WATER QUALITY

Per State and County standards, the average daily water demand for single-family homes is 2.5 gallons per minute per residence. For the proposed development of 25 single-family homes, water demand would be approximately 62.5 gallons per minute. As existing groundwater resources provide for a safe yield of approximately 108 gallons per minute, the future potable water demand of 62.5 gallons per minute would only encompass 58 percent of this yield, avoiding significant impacts to onsite groundwater resources.

It should be noted that the proposed subdivision would entail the installation of up to five groundwater wells to provide potable water for the future residences. While three of the proposed groundwater wells would be located on the 567-acre property, two of the groundwater wells are proposed off-site, east of the property. The use of offsite wells would entail the capture of groundwater from a broader geographic area (and groundwater basin) than the 567-acre property evaluated in the Geoconsultants report. The use of these offsite wells would increase the amount of groundwater resources available for the project, further ensuring that future water demand from the 25 residences would not overdraft groundwater resources.

With mitigation incorporated, the proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site. (Less than significant impact with mitigation incorporated)

Construction

Construction of the primary roadway for the proposed project would involve drainage improvements within Corralitos Creek, including culverts for the proposed roadway. To construct these drainage improvements, the creek would be temporarily dewatered to create a dry workspace in the construction area. While the dewatering would temporarily alter the course of the stream, it would comply with requirements of the 401 water quality certification. Mitigation Measures Hydrology-1 would be implemented to reduce the impacts to water quality through implementation of BMPs to control sediment. The following mitigation measure would reduce potential impacts from the temporary dewatering to a less than significant level.

Mitigation Measure Hydrology-6: A dewatering plan shall be submitted to Santa Clara County and regulatory agencies (Regional Water Quality Control Board, California Department of Fish and Game) for review and approval with final subdivision improvement plans. The dewatering plan shall include contingency measures for managing dewatering structures and creek flows in the event of a storm (such as ceasing construction and applying creek protection BMPs within 48 hours of a predicted rain event with a 50 percent or greater probability of occurrence), and dewatering structures shall be designed to convey 150 percent of creek flows. BMPs shall be used during dewatering so that water quality standards are met.
3.9 HYDROLOGY AND WATER QUALITY

Subdivision Improvements and Future Residences
The roadway and future residential development would not alter the course of a stream or river after construction. The majority of the project area would remain undisturbed open space, draining via Foothill, Fischer, and Corralitos Creeks to Monterey Bay. The proposed subdivision improvements and future residential development would not alter the natural drainage boundaries. However, the proposed improvements and future residential development could cause an increase in the rate and amount of surface runoff through an increase in impervious area within each basin. The estimated increase in impervious area within each basin is identified in Table 3.9-3.

The subdivision improvements and future residential construction would increase drainage to the receiving waters of the aforementioned Corralitos, South Corralitos, Coyote, Foothill, and Fischer Creeks. This increase in drainage would increase the peak flows and drainage volumes associated with the flows in the creeks resulting in flooding on and off site.

Table 3.9-3: Project Increase in Impervious Surfaces

<table>
<thead>
<tr>
<th>Drainage Basin</th>
<th>New Impervious Areas</th>
<th>Increase in Impervious Area (% of Basin)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fischer Creek</td>
<td>1,200 feet of Maple Avenue Access Road A Residential Lots 2, 7, 8, and 9</td>
<td>1.2</td>
</tr>
<tr>
<td>Foothill Creek</td>
<td>4,300 feet of Maple Avenue Access Roads B, C, and D Lots 1-6 and 10-21</td>
<td>3.2</td>
</tr>
<tr>
<td>Coyote Creek</td>
<td>Lots 9 and 10</td>
<td>5.9</td>
</tr>
<tr>
<td>Corralitos Creek</td>
<td>6,800 feet of Maple Avenue Off-site water storage tanks and access roads Lots 17, 21-23, and C1</td>
<td>2.4</td>
</tr>
<tr>
<td>South Corralitos Creek</td>
<td>Lots C1 and C2</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Source: Schaaf & Wheeler 2012

The total runoff from the project area and contributing off-site areas for the 100-year, 24-hour storm would increase from 647.1 cubic feet per second (cfs) to 664.8 cfs. The increase in runoff as a result of site improvements, by drainage basin in cubic feet (cf), is provided in Table 3.9-5. The increase in runoff as a result of future residential development and subdivision improvements, by drainage basin in cubic feet (cf), is provided in Tables 3.9-4 and 3.9-5.

The proposed project would include construction of two detention basins within the Corralitos Creek drainage basin. The two basins would have a retention capacity of approximately 90,000 cf and 26,000 cf of runoff, respectively. Both detention basins would discharge directly to Corralitos Creek. The additional storage volume provided by the proposed detention basins within Corralitos Creek Basin would exceed the storage requirements for that basin.
Table 3.9-4: Proposed Increase in Runoff (cf), Subdivision Improvements

<table>
<thead>
<tr>
<th>Drainage Basin</th>
<th>2-Year Storm</th>
<th>10-Year Storm</th>
<th>100-Year Storm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fischer Creek</td>
<td>4,747</td>
<td>5,819</td>
<td>5,742</td>
</tr>
<tr>
<td>Foothill Creek</td>
<td>20,050</td>
<td>24,747</td>
<td>24,403</td>
</tr>
<tr>
<td>Coyote Creek</td>
<td>484</td>
<td>604</td>
<td>597</td>
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<tr>
<td>Corralitos Creek</td>
<td>21,874</td>
<td>26,324</td>
<td>25,011</td>
</tr>
<tr>
<td>South Corralitos Creek</td>
<td>2,215</td>
<td>2,654</td>
<td>2,502</td>
</tr>
</tbody>
</table>

Source: Schaaf & Wheeler 2012

Table 3.9-5: Proposed Increase in Runoff (cf), Future Residential Development

<table>
<thead>
<tr>
<th>Drainage Basin</th>
<th>2-Year Storm</th>
<th>10-Year Storm</th>
<th>100-Year Storm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fischer Creek</td>
<td>7,205</td>
<td>6,187</td>
<td>5,775</td>
</tr>
<tr>
<td>Foothill Creek</td>
<td>30,156</td>
<td>36,801</td>
<td>35,461</td>
</tr>
<tr>
<td>Coyote Creek</td>
<td>1,140</td>
<td>1,419</td>
<td>1,406</td>
</tr>
<tr>
<td>Corralitos Creek</td>
<td>2,795</td>
<td>3,337</td>
<td>3,117</td>
</tr>
<tr>
<td>South Corralitos Creek</td>
<td>1,237</td>
<td>1,436</td>
<td>1,376</td>
</tr>
</tbody>
</table>

Source: Schaaf & Wheeler 2012

proposed detention basins would not meet the additional requirements for the other four drainage basins because no additional storage is proposed within those basins. Mitigation Measures Hydrology-3 and Hydrology-7 would provide adequate storage within each of the basins that would be affected by the project and would avoid causing flooding.

**Mitigation Measure Hydrology-7**: The project shall include detention basins within each creek catchment to mitigate the peak discharge to pre-project conditions, such that there is the same or less frequency of flooding of downstream culverts or floodplains. A Detention Basin Design Plan shall be submitted to the County with final subdivision improvement plans. The Detention Basins shall include sufficient storage volume to mitigate the increase in runoff within each drainage basin for both the infrastructure improvements and the future development of residences.

The proposed project would use drainage ditches to capture sheet flow on the upstream side of the proposed Maple Avenue extension. Storm drain inlets located along the roadway extension would capture flow from drainage ditches and roadway drainage and collect it into an underground drainage system that discharges to area creeks. Drainage infrastructure may be necessary with the construction of the houses to divert upstream flows around the structures, especially where concentrated by a down-sloping driveway. Drainage pipe sizing and design shall meet the drainage requirements of the County of Santa Clara to safely convey stormwater. Erosion control measures (such as hay bales or rip-rap) shall be implemented to prevent erosion.
along storm drains. Outlet measures may include, but are not limited to, erosion control fabric, rip-rap, strategic outlet placement, vegetated lining, and appropriate pipe sizing to limit velocities.

**With mitigation incorporated, the proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or off site.** *(Less than significant impact with mitigation incorporated)*

**Construction**
The proposed project would include dewatering of Corralitos Creek during installation of roadway culverts, as described above. Project construction would also require use of an off-site soil stockpile for approximately 10,000 cubic yards of cut soil storage. Mitigation Measure Hydrology-1 would reduce the impact to sedimentation or siltation associated with the soil stockpile. Mitigation Measure Hydrology-6 would be implemented to reduce erosion or siltation impacts from dewatering to a less than significant level.

**Subdivision Improvements and Future Residences**
Construction of the proposed roadway and residential development would result in an increase in peak runoff from the project area, as discussed above. The portion of the project area that drains to San Francisco Bay via Coyote Creek is under the jurisdiction of the San Francisco Bay RWQCB. RWQCB requires the applicant to provide hydromodification mitigation for new or replaced impervious area greater than 1 acre. The proposed roadway would include 0.4 acres of new impervious area within the Coyote Creek basin and, therefore, hydromodification would not be required. Should future residential development include impervious area of greater than 1 acre within the Coyote Creek basin, the project would be required to comply with the Phase 2 NPDES Permit requirements of the SFRWQCB and CCRWQCB (HMP). Through compliance with Phase 2 NPDES requirements and implementation of Mitigation Measures Hydrology-1 through Hydrology-7, the proposed changes to area drainage would result in a less than significant increase in sedimentation or siltation.

**With mitigation incorporated, the proposed project would not create or contribute increased impervious surfaces and associated runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.** *(Less than significant impact with mitigation incorporated)*

**Construction**
As described previously, construction of the proposed project would include the addition of impervious surfaces to the five drainage basins within the project area. The proposed project would also include new drainage features to convey flows to area streams. The drainage improvements and additional impervious areas could increase the volume of runoff during peak storm events, resulting in a significant impact. Impacts to the capacity of existing downstream stormwater drainage systems would be addressed through construction of stormwater detention basins as required by Mitigation Measure Hydrology-7.
Potential additional sources of polluted runoff associated with construction of the proposed project include petroleum hydrocarbons and other chemicals associated with construction equipment and vehicle usage. The impact to runoff water quality during construction would be less than significant with implementation of Mitigation Measures Hydrology-1.

Subdivision Improvements and Future Residences

Post-construction, the presence of the additional impervious surfaces could result in an increase in peak runoff volume. This increase in volume could exceed the capacity of existing stormwater drainage systems, resulting in a significant impact. This impact would be avoided with implementation of Mitigation Measure Hydrology-7, which requires construction of detention basins with sufficient capacity to contain the increase in runoff within each drainage basin.

Pollutants and chemicals associated with urban development could flow off new roadways and other impervious surfaces and into area creeks. These pollutants could include, but may not be limited to, heavy metals from automobile emissions, oil, grease, debris, and air pollution residue. Contaminated urban runoff that remains relatively untreated could result in incremental long-term degradation of water quality. A Spill Containment and Countermeasures Program would be required for containment of spills and management of hazardous materials associated with construction. Mitigation Measures Hydrology-4 and Hydrology-5 would require permanent BMPs throughout the subdivision area to avoid surface water quality impacts post-construction, and management of the BMPs in perpetuity. Through implementation of Mitigation Measures Hydrology-4 and Hydrology-5, the impact to runoff water quality would be less than significant.

With incorporation of identified mitigation measures, the proposed project would not otherwise substantially degrade water quality. (Less than significant impact)

Construction

Construction of the roadway, drainage improvements, and future residential development could disturb soils containing herbicidal residue. In 2009, Milestone herbicide was applied onsite to control an invasive weed, purple star-thistle. Milestone is identified as non-toxic to humans and wildlife. This herbicide was applied in specific locations to control invasive weeds. Because the herbicide is non-toxic to humans and wildlife, the impact to water quality from the disturbance of soils containing residue from this herbicide would be less than significant.

Subdivision Improvements and Future Residences

Post-construction, the proposed future residential development may include agricultural areas within the transition zones on each lot. These agricultural areas would be managed by each residence and could include the use of herbicides, pesticides, and fertilizers. These agricultural areas would be limited to approximately 12.66 acres. The proposed project would also reduce agricultural areas by approximately 72.05 acres through the loss of grazing land to roadways and residential development.
The proposed project would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. *(No impact)*

The project area does not contain areas within a Special Flood Hazard Area that would be subject to flooding from a 100-year flood. No housing would be placed within a 100-year flood hazard area as a result of the proposed project. The proposed project and future residential development would have no impact on housing within a 100-year flood hazard area.

The proposed project would not place within a 100-year flood hazard area structures that would impede or redirect flood flows. *(No impact)*

There are no 100-year flood hazard areas in the project area. No structures would be placed within a 100-year floodplain as a result of the project. The proposed project and future residential development would have no impact on flood flows.

The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. *(Less than significant impact)*

**Construction**

Construction of the proposed roadway and future residential development would not expose people or structures to flooding. The project area is not located within a Special Flood Hazard Area and would not be subject to flooding from a 100-year storm event. The project area is also not located within a dam inundation area. In the event that Anderson Dam fails, downgradient access roads to the project area would be subject to flooding. There would be warning in the event of a dam failure and any construction workers travelling to or from the project area would be able to avoid travel through flooded areas. The project would, therefore, have a less than significant impact on exposure of people to injury or death from flooding.

**Subdivision Improvements**

Post-construction, the subdivision improvements on the Coyote Highlands project area would not be subject to flooding from either a 100-year storm or from failure of a levee or dam. There would be no impact to people or structures from flooding as a result of the roadway and infrastructure improvements.

**Future Residences**

The future residential development would not be located within a Special Flood Hazard Area that is subject to flooding from a 100-year storm event. Down-gradient access roads to the project area are located within the inundation area for Anderson Dam. In the event of failure of Anderson Dam, down-gradient access roads to the project area would be subject to inundation. There would be warning in the event of a dam failure or flooding along access roads, and residents would be able to avoid travel through these areas during potential flooding or inundation. The proposed future residential development would, therefore, have a less than significant impact on exposure of people to injury or death from flooding.
The proposed project would not be located in an area of special water quality concern (e.g., Los Gatos or Guadalupe Watershed). (No impact)
The proposed project is not located in an area of special water quality concern. The project is located within the Llagas Creek basin and Coyote Creek basin. These basins have known impairments and are 303(d)-listed by the State of California. The basins are not designated as areas of special water quality concern. The project is not located within the Los Gatos or Guadalupe Watersheds. There would be no impact because the project is not located within an area of special water quality concern.

The project is not located in an area known to have high levels of nitrates in well water. (Less than significant impact)
There are no wells located within the proposed project area that are known to have high levels of nitrates, although the Llagas Creek groundwater basin has wells with elevated nitrate levels. As discussed above, water quality testing in accordance with State and County standards would be required for future groundwater wells to ensure that potable water meets water quality standards.

The project would not result in a septic field being constructed on soil where a high water table extends close to the natural land surface. (No impact)
The future residential development would involve construction of septic leach fields. The proposed project does not include areas where the water table is near the land surface. Initial evaluation of the project area identified the area as being suitable for septic leach fields and that engineered septic tanks would not be required. There would be no impact due to the absence of a high water table.

The proposed project would not result in a septic field being located within 50 feet of a drainage swale; 100 feet of any well, water course, or water body; or 200 feet of a reservoir at capacity. (Less than significant impact)
The septic leach fields that would be constructed with the proposed residential development would be located more than 50 feet from a drainage swale, and more than 100 feet from a groundwater well, water course, or water body. Because septic leach fields would be set back in accordance with these guidelines, the impact would be less than significant.
3.10 LAND USE, PLANNING, AND RECREATION

3.10.1 Environmental Setting

Land Use and Planning

Regional Land Uses

The proposed subdivision area is located in the San Francisco Bay Area of northern California, east of US-101 and south of the City of Morgan Hill, within an unincorporated portion of Santa Clara County. The total acreage of Santa Clara County is 835,449 acres (Santa Clara County 1994). The subdivision area comprises approximately 566.85 acres. The majority of the subdivision area is located on a hillside and is surrounded to the north, west, and south by rural and suburban residential development. The eastern boundary of the subdivision area generally coincides with a hillcrest, with the area to the east consisting largely of undeveloped lands. Agricultural uses are also found in the project region, with row crops on lands west of the subdivision area, and livestock grazing activities in the project area and to the east. Also located to the southeast of the project site is the Coyote Lake-Harvey Bear Ranch County Park.

Santa Clara County

The Santa Clara County General Plan land use designations for the subdivision area are shown in Table 3.10-1 and on Figure 3.10-1. Figure 3.10-2 shows the Santa Clara County Zoning Ordinance land use designations in the project vicinity.

City of Morgan Hill

The adjacent City of Morgan Hill has included in its General Plan “any land outside its boundaries which, in the planning agency’s judgment, bears relation to its planning.” Accordingly, the Morgan Hill General Plan covers the incorporated area of the City as well as the City’s “Sphere of Influence,” which denotes an area under Santa Clara County jurisdiction where the City of Morgan Hill has a shared concern regarding land use and development (City of Morgan Hill 2001). The project area is located within the City of Morgan Hill’s Sphere of Influence on lands designated as Open Space and Rural County, portions of which are also

<table>
<thead>
<tr>
<th>Lot</th>
<th>Ownership</th>
<th>General Plan</th>
<th>Zoning Ordinance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Lots 1-23</td>
<td>Coyote Highlands LLC</td>
<td>Rural Residential</td>
<td>RR-20Ac-d1</td>
</tr>
<tr>
<td>Residential Lots C1 and C2</td>
<td>Fountain Oaks Ranch LLC</td>
<td>Hillsides</td>
<td>HS-d1</td>
</tr>
<tr>
<td>Open Space Lots 1-3</td>
<td>Coyote Highlands LLC</td>
<td>Rural Residential</td>
<td>RR-20Ac-d1</td>
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<tr>
<td>Open Space Lots 4-5</td>
<td>Fountain Oaks Ranch LLC</td>
<td>Hillsides</td>
<td>HS-d1</td>
</tr>
</tbody>
</table>
Figure 3.10-1: Santa Clara County General Plan Land Use Designations

General Plan Legend:
- A: Agriculture Medium Scale
- H: Hillsides
- MH: City of Morgan Hill
- R: Ranchlands
- RP: Regional Parks
- RR: Rural Residential
- O: Other Public Open Lands

Scale: 1:40,000

LEGEND
- Proposed Subdivision
  Area Boundary
- Lot Area Boundary
Figure 3.10-2: Santa Clara County Zoning Ordinance Land Use Designations

Zoning Legend

- **HS** - Hillside
- **HS-se** - Hillside Scenic Road Combining District
- **AR** - Agricultural Ranchland
- **AR-se** - Agricultural Ranchland Scenic Road Combining District
- **RR** - Rural Residential Scenic Road Combining District
- **A** - Exclusive Agriculture with Combining District
- **A1** - General Use District
- **City of Morgan Hill**
- **Waterbody**

**SOURCE:** ESRI 2012, County of Santa Clara 2007, and Panorama Environmental, Inc. 2012

**SCALE:** 1:40,000

**LEGEND**
- Red: Proposed Subdivision Area Boundary
- Orange: Urban Service Area Boundary
- Green: Lot Area Boundary
- White: Parcel

**Mile**

0 | 0.25 | 0.5 | 1
---|---|---|---
- Coyote Highlands Cluster Subdivision Draft EIR - November 2012
overlain by a Hillside designation. Figure 3.10-3 shows the City of Morgan Hill General Plan land use designations currently do not apply to the subdivision area because the entire project area is within the jurisdiction of the County of Santa Clara and its General Plan; the City does not specify Zoning Ordinance land use designations for the project area. The City of Morgan Hill General Plan land use designations would only become applicable to the subdivision area if the area is annexed to the City of Morgan Hill at some future date. No annexation of the subdivision area to the City of Morgan Hill is proposed at this time.

Land Uses on the Project Site
The relatively flat, western portion of the subdivision area contains two occupied residences and a barn that is no longer in use. The majority of the subdivision area has historically been used as grazing land for cattle. Existing agricultural improvements are scattered throughout the subdivision area, including dirt access roads, fencing, improved springs, water storage tanks, and water troughs. The three creek drainages located on the subdivision area – Fisher Creek, Foothill Creek, and Corralitos Creek – are intermittent drainages that support riparian vegetation.

Recreation Facilities in the Project Vicinity
Figure 3.10-4 shows the various parks and recreational facilities in the project vicinity.

The largest regional park in the area is the Coyote Lake-Harvey Bear Ranch County Park, located immediately adjacent to the subdivision area. This County-owned and operated park is approximately 4,595 acres in size, and includes the 635-acre Coyote Lake. The park provides a range of recreational opportunities, including boating, fishing, camping, and 35 miles of hiking, biking, and equestrian trails. The park also provides habitat for many species of birds, reptiles, amphibians, insects, and mammals, including such special-status species as the western pond turtle, California tiger salamander, and bay checkerspot butterfly.

Anderson Lake County Park is another regional park that is County-owned and operated. The Anderson Lake County Park is located approximately 1.5 miles north of the subdivision area, and provides opportunities for boating, fishing, and trails for hiking, biking, and horseback riding.

The Hill Country Golf and Country Club (also known as the Institute Golf Course) is an 18-hole private golf course located less than 0.25 mile southwest of the subdivision area. This golf course is also known as The Institute Course, as the owner and founder of Fry’s Institute and the Fry’s Electronics chain of stores is also the owner of this golf course.

Holiday Lake Meadow and Holiday Lake Golf Course are private recreational facilities located approximately 1 mile north of the subdivision area.

The nearest neighborhood public park is Jackson Park, located adjacent to Jackson Elementary School in Morgan Hill and approximately 0.5 mile northwest of the subdivision area.
Figure 3.10-3: City of Morgan Hill General Plan Land Use Designations


Scale: 1:40,000
3.10 LAND USE, PLANNING, AND RECREATION

Figure 3.10-4: Parks and Recreational Facilities in the Project Vicinity

LEGEND
- Proposed Subdivision Area Boundary
- Existing Santa Clara County Trail
- Potential Future City of Morgan Hill Recreational Facilities
- Proposed Wall
- Proposed Water Tank
- Proposed Water Pipeline


Scale 1:40,000

Coyote Highlands Cluster Subdivision Draft EIR – November 2012
In addition to the existing public and private parks and recreational facilities in the project vicinity, a number of public regional trail routes defined in the Countywide Trails Master Plan Update (an adopted element of the County’s General Plan, September 1995) occur within the project area or vicinity (see Figure 3.10-4). These routes include:

- **Regional Trail Route R5 (Bay Area Ridge Trail)** - An alignment for the Bay Area Ridge Trail is delineated within the portion of the project area that contains the proposed temporary soil storage stockpile area, two wells, and water tanks. The Bay Area Ridge Trail is envisioned to be a continuous trail system loop that encircles the entire Bay Area, providing a multi-use trail for hikers, runners, cyclists, and equestrians. Approximately 335 miles of the planned 550-mile Bay Area Ridge Trail system already exist in the Bay Area (Bay Area Ridge Trail Council 2012). Approximately 190 miles (34 percent) of the proposed Bay Area Ridge Trail system lies within Santa Clara County. A total of 75 miles of the Bay Area Ridge Trail has been constructed to date in Santa Clara County, including 5.1 miles of trails within Coyote Lake-Harvey Bear Ranch County Park (Figure 3.10-4). The Bay Area Ridge Trail alignment is planned to continue north near the eastern boundary of the subdivision area and connect up to trail routes in Anderson Lake County Park and points north.

- **Sub Regional Trail Route S7 (Morgan Hill Cross-Valley Trail)** - An on-street bicycle route with parallel trail from the west side of the valley to Anderson Lake County Park.
- **Sub Regional Trail Route S8 (San Martin Cross Valley Trail)** - An on-street bicycle route with parallel trail from the west side of the valley to Coyote Lake-Harvey Bear Ranch County Park.
- **Connector Trail Route C27 (San Martin/South Valley Trail)** - An on-street bicycle route with parallel trail along Foothill Avenue that connects to many cross valley trails.
- **Regional Trail Route R1-A (Juan de Bautista National Historic Trail)** – Established by the US Congress in 1990, the designated Northern Recreation Retracement route of the trail taken by Anza in 1775-1776 when he successfully led a large group of colonists overland from Sonora, Mexico to northern California.

Two staging areas that serve public trails are also located in the project vicinity. Both of these staging areas are operated by the Santa Clara County Parks Department. They include a staging area on the east side of Anderson Lake County Park and a staging area at the top of the dam at Coyote Lake-Harvey Bear Ranch County Park.

### 3.10.2 Regulatory Setting

**Federal**

There are no federal regulations regarding land use and planning that are relevant to the proposed project.
3.10 LAND USE, PLANNING, AND RECREATION

State
There are no state regulations regarding land use and planning that are relevant to the proposed project.

Local
Santa Clara County General Plan
The Santa Clara County General Plan (1995-2010) policies relevant to land use and planning for the proposed project are listed below. The Santa Clara County General Plan land use designations of Rural Residential and Hillside allow for the construction of dwellings, with adherence to the provisions outlined in the Santa Clara County Zoning Ordinance (see below).

Countywide Strategies and Policies
C-PR 17 The private sector and non-profit organizations should be encouraged to provide outdoor recreational opportunities. In rural areas, private recreational uses shall be low intensity.

C-PR 21 The countywide trail system should be linked to provide for regional trails including the Bay Area Ridge Trail, the Benito-Clara Trail; and the San Francisco Bay Trail systems encircling the urban areas of the County and the San Francisco Bay.

C-PR 22.1 Encourage private developers to incorporate trail routes identified on the Countywide Trails Master Plan Map into their development project designs.

C-PR(i) 13.3 Monitor proposed development, including General Plan amendments and zoning changes, and/or subdivision of properties with proposed trail routes, and work with property owners and/or their representatives to preserve the integrity of the proposed trail route in their project design.

C-PR 23 Trail routes shall be located, designed, and developed with sensitivity to their potential environmental, recreational, and other impacts on adjacent lands and private property.

C-PR 24 As provided for in the Resource Conservation Chapter, trails shall be located to recognize the resources and hazards of the areas they traverse, and to be protective of sensitive habitat areas such as wetlands and riparian corridors and other areas where sensitive species may be adversely affected.

Rural Unincorporated Area Issues and Policies
R-PR 14 Privately owned recreational land uses and facilities within rural unincorporated areas, including, but not limited to golf courses, campgrounds, recreational vehicle (RV) parks, and similar uses, should be compatible with the landscape and resources of the areas in which they are proposed. To ensure such compatibility, potentially significant impacts often associated with such land uses should be avoided or reduced to less-than-significant levels, including:
(a) water demand;
(b) traffic generation;
(c) wastewater generation and disposal;
(d) alteration of natural topography, drainage patterns, habitat, or vegetative cover;
(e) use of harmful chemicals, such as pesticides and herbicides;
(f) riparian area or heritage resource impacts;
(g) loss of prime soils or other impacts upon local agriculture;
(h) visual impacts; and
(i) impacts on public services and facilities, including schools.

R-PR 19 The private sector and non-profit organizations should be encouraged to provide outdoor recreational opportunities. In rural areas, private recreational uses shall be low intensity.

General Plan Policies Applicable to the Hillside Land Use Designation
The following General Plan policies are applicable to the two parcels that comprise proposed residential lots C1 and C2, and proposed open space lots 4 and 5:

R-LU 16 Hillsides: Mountainous lands and foothills unsuitable and/or unplanned for annexation and urban development. Lands so designated shall be preserved largely in natural resource-related and open space uses in order to:

(a) support and enhance rural character;
(b) protect and promote wise management of natural resources;
(c) avoid risks associated with the natural hazards characteristic of those areas; and
(d) protect the quality of reservoir watersheds critical to the region’s water supply.

R-LU 17 These lands also contain such important resources as grazing lands, mineral deposits, forests, wildlife habitat, rare or locally unique plant and animal communities, historic and archeological sites, and recreational and scenic areas of regional importance, which serve to define the setting for the urbanized portions of Santa Clara County. Given the importance of these lands to the County’s overall quality of life, allowable uses shall be consistent with the conservation and wise use of these resources and levels of development shall be limited to avoid increased demand for public services and facilities.

R-LU 18 All allowable uses must be consistent with the basic intent of the ‘Hillside’ designation. The range of allowable uses shall be limited to:

(a) agriculture and grazing;
(b) mineral extraction;
(c) parks and low-density recreational uses and facilities;
(d) land in its natural state;
3.10 LAND USE, PLANNING, AND RECREATION

(e) wildlife refuges;
(f) very low-density residential development; and
(g) commercial, industrial, or institutional uses, which by their nature
   1) require remote, rural settings; or
   2) support the recreational or productive use, study, or appreciation of
      the natural environment.

R-LU 20 Proposed cluster residential developments shall adhere to the following:

1. Developed Area: The building envelopes for all residences and the locations
   of all other permitted uses proposed as accessory structures shall be specified
   in the design, the combined area of which shall not exceed 10 percent of the
   gross acreage of the site:
      (a) If the property is under Land Conservation (Williamson Act) contract,
          the contract must be canceled or modified to exclude the portion of
          the site that is to be developed.
      (b) No individual parcel created for residential development shall be less
          than 2 acres in size.

2. Open Space: It is mandatory that no less than 90 percent of the land area shall
   be preserved permanently as open space through dedication of an open space
   or conservation easement precluding any future development:
      (a) Those portions of the land permanently preserved as open space shall
          be configured as large, contiguous, and usable areas.
      (b) The open space may be dedicated through easements over portions of
          individually owned parcels or may be configured as separate parcels
          owned in common or individually.
      (c) The open space area shall be privately controlled and not accessible to
          the public unless the area is deeded to a public agency or entity
          willing to undertake responsibilities of ownership, maintenance, and
          public access [designated trail corridors may traverse such areas if
          proposed as part of the Regional Parks, Trails, and Scenic Highways
          Plan].
      (d) Land uses allowed within the area dedicated as permanent open
          space shall be limited to agricultural or other limited resource-related
          uses, and to non-commercial recreational facilities of an ancillary
          nature to the cluster residential development and for use by residents
          only.

R-LU 21 Design of the cluster development shall incorporate the following basic
principles:

1. Site layout shall demonstrate efficiency in the location and length of
   roadways, driveways, and other basic infrastructure improvements or
   extensions.
2. Roads shall be of adequate design, capacity, and construction to accommodate traffic associated with the development safely, efficiently, and with minimal long-term maintenance needs.

3. The locations of roads, building sites, septic system leach fields, or other major features of development must be accurately identified on the proposed subdivision map, and they shall:
   (a) avoid areas of natural hazards and avoid adverse impacts upon natural and heritage resources; and
   (b) be required to mitigate or reduce potentially significant adverse environmental impacts to an insignificant level, particularly regarding water quality, through such means as adequate setbacks from water resources, avoidance of areas with high percolation rates and/or high groundwater tables.

4. Building sites and access roads should be located such that areas of the site which pose a significant hazard, such as landslides, very steep slopes, fault traces, or floodways, are placed within the portion of the site that is dedicated as permanent open space.

5. Roads, building sites, and other facilities shall not be allowed to create major, lasting visible scars on the landscape.

6. Structures on or near ridgelines shall be located, constructed, and/or landscaped so that they do not create a significant adverse visual impact as seen from the valley floor.

R-LU 24 New development, whether through subdivision or on existing, legal parcels ("single-site development") shall not be allowed on building sites in excess of 30 percent average slope unless:
   (a) the proposed site is a more feasible, suitable location for development than alternative locations on the parcel proposed for development; and
   (b) technical feasibility and environmental impact have been assessed and demonstrated through required studies, tests, and analyses of site conditions and characteristics.

General Plan Policies Applicable to the Rural Residential Land Use Designation
The following General Plan policies are applicable to the eight parcels that comprise proposed residential lots 1-23, and proposed open space lots 1-3:

R-LU 57 Residential, agricultural, and open space uses are the primary uses. Commercial, industrial, and institutional uses may be established only where they serve the needs of the resident population and result in a net overall reduction of travel demand.

R-LU 58 The allowable density of development shall be 5-20 acres per dwelling, depending upon the average slope of the land, as based upon the County's "-5-
20s” slope density formula. Minimum parcel size shall be 5 acres, unless development is proposed as a cluster subdivision (see R-LU 59 and R-LU 60).

**R-LU 59** Residential development may be clustered, provided that the open space portions of the development are protected as permanent open space.

**R-LU 60** The minimum parcel size within a Rural Residential cluster subdivision shall be no less than 1 acre (density to be determined by 5-20 acre variable slope density formula).

*Site-Specific General Plan Land Use Policies*

The following General Plan site-specific policy is applicable to the eight parcels that comprise proposed residential lots 1-23, and proposed open space lots 1-3:

**R-LU-A: 5 Carey Avenue/Kazizki** The 465 acres of property located east of Carey Avenue, approximately between Tennant and Maple Avenues, designated “Rural Residential,” shall have a maximum density of 20 acres per dwelling unit.

*Santa Clara County Zoning Ordinance*

The project site is split between two Santa Clara County Zoning Ordinance designations. The two parcels that comprise proposed residential lots C1 and C2 and open space lots 4 and 5 are zoned HS-d1, while the eight parcels that comprise proposed residential lots 1-23 and open space lots 1-3 are zoned RR-20Ac-d1. Both zoning districts are intended to maintain and preserve the predominantly rural character of the lands to which they area applied. Both zoning districts establish parameters for minimum lot area, minimum building setbacks, maximum building height, and development regulations for accessory buildings.

*Hillside Zoning District*

The Hillside (HS) land use designation is intended to preserve mountainous lands unplanned or unsuited for urban development primarily as open spaces uses, and to promote those uses which support and enhance a rural character, protect and promote the wise use of natural resources, and avoid the risks imposed by natural hazards found in these areas. Permitted uses in the HS zoning district include agriculture and grazing, very low-density residential use, low-density and low-intensity recreational use, mineral and other resource extraction, and land in its natural state.

Clustering of development, particularly residential, is encouraged in order to preserve contiguous open space and achieve efficiency in the provision of access to dwellings. Minimum lot size for a cluster subdivision is 2 acres, and a minimum of 90 percent of the development must be maintained in permanent open space. This open space may be arranged as portions of parcels or as a single parcel, provided that the maximum permitted density of development is not exceeded, and the land devoted to open space is configured as a large, contiguous, usable area.
3.10 LAND USE, PLANNING, AND RECREATION

Rural Residential Zoning District
The Rural Residential (RR) land use designation is intended to permit rural residential development, with residential, agricultural, and open space uses being the primary intended uses. Commercial, industrial, and institutional uses may be established in the RR district only where these uses serve the needs of the resident rural population and result in a net overall reduction in travel demand for rural residents.

Cluster subdivisions are allowed in the RR zone, with a minimum lot size of 1 acre. Permanent dedication of development rights and open space preservation are required for cluster subdivisions in the RR zone in order to ensure that no further subdivision is possible that would exceed the maximum allowable residential density.

Design Review Combining District
The purpose of the Design Review (–d1) combining district is to designate certain visually and environmentally sensitive areas as requiring design review, with the intention of mitigating adverse visual impacts of development and encouraging quality design. The –d1 combining district is intended to conserve the scenic attributes of those hillside lands most immediately visible from the Santa Clara Valley floor. The district is intended to minimize the visual impacts of structures and grading on the natural topography and landscape, using a combination of supplemental development standards, design guidelines, design review, and process incentives for smaller and less visible projects. The –d1 combining district uses a tiered regulatory structure primarily on building size.

The –d1 combining district also has specific regulations regarding the light reflectivity value of exterior surfaces, building massing, and retaining walls, as well as a requirement that the ridgeline protection policies of the General Plan Growth and Development chapter be applied to any project situated on or adjacent to a ridgeline.

City of Morgan Hill General Plan
The City of Morgan Hill has identified General Plan land use designations for the subdivision area. The entire project area is within the jurisdiction of the County of Santa Clara, however, and, therefore, no Morgan Hill General Plan policies apply to the proposed project.

Draft Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan (Santa Clara County et al. 2010)
The draft Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) was released for public review in December 2010, and comments were accepted through April 2011. As of the date of this document, the plan has not been finalized or adopted. After the HCP/NCCP is adopted, it would be applicable to the project in the future.
3.10 LAND USE, PLANNING, AND RECREATION

3.10.3 Thresholds of Significance

The proposed project would result in a significant impact if it would:

- Physically divide an established community.
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the General Plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.
- Conflict with special policies:
  - (i) San Martin and/or South County
  - (ii) Los Gatos Specific Plan or Lexington Watershed
  - (iii) New Almaden Historical Area/Guadalupe Watershed
  - (iv) Stanford
  - (v) City of Morgan Hill Urban Growth Boundary Area
  - (vi) West Valley Hillsides Preservation Area.
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.
- Be on, within, or near a public or private park, wildlife reserve, or trail or affect existing or future recreational opportunities.
- Result in loss of open space rated as high priority for acquisition in the “Preservation 2020” report.

3.10.4 Impacts and Mitigation

The project would not physically divide an established community. (No impact)

The construction of the proposed project, the future construction of the 25 residences, and the post-construction occupation of the future residences would not divide an established community. The project area is bordered to the north, west, and south by distinct and separate rural and suburban residential developments with scattered agricultural uses to the west, and the land east of the project site is largely undeveloped and used for livestock grazing. The subdivision area is currently largely undeveloped and does not contain an established community. No impacts would occur.

The project would not significantly conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the General Plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. (Less than significant impact)

Santa Clara County General Plan
Countywide Strategies and Policies

The proposed project includes the construction of private on-site recreational pedestrian and equestrian trails for the exclusive use of subdivision residents and their guests. These trails
would use the existing dirt roads and the shoulder of the new primary access roadway to the extent feasible, with new trail portions constructed to create a contiguous system of private trails. These trails would avoid wetland and riparian habitat. Future residential development may include the development of additional private recreational features such as equestrian riding arenas, tennis courts, and swimming pools within the homesite and transition zones on each of the residential lots, as well as less intensive recreational uses such as hiking, horseback riding, and wildlife observation in the natural lands zones. The residential lots are located in areas that avoid wetlands, riparian areas, and other sensitive habitats.

The proposed project would be consistent with C-PR 17, which requires that private recreational uses be low-intensity. The proposed recreational facilities would only be used by the subdivision residents and their guests.

General Plan policies C-PR 21 and C-PR(iii) 13.3 state that countywide trail system should be linked to regional trails, such as the Bay Area Ridge Trail, to encircle the urban areas of the County and the San Francisco Bay, and that private development should be monitored and the County to work with property owners to preserve the integrity of the proposed trail route in their project design.

The proposed alignment for a segment of Regional Trail Route R5, also known as the Bay Area Ridge Trail, is located on the adjacent parcel near several of the project elements, including two wells, dual water tanks, underground pipelines, access roads, and the temporary soil storage area. The construction of these facilities and associated easement dedication to serve the subdivision could impact the completion of this segment of the Bay Area Ridge Trail. To ensure the construction of the facilities and associated easement dedication would not impair the ability to complete this trail segment, the County would require as a condition of the project’s approval that both the language of required utility easement and the location of the improvements do not prohibit future trail dedication and construction.

The proposed project would also be consistent with C-PR 23 and C-PR 24, which require the planning and location of trails to be protective of habitat, wetlands, and riparian areas and sensitive to impacts on adjacent lands.

*Rural Unincorporated Area Issues and Policies*
R-PR 14 and R-PR 19 are similar in scope to the Countywide strategies and policies discussed above in that they require private recreational uses to be low-intensity and compatible with the landscape and natural resources. The private recreational uses that would be constructed as part of the proposed project and future residential development would be consistent with these policies.

*General Plan Policies Applicable to the Hillside Land Use Designation*
The Fountain Oaks LLC property, which would involve subdivision into residential lots C-1 and C-2 and open space lots 4 and 5, is designated as Hillside Land Use by Santa Clara County.
Policies R-LU 16 and R-LU 17 require the preservation of hillsides largely for natural resource and open space uses, and require that use is consistent with the goal of conservation, the wise use of resources, and limited development. The proposed development is consistent with both of these policies. Development on the Fountain Oaks LLC property would be limited, as described in Table 3.10-2 below. The limited acreage of developed area would be in compliance with Policies R-LU 16 and R-LU 17.

The project would include the development of low-density residential development, low-density private recreational uses, limited agriculture, and continued livestock grazing use of the Fountain Oaks LLC property. These uses comply with the allowable uses outlined in policy R-LU 18, and the project would be consistent with this policy.

The proposed subdivision is designed as a cluster development, and policies R-LU 20 and R-LU 21 pertain to residential density and cluster development in the Hillside land use designation.

R-LU 20 requires a minimum parcel size of 2 acres for developed areas. Parcel sizes for the proposed residential lots are 6.72 acres for lot C-1 and 6.64 acres for lot C-2, which complies with this requirement. R-LU 20 also requires that open space allotments comprise a minimum of 90 percent of the land area, and that this open space area not be accessible to the public. As discussed above, approximately 85.32 acres of the total 92.18 acres of the Fountain Oaks LLC property, or 92.6 percent, would be designated as open space, and the grazing and limited recreational uses within this open space area would not be accessible to the public. The project would be consistent with policy R-LU 20.

Policy R-LU 21 requires basic infrastructure improvements, including roadways, to be efficient in terms of location and length, and that development features avoid natural hazards and impacts on resources. The policy also requires that visual impacts be minimized by prohibiting major, lasting visible scars on the landscape, and that structures on or near ridgelines be constructed and screened so that visual impacts from the valley floor are minimized. The applicant selected the roadway alignments and homesite zone locations from several options based on creating the least environmental impact and the lowest amount of visibility from the valley floor. Visual impacts and mitigation measures are discussed in more detail in Section 3.1: Aesthetics. The project would be consistent with policy R-LU 21.

| Table 3.10-2: Development and Open Space on the Hillside-Zoned Area of the Subdivision |
|----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| **Total Acres** | **Homesite Zone (acres)** | **Transition Zone (acres)** | **Natural Lands Zone (acres)** | **Open Space Lots (acres)** | **Total Open Space¹ (acres)** | **Total Open Space (%)** |
| 92.18 | 1.93 | 4.93 | 6.5 | 78.82 | 85.32 | 92.6 |

**NOTE:** ¹ The total open space is a combination of the natural lands zones of the residential lots and the open space lots.
R-LU 24 prohibits development on slopes greater than 30 percent with two exceptions. Although the residential lots included in the proposed project have overall slopes greater than 30 percent, the slope of the homesite zones, where the residential and supporting structures would be located, are approximately 7 percent for lot C-1 and 11 percent for lot C-2. The project would be consistent with policy R-LU 24.

**General Plan Policies Applicable to the Rural Residential Land Use Designation**

The Coyote Highlands LLC property, which would involve subdivision into residential lots 1 through 23 and open space lots 1 through 3, is designated as Rural Residential by Santa Clara County.

The proposed project would be low-density residential development, low-density private recreational uses, limited agriculture, and continued livestock grazing use of the Coyote Highlands LLC property. These uses comply with the allowable uses outlined in policy R-LU 57, and the project would be consistent with this policy.

Policy R-LU 58 requires a minimum lot size of 5 acres per parcel, unless the development is a cluster subdivision. Since the proposed project is a cluster subdivision, policy R-LU 58 does not apply, and the project would be considered consistent with this policy.

Policy R-LU 59 allows for residential cluster development as long as the open space portions of the project are protected as permanent open space. The open space areas proposed as part of the project would include open space lots 1 through 3 and the natural lands zones on residential lots 1 through 23. These proposed open space areas would be protected as permanent open space and managed by a private land use trust. The project would be consistent with policy R-LU 59.

R-LU 60 requires a minimum lot size of 1 acre per parcel for residential cluster developments. The proposed lot sizes for residential lots 1 through 23 would range from 3.45 to 10.76 acres, and exceed the minimum lot size requirement of 1 acre. The proposed project would be consistent with policy R-LU 60.

**Site-Specific General Plan Land Use Policies**

Policy R-LU A:5 applies specifically to the Coyote Highlands LLC property and requires a maximum density of 20 acres per dwelling unit. The Coyote Highlands LLC property is approximately 465 acres in size, which would allow for 23 residential units on the property. The project involves the creation of 23 residential lots on this property and the future development of up to 23 residences (20.2 acres per dwelling unit). The proposed project is consistent with policy R-LU A:5.

**Santa Clara County Zoning Ordinance**

**Hillside Zoning District**

All of the proposed uses comply with the uses permitted in the HS zoning district. The proposed development is compatible with the intent of the HS zoning district, and would comply with the 2-acre minimum lot size requirement, as lot C-1 would be approximately
6.72 acres in size and lot C-2 would be approximately 6.64 acres in size. The project would also comply with the 90 percent open space requirement, as the combination of open space lot 4 and 5 and the natural lands zones of lots C-1 and C-2 would be 92.6 percent. The proposed project would be compatible with all HS zoning requirements.

**Rural Residential Zoning District**

The proposed cluster subdivision on the Coyote Highlands LLC property would include low-density residential development combined with low-intensity recreation, limited agriculture, and continued livestock grazing activities. All of these uses comply with the uses permitted in the RR zoning district. The proposed development is compatible with the intent of the RR zoning district, which is to promote rural residential development with residential, agricultural, and open space uses being the primary intended uses. The project would comply with the RR cluster subdivision requirement of a minimum of 1 acre per lot, as residential lots 1 through 23 would range in size from 3.45 to 10.76 acres. The open space proposed in open space lots 1 through 3 and the natural lands zones of residential lots 1 through 23 would be dedicated as permanent open space. The proposed project would be compatible with all RR zoning requirements.

**Design Review Combining District**

Both the Fountain Oaks LLC property and the Coyote Highlands LLC property are subject to the -d1 Design Review Combining District. The –d1 zoning designation uses a tiered regulatory system for County review of proposed structures, with Tier 3 providing the most stringent of the three review processes. Future residential development would comply with Tiers 1, 2 or 3 (see the description of the Design Review Combining District in the Regulatory Setting, above).

Future residential development would also be required to comply with all –d1 regulations regarding light reflectivity, building massing, retaining walls, and protection of ridgelines from visual impacts. Compliance with the Tier 1, Tier 2, or Tier 3 design review requirements would ensure future residential development complies with all –d1 zoning regulations.

**City of Morgan Hill General Plan**

The City of Morgan Hill does not have jurisdiction over the subdivision area, so the City’s General Plan land use designations (see Figure 3.10-3) do not affect current development of the subdivision area. The subdivision area is within the City of Morgan Hill sphere of influence, and the City of Morgan Hill may therefore be interested in the development of the subdivision area. A preliminary review of the City of Morgan Hill General Plan policies was performed to determine whether the proposed project would be compatible with the City’s General Plan land use designations.

The subdivision area is designated as Open Space and Rural County. The low-density residential, low-density recreation, limited agriculture, and continued livestock grazing uses proposed as part of the project are compatible with the City of Morgan Hill General Plan land use designations for the subdivision area, which allow for all of these uses. The project would generally comply with the City’s policies regarding the protection of open space, agriculture, riparian areas, and scenic hillsides, and would avoid development in hazardous areas and steep
3.10 LAND USE, PLANNING, AND RECREATION

slopes. The minimum lot size for single-family parcels within the applicable City of Morgan Hill General Plan land use designations is 5 acres, though residential cluster development is also allowed. The proposed project would be generally compatible with the City of Morgan Hill’s General Plan policies.

The project would not conflict with special policies in any of the following regions: (i) San Martin and/or South County; (ii) Los Gatos Specific Plan or Lexington Watershed; (iii) New Almaden Historical Area/Guadalupe Watershed; (iv) Stanford; (v) City of Morgan Hill Urban Growth Boundary Area; and (vi) West Valley Hillsides Preservation Area. (No impact)

The project is not located in any of the six special areas identified in the Santa Clara County General Plan, and would therefore not conflict with any policies specific to these special areas. The project would have no impact on the County’s special policies.

The project would not significantly increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. (Less than significant impact)

Construction
Construction of the proposed project would draw the majority of the construction workforce from the San Francisco Bay Area and environs. It is unlikely that any construction personnel would need to relocate to the area. Any added deterioration to neighborhood and regional parks or other recreational facilities as a result of use by project construction workers would be minimal, and impacts would be less than significant.

Subdivision Improvements and Future Residences
Future residential development would result in the creation of 25 new single-family residences. Some of the new residents may be property owners who already live in the project region, whereas other residents may relocate to the new residences from outside the project region, and potentially from outside the San Francisco Bay Area. The occupation of the 25 new residences would add to the population served by the neighborhood and regional parks and recreational facilities. However, the increase in population would be small compared to the population already served by existing recreational facilities, and any added deterioration to neighborhood and regional parks or other recreational facilities as a result of residents’ use would be minimal. Post-construction impacts to existing parks and recreational facilities would be less than significant.

The project would not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. (Less than significant impact)

Construction
The proposed project includes the development of hiking and equestrian trails within the subdivision area, as shown on Figure 2.5-3.

The construction of private recreational facilities on the subdivision area would have minimal impacts on existing recreational uses in the project vicinity, as the proposed recreational uses would not be connected to any off-site recreational facilities. The environmental impacts of the
construction of these proposed recreational facilities are addressed in greater detail in Section 3.4: Biological Resources, Section 3.6: Geology and Soils, and Section 3.9: Hydrology and Water Quality.

**Subdivision Improvements**
The private hiking and equestrian trails proposed as part of the project would be for the exclusive use of the subdivision residents and their guests. The trails would not be accessible to the public, and would not receive heavy foot and equestrian traffic from residents of 25 homes. The private on-site trails would not connect to any public or private trails located outside of the subdivision area. The majority of the private onsite trail system would be created from the existing unpaved access roads on the site or in the shoulder of the new primary access road, with minimal new segments created to connect existing onsite dirt road segments. Three picnic tables would be placed at locations along the private trail route, but no other recreational improvements are proposed. The proposed private trail system would have a less than significant impact on the physical environment, and no mitigation is required.

**Future Residences**
Future construction of the 25 single-family residences would also allow for the construction of recreational facilities such as tennis courts and swimming pools in the homesite zones; riding arenas, horse paddocks, and trails in the transition zones; and recreational activities such as hiking, horsetack riding, off-street bicycling, and wildlife observation in the natural lands zones. Each residential lot’s recreational uses and activities would be for the private use of the property owner and would not be available to the public or other subdivision residents. Future lot-specific recreational facilities would have a minimal impact on the physical environment, and no mitigation is required.

The project would be located adjacent to an existing public park and a planned public trail, and would not have a significant impact on existing or future recreational opportunities. *(Less than significant impact)*

The Coyote Lake-Harvey Bear Ranch County Park is located adjacent to the southeastern edge of the proposed subdivision area, and a proposed future segment of the Bay Area Ridge Trail is located to the immediate east of the subdivision area eastern boundary. The proposed subdivision and future residential development would not have a significant impact on existing recreational opportunities at the Coyote Lake-Harvey Bear Ranch County Park, as the proposed development would not provide a link to the existing park and would not interfere with recreational uses in the park. Additionally, per the Use and Management Guideline M-2.0 of the Countywide Trails Master Plan, no private access to county parks or trails shall be permitted without prior authorization. Impacts to planned public trails as a result of this project have been discussed previously in this section.

The project would not result in loss of open space rated as high priority for acquisition in the “Preservation 2020” report. *(Less than significant impact)*

The subdivision area is within the East San Martin Foothills study area as designated by the April 1987 Open Space Preservation: A Program for Santa Clara County report (Preservation 2020
The Preservation 2020 report contains guidelines for development and open space acquisition for hillside areas in order to preserve the maximum area of open space while accommodating development. The Preservation 2020 guidelines suggest using incentives to limit development of hillside areas to 10 percent of the total combined acreage, and the provision of an open space easement on the remaining 90 percent. The Preservation 2020 report also contains criteria for cluster developments on hillsides, including the following:

- Cluster development should not be located on lands designated as high priority for park or open space acquisition.
- Cluster development should occur on stable slopes of less than 30 percent, and that are not in an active fault zone.
- Cluster development should avoid aquifer recharge areas and riparian corridors.
- Cluster development should not intrude on prime viewsheds and should not be located on a visually prominent ridgeline.
- Cluster development should be reasonably accessible via existing or potential roads that avoid riparian habitat, disruption of stream corridors, and transcending slopes of 30 percent or more.
- Cluster development should avoid adversely impacting habitat for endangered species.
- Public services provided to the cluster development should be sized to meet the demands of the particular development only, with appropriate restrictions included to limit capacity.
- Open space preserved should be in contiguous blocks of at least 20 acres.

The proposed project includes a cluster development that would comply with most of the guidelines of the Preservation 2020 report. The cluster development would not be located on lands designated for park acquisition but would, however, be located on lands designated as high priority for open space acquisition.

While a portion of the subdivision area would be used for cluster subdivision development, a minimum of 90 percent of the subdivision area would be dedicated as open space as a result of this project, with all contiguous open space blocks measuring more than 20 acres in size. The small amount of land lost to the improvements and residences, and the preservation and dedication of the more desirable open space areas on the property near the Kellogg and Fountain Oaks residences, would result in less than significant impacts.

The project would also comply with the Preservation 2020 guidelines regarding slopes, aquifer recharge areas, riparian and stream corridors, and endangered species. See Section 3.2: Biology, Section 3.6: Geology, and Section 3.9: Hydrology and Water Quality for more information on these resources.
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3.11 MINERAL RESOURCES

3.11.1 Environmental Setting
Regional Setting
Minerals of significance in the County include construction aggregate deposits (i.e., sand, gravel, and crushed stone) and salt, which is evaporated from southern San Francisco Bay waters (Santa Clara County 2010).

The County reported eight operational quarries on unincorporated lands in 1992, none of which are located in the project vicinity (Santa Clara County 2010).

Local Setting
The California Surface Mining and Reclamation Act (SMARA) of 1975 requires that the State Geologist classify land into mineral resource zones (MRZs) according to the known or inferred mineral potential of the land. The four major MRZ classification types identified by the California State Mining and Geology Board (SMGB) are:

- MRZ-1: areas where geologic information indicates no significant mineral deposits are present
- MRZ-2: areas that contain identified mineral resources
- MRZ-3: areas of undetermined mineral resource significance
- MRZ-4: areas of unknown mineral resource potential

The northwest and west portion of the project is located on lands classified as MRZ-1 and MRZ-3, which contain no known mineral resources of value. The project is not located in an area designated MRZ-2, where minerals of significant value have been identified (Baker 2012).

3.11.2 Regulatory Setting
Federal
There are no federal laws or regulations pertaining to mineral resources that are applicable to the proposed project.

State
Surface Mining and Reclamation Act of 1975
Mineral resource zones are designated by the California Geological Survey (CGS) where access to important mineral resources may be threatened, according to the provisions of SMARA. SMARA requires that all jurisdictions incorporate mapped mineral resources approved by SMGB into their general plans. The California Department of Conservation’s (CDC’s) Office of Mine Reclamation (OMR) and SMGB are jointly charged with ensuring proper administration of SMARA’s requirements. SMGB promulgates regulations to clarify and interpret the act’s provisions and also serves as a policy and appeals board. OMR provides an ongoing technical assistance program for lead agencies and operators, maintains a database of mine locations and operational information statewide, and is responsible for compliance-related matters.
3.11 MINERAL RESOURCES

Local
The Santa Clara County General Plan (Santa Clara County 1994) policies relevant to mineral resources of the proposed project are listed below.

C-RC 44 Local supplies of mineral resources should be recognized for their importance to the local, regional, and state economy. County-wide strategies for preserving and managing mineral resources include:

(a) Ensuring continued availability of mineral resources to meet long term demand;
(b) Mitigating environmental impacts of extraction and transportation; and
(c) Reclaiming sites for appropriate subsequent land uses.

C-RC 46 Existing sites and access routes for regionally significant resources should be protected from incompatible land uses and development that would preclude or unnecessarily limit resource availability.

3.11.3 Thresholds of Significance
The proposed project would result in a significant impact if it would:

• Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the state
• Result in the loss of availability of a locally important mineral resource recovery site as delineated on a local general plan, specific plan, or other land use plan

3.11.4 Impacts and Mitigation
The project would not result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the state. (No impact)

There is no known mineral resource within the project area or vicinity. Construction of the roadway, infrastructure, private recreation, and future residential development in the project area would not result in the loss of availability of valuable mineral resources. Construction of the proposed project would have no impact on availability of a known mineral resource.

The project would not result in the loss of availability of a locally important mineral resource recovery site as delineated on a local general plan, specific plan, or other land use plan. (No impact)

There are no mineral resource recovery sites identified in the project area or vicinity. The proposed project and future residential development would have no impact on the availability of any locally important mineral resource recovery site.
3.12 NOISE

3.12.1 Description of Noise
Noise is defined as unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing. Decibels and other technical terms are defined in Table 3.12-1.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decibel (dB)</td>
<td>A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the sound pressure to the reference pressure. The reference pressure for air is 20.</td>
</tr>
<tr>
<td>A-Weighted Sound Level (dBA)</td>
<td>The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter deemphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear, and correlates well with subjective reactions to noise.</td>
</tr>
<tr>
<td>Statistical descriptor (Lx)</td>
<td>The noise level exceeded X percent of a specified time period. The value of X is commonly 10 (e.g., L10). Other values such as 50 and 90 are also used.</td>
</tr>
<tr>
<td>Equivalent Noise Level (Leq)</td>
<td>The equivalent steady-state noise level in a stated period of time that would contain the same acoustic energy as the time-varying noise level during the same period.</td>
</tr>
<tr>
<td>Community Noise Equivalent Level (CNEL)</td>
<td>The average A-weighted sound level during a 24-hour day, obtained after addition of 5 dB to sound levels in the evening from 7:00 PM to 10:00 PM and addition of 10 dB to sound levels in the night from 10:00 PM to 7:00 AM. The CNEL is generally computed for annual average conditions.</td>
</tr>
<tr>
<td>Day/Night Average Sound Level (Ldn)</td>
<td>The average A-weighted sound level during a 24-hour day, obtained after addition of 10 dB to sound levels measured in the night from 10:00 PM to 7:00 AM.</td>
</tr>
<tr>
<td>Maximum Noise Emission Level (Lmax)</td>
<td>The highest instantaneous noise level during a specified time period. This descriptor is sometimes referred to as “peak (noise) level.”</td>
</tr>
<tr>
<td>Ambient Noise Level</td>
<td>The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.</td>
</tr>
<tr>
<td>Intrusive</td>
<td>Noise that intrudes over and above the existing ambient noise level at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, time of occurrence, and tonal or informational content, as well as the prevailing ambient noise level.</td>
</tr>
</tbody>
</table>

Source: Caltrans 2009
Most of the sounds that we hear in the environment do not consist of a single frequency, but a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency combine to generate a sound. The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies of a sound in accordance with a filter that reflects the fact that human hearing is less sensitive at low frequencies and extremely high frequencies than in the middle range of frequencies. This is called “A” weighting, and the decibel level measured is called the A-weighted sound level (dBA). The level of a sound source is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve. Typical A-weighted sound levels for different types of noise measured in the environment and in industry are provided in Table 3.12-2.

Although the A-weighted sound level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources, which creates a relatively steady background noise in which no particular source is identifiable. To describe the time-varying character of environmental noise, the statistical noise descriptors $L_{01}$, $L_{10}$, $L_{50}$, and $L_{90}$ are commonly used. They are the A-weighted sound levels equaled or exceeded during 1 percent, 10 percent, 50 percent, and 90 percent of a stated time period. A single numerical descriptor called the $L_{eq}$ is also widely used. $L_{eq}$ is the average A-weighted sound level during a stated time period.

In determining the daily level of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises. Exterior background noises are generally lower during the nighttime than during the daytime. Most household noise also decreases at night and exterior noise becomes very noticeable despite reduced noise level. Most people sleep at night and are very sensitive to noise intrusion. To account for human sensitivity to nighttime noise levels, a descriptor, $L_{dn}$ (day/night average sound level), was developed. The $L_{dn}$ divides the 24-hour day into the daytime of 7:00 AM to 10:00 PM and the nighttime of 10:00 PM to 7:00 AM. The nighttime noise level is weighted 10 dB higher than the daytime noise level.

**Groundborne Vibration**

Vibrating objects in contact with the ground radiate energy through the ground. Vibrations from large and/or powerful objects are perceptible by humans and animals. Vibrations can be generated by construction equipment and activities. Vibrations attenuate depending on soil characteristics and distance.

The U.S. Department of Transportation (USDOT) has guidelines for vibration levels from construction activities, and recommends that the maximum peak particle velocity levels remain less than 0.05 inch per second (in/sec) at the nearest structures. Vibration levels greater than 0.5 in/sec have the potential to cause architectural damage to normal dwellings. USDOT also states that vibration levels greater than 0.015 in/sec are sometimes perceptible to people, and the level at which vibration becomes annoying to people is 0.64 in/sec (USDOT 2006).
## Table 3.12-2: Typical Noise Levels in the Environment

<table>
<thead>
<tr>
<th>Common Outdoor Activities</th>
<th>Noise Level (dBA)</th>
<th>Common Indoor Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jet flyover at 1,000 feet</td>
<td>110</td>
<td>Rock band</td>
</tr>
<tr>
<td>Gas lawnmower at 3 feet</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Diesel truck at 50 feet at 50 mph</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Noisy urban area, daytime</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas lawnmower, 100 feet</td>
<td>80</td>
<td>Food blender at 3 feet</td>
</tr>
<tr>
<td>Commercial area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heavy traffic at 300 feet</td>
<td>70</td>
<td>Garbage disposal at 3 feet</td>
</tr>
<tr>
<td>Quiet urban daytime</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Quiet urban nighttime</td>
<td>50</td>
<td>Vacuum cleaner at 10 feet</td>
</tr>
<tr>
<td>Quiet suburban nighttime</td>
<td>40</td>
<td>Normal speech at 3 feet</td>
</tr>
<tr>
<td>Quiet rural nighttime</td>
<td>30</td>
<td>Large business office</td>
</tr>
<tr>
<td>Broadcast/recording studio</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Library</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Bedroom at night, concert hall (background)</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Source: Caltrans 2009
3.12 NOISE

3.12.2 Environmental Setting

Existing Noise Conditions

Regional Noise Setting

The project area is undeveloped and adjacent to suburban and rural residential areas to the north, west, and south. Areas not affected by transportation typically experience noise levels in the range of 40 to 50 L_{dn}, and remote parks can experience noise levels below 40 L_{dn} within Santa Clara County (Santa Clara County 1994a). The primary areas affected by noise include areas near transit corridors, major streets, highways, rail lines, and airports. The County has defined areas that experience noise in excess of 55 L_{dn} as noise impact areas (Santa Clara County 1994b).

The project area is not located within or near a transit corridor. Noise levels within the project area are typical of rural and residential areas within Santa Clara County not affected by transportation, in the range of 40 to 50 L_{dn}.

The project is not located within an airport land use plan. The nearest airport to the project area is South County Airport of Santa Clara County, which is located approximately 2.5 miles south-southwest of the project area. There are no private airstrips within the project vicinity. The closest private airstrip is Frazier Lake Airpark located more than 10 miles south of the project area.

The primary sources of noise associated with existing urban and rural residential development in the project vicinity include vehicles, landscaping equipment (e.g., lawnmowers, chain saws, and weed whackers), and barking dogs. Sources of noise associated with the current and future agricultural use of the property, cultivated row crops to the west of the project area, and grazing and vegetation management activities to the east of the project area may include vehicles, tractors, and gas-powered equipment used for vegetation management.

Sensitive Receptors

Sensitive noise receptors include residential areas, hospitals, schools, performance spaces, businesses, and religious congregations. Wildlife within the area may also be considered sensitive receptors because certain species of wildlife and their use of the area can be impacted by noise.

The project area is currently undeveloped. Most of the developed land in the surrounding area is in residential use with suburban and rural residential areas to the north, west, and south. The closest residences to the north are located in the Jackson Oaks and Holiday Lakes Estates subdivisions. To the west there are 14 single-family residences east of Carey Lane. The closest residences to the south are located within the Rancho Robles subdivision. The area east of the project area is used for grazing at Coyote Valley Ranch and recreation at Harvey Bear Ranch County Park (Figure 2.2-3).

Twenty-three residences are located within 500 feet of proposed construction activities (Figure 3.12-1). There are no hospitals, performance spaces, or religious congregations located within 1 mile of the project area. The nearest school to the project area is Jackson Elementary School, located approximately 0.65 mile northwest of the project area.
3.12 NOISE

Figure 3.12-1: Sensitive Receptors in the Project Vicinity

Legend:
- Proposed Subdivision Area Boundary
- Access Road 500 foot Radius
- Project Impact Zone 500 foot Radius
- Sensitive Receptor

Source: ESRI 2012 and Panorama Environmental, Inc. 2012

Scale: 1:14,000
3.12.3 Regulatory Setting

Federal

Noise Control Act
In 1974, EPA published Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. The document provides information for state and local governments to use in developing ambient noise standards. EPA determined that an Ldn of 55 dBA protects the public from indoor and outdoor activity interference.

EPA, FHWA, and USDOT have developed guidelines for noise. Under the authority of the Noise Control Act of 1972, EPA established noise emission criteria and testing methods, published in 40 CFR Part 204, that apply to some construction and transportation equipment (i.e., portable air compressors and medium- and heavy-duty trucks).

State

Noise Control Act of 1973
The California Department of Health Services (DHS) Office of Noise Control has studied the correlation of noise levels and their effects on various land uses. The California Noise Control Act of 1973 is contained within California Health and Safety Code §46000-46080. The policy requires study of noise impacts on human health and requires the state to support local agencies in developing noise ordinances.

Local

Santa Clara County General Plan
Noise policies included in the Santa Clara County General Plan Health and Safety Chapter, include:

C-HS 24 Environments for all residents of Santa Clara County free from noises that jeopardize their health and well-being should be provided through measures which promote noise and land use compatibility.

C-HS 25 Noise impacts from public and private projects should be mitigated.

C-HS 26 New development in areas of noise impact (areas subject to sound levels of 55 DNL or greater) should be approved, denied, or conditioned so as to achieve a satisfactory noise level for those who will use or occupy the facility (as defined in “Noise Compatibility Standards for Land Use” and “Maximum Interior Noise Levels For Intermittent Noise”).
3.12 NOISE

Noise and Vibration Ordinance

County Municipal Code, Sec. B11-192: Exterior Noise Limits

1. Maximum Permissible Sound Levels by Receiving Land Use
   
   (a) The noise standards for the various receiving land use categories as presented in table B11-192 [see Table 3.12-3] shall apply to all such property within any zoning district.

   (b) No person shall operate or cause to be operated any source of sound at any location within the unincorporated territory of the county or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other property either incorporated or unincorporated, to exceed:

   i. The noise standard for that land use as specified in table B11-192 for a cumulative period of more than thirty (30) minutes in any hour; or
   ii. The noise standard plus five (5) dB for a cumulative period of more than fifteen (15) minutes in any hour; or
   iii. The noise standard plus ten (10) dB for a cumulative period of more than five (5) minutes in any hour; or
   iv. The noise standard plus fifteen (15) dB for a cumulative period of more than one (1) minute in any hour; or
   v. The noise standard plus twenty (20) dB or the maximum measured ambient, for any period of time.

   (c) If the measured ambient level exceeds that permissible within any of the first four (4) noise limit categories above, the allowable noise exposure standard shall be increased in five (5) dB increments in each category as appropriate to encompass or reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

   (d) If the noise measurement occurs on a property adjacent to a different land use category, the noise level limit applicable to the lower land use category, plus five (5) dB, shall apply.

   (e) If for any reason the alleged offending noise source cannot be shutdown, the ambient noise must be estimated by performing a measurement in the same general area of the source but at a sufficient distance such that the noise from the source is at least ten (10) dB below the ambient in order that only the ambient level be measured. If the difference between the ambient and the noise source is five (5) to ten (10) dB, then the level of the ambient itself can be reasonably determined by subtracting a one-decibel correction to account for the contribution of the source.
**Table 3.12-3: Santa Clara County Noise and Vibration Ordinance Table B11-192, Exterior Noise Limits**

<table>
<thead>
<tr>
<th>Receiving Land Use Category</th>
<th>Time Period</th>
<th>Noise Level (dBA)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>One- and Two-Family Residential</td>
<td>10:00 PM—7:00 AM</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>7:00 AM—10:00 PM</td>
<td>55</td>
</tr>
<tr>
<td>Multiple-Family Dwelling</td>
<td>10:00 PM—7:00 AM</td>
<td>50</td>
</tr>
<tr>
<td>Residential Public Space</td>
<td>7:00 AM—10:00 PM</td>
<td>55</td>
</tr>
<tr>
<td>Commercial</td>
<td>10:00 PM—7:00 AM</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>7:00 AM—10:00 PM</td>
<td>65</td>
</tr>
<tr>
<td>Light Industrial</td>
<td>Any Time</td>
<td>70</td>
</tr>
<tr>
<td>Heavy Industrial</td>
<td>Any Time</td>
<td>75</td>
</tr>
</tbody>
</table>

**NOTE:**
* Levels are not to be exceeded more than 30 minutes in any hour.

Source: Santa Clara County Noise and Vibration Ordinance 2012

2. Correction for Character of Sound: In the event the alleged offensive noise contains a steady, audible tone such as a whine, screech or hum, or contains music or speech conveying informational content, the standard limits set forth in table B11-192 shall be reduced by five (5) dBA.

*Sec. B11-194*

The following acts, and the causing or permitting thereof, are declared to be in violation of this chapter:

2.6 Construction/Demolition

(a) Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between weekdays and Saturday hours of 7:00 PM and 7:00 AM, or at any time on Sundays or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance. This section shall not apply to the use of domestic power tools as specified in section B11-194 (2.11).

(b) Where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum noise levels at affected properties will not exceed those listed in the following schedule [see Table 3.12-4]:
Table 3.12-4 Santa Clara County Noise and Vibration Ordinance

<table>
<thead>
<tr>
<th>Time Period</th>
<th>One- and Two-Family Dwelling Residential Area</th>
<th>Multiple-Family Dwelling Residential Area</th>
<th>Commercial Area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mobile equipment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily, except Sundays and legal holidays, 7:00 AM—7:00 PM</td>
<td>75 dBA</td>
<td>80 dBA</td>
<td>85 dBA</td>
</tr>
<tr>
<td>Daily, 7:00 PM—7:00 AM, and all day Sundays and legal holidays</td>
<td>50 dBA</td>
<td>55 dBA</td>
<td>60 dBA</td>
</tr>
<tr>
<td><strong>Stationary equipment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily, except Sundays and legal holidays, 7:00 AM—7:00 PM</td>
<td>60 dBA</td>
<td>65 dBA</td>
<td>70 dBA</td>
</tr>
<tr>
<td>Daily, 7:00 PM—7:00 AM, and all day Sundays and legal holidays</td>
<td>50 dBA</td>
<td>55 dBA</td>
<td>60 dBA</td>
</tr>
</tbody>
</table>

Source: Santa Clara County Noise and Vibration Ordinance 2012

2.7 Vibration. Operating or permitting the operation of any device that creates a vibrating or quivering effect that:

(a) Endangers or injures the safety or health of human beings or animals; or
(b) Annoys or disturbs a person of normal sensitivities; or
(c) Endangers or injures personal or real properties.

3.12.4 Thresholds of Significance
Potential project impacts to noise were evaluated by determining the sensitivity, significance, or rarity of each resource that could be adversely affected (either directly or indirectly) by the proposed project, and by using thresholds of significance to evaluate the significance of potential impacts. Guidance for evaluating significance thresholds is based on the CEQA Environmental Checklist (CEQA Guidelines, Appendix G). Using these guidelines, the proposed project would result in a significant impact if it would:

- Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project
3.12 NOISE

- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project
- For a project located within an airport land use plan referral area or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels

3.12.5 Impacts and Mitigation

With mitigation incorporated, the proposed project would not result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Less than significant with mitigation incorporated)

Construction

The County noise ordinance restricts construction-related noise near single-family residential areas to 60 dBA for mobile equipment operated Monday through Saturday from 7:00 AM to 7:00 PM. Anticipated noise emissions associated with equipment used for construction of the roadway, utility, private recreation, and drainage improvements are identified in Table 3.12-5. The table also provides a typical usage factor for each equipment type and the estimated number of hours that each piece of equipment would be used for project construction. The acoustical usage factor is an estimate of the fraction of time each piece of equipment operates at full power.

For construction of the roadway and infrastructure, equipment use would be temporary and restricted to the 6-month construction period. Future residential construction could be conducted over multiple years. Construction would be restricted to the hours of 7:00 AM to 7:00 PM Monday through Saturday, excluding holidays, in accordance with the County noise ordinance. The maximum anticipated noise levels would be approximately 85 dB at 50 feet from construction equipment. Construction-generated noise is generally reduced by 6 dB every time the distance from a point source is doubled. A doubling of noise generally results in a 3-dB increase in sound level.

Noise impacts to sensitive receptors along area roadways would be less than significant because truck traffic would be routed along a state-authorized truck route. Construction traffic would use Tennant Avenue and Hill Road, which do not border residential areas. Construction traffic would not use Oak Canyon Drive or otherwise travel through the Jackson Oaks subdivision. There are no schools, hospitals, or religious congregations located along the proposed truck route. Sensitive noise receptors would be limited to the few residences located along Maple Avenue and Carey Lane near the entrance to the project area. Noise from truck traffic would periodically exceed 60 dBA for the few residences located near the proposed truck route. Truck traffic would be heaviest for approximately 2 weeks during staging of materials and equipment and at the completion of construction to remove materials from the project area. One or two water trucks would be used continuously throughout construction.
### 3.12 NOISE

#### Table 3.12-5: Construction Equipment and Typical Noise Emission Levels

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Acoustical Usage Factor (%)</th>
<th>$L_{\text{max}}$ at 50 feet (dBA)</th>
<th>$L_{\text{max}}$ at 100 feet (dBA)</th>
<th>$L_{\text{max}}$ at 400 feet (dBA)</th>
<th>Usage (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulldozer</td>
<td>40</td>
<td>85</td>
<td>79</td>
<td>67</td>
<td>504</td>
</tr>
<tr>
<td>Motor Grader</td>
<td>40</td>
<td>85</td>
<td>79</td>
<td>67</td>
<td>280</td>
</tr>
<tr>
<td>Scraper</td>
<td>40</td>
<td>85</td>
<td>79</td>
<td>67</td>
<td>160</td>
</tr>
<tr>
<td>Excavator</td>
<td>40</td>
<td>85</td>
<td>79</td>
<td>67</td>
<td>180</td>
</tr>
<tr>
<td>Backhoe</td>
<td>40</td>
<td>80</td>
<td>74</td>
<td>62</td>
<td>260</td>
</tr>
<tr>
<td>Front-end Loader</td>
<td>40</td>
<td>80</td>
<td>74</td>
<td>62</td>
<td>200</td>
</tr>
<tr>
<td>Compactor</td>
<td>20</td>
<td>80</td>
<td>74</td>
<td>62</td>
<td>200</td>
</tr>
<tr>
<td>Dump Truck</td>
<td>40</td>
<td>84</td>
<td>78</td>
<td>66</td>
<td>160</td>
</tr>
<tr>
<td>Water Truck*</td>
<td>40</td>
<td>84</td>
<td>78</td>
<td>66</td>
<td>600</td>
</tr>
<tr>
<td>Asphalt Paver</td>
<td>50</td>
<td>85</td>
<td>79</td>
<td>67</td>
<td>65</td>
</tr>
<tr>
<td>Roller</td>
<td>20</td>
<td>85</td>
<td>79</td>
<td>67</td>
<td>200</td>
</tr>
</tbody>
</table>

**NOTE:**

*Based on the noise level for a dump truck.

Source: FHA 2011

Construction-related noise has the potential to exceed County standards for single family residences (60dB) within 500 feet of active construction. The five residences located near the main marshaling yard and the one residence located near Staging Area 1 would be subject to a periodic increase in noise throughout the construction period. Construction noise would be generated by trucks and equipment use associated with material staging. Noise levels would temporarily exceed County noise standards at these residences. 17 additional residences located within Jackson Oaks and Paseo Robles are located within 500 feet of areas that would be subject to active grading for the roadway or future residences as shown on Figure 3.12-1. These areas would involve the use of trucks, bulldozers, pavers, graders, scrapers, and other equipment which would temporarily and periodically increase noise levels at the residences above County standards. Table 3.12-6 shows the potential noise effects of project construction on nearby residences.

Approximately 23 residences would be exposed to temporary construction noises in excess of County standards, and which would therefore be significant. The number of people that would be exposed to noise levels above 60 dB for single family residential areas would be limited to individual residents near areas of active construction. Construction of the roadway, utilities, and drainage improvements would proceed in a linear manner along the roadway, and construction near residences located near the roadway, utility, private recreation, and drainage improvements would be short in duration. Noise from construction (truck traffic) at the staging...
Table 3.12-6: Expected Noise Levels During Construction

<table>
<thead>
<tr>
<th>Staging Area</th>
<th>Activity</th>
<th>Distance to Nearest Resident</th>
<th>Expected Maximum Noise Level</th>
<th>Period of Use/Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Main marshaling yard</td>
<td>137 feet</td>
<td>78 dB for trucks delivering materials</td>
<td>6 months/daily</td>
</tr>
<tr>
<td>2</td>
<td>Rough grading of access road, project entry, mitigation pond</td>
<td>264 feet</td>
<td>72 dB</td>
<td>3 months/daily</td>
</tr>
</tbody>
</table>

areas would be ongoing throughout the 6-month time period for construction. Noise from construction of the future residential development could be generated for multiple years; however, the future residences are setback within the subdivision area and only 2 residences are within 500 feet of residential construction areas.

To reduce noise impacts associated with construction activities near residences, Mitigation Measure Noise -1 would employ best management practices to reduce the noise generated by construction equipment. Mitigation Measure Noise-2 requires that stationary equipment, which could generate noise on a continuous basis be located away from residences thereby reducing impacts to sensitive noise receptors. Mitigation Measure Noise-3 would locate staging areas a minimum of 100 feet from any residences to minimize routine construction noises. By managing construction noise in accordance with these mitigation measures, construction related noise impacts would be less than significant.

**Mitigation Measure Noise-1.** All construction equipment powered by internal combustion engines shall be properly maintained and muffled and shall not be idled longer than necessary.

**Mitigation Measure Noise-2.** Stationary equipment shall be located as far away from residences as possible.

**Mitigation Measure Noise-3.** Construction staging shall not be conducted within 100 feet of any residence.

**Subdivision Improvements**
The addition of the infrastructure included in the proposed project would have no permanent impact on noise in the area. The roadways, utility systems, private recreation development, and drainage improvements would not emit noise after construction. Maintenance and repairs to the infrastructure could result in temporary noise emissions similar to construction noise levels. Maintenance and system repairs would be conducted on an as-needed basis, and would be limited in duration depending on the infrastructure that is in need of repair/maintenance. The presence of the roadways and infrastructure would not expose persons to noise levels in excess of County standards and the impact would be less than significant.
Future Residences
The presence of the 25 future residences would not expose people to noise levels in excess of County standards. New sources of noise associated with future residential development would include vehicles, landscaping equipment, and household noises. These noise sources are commonly associated with residential development and would be similar to those in the surrounding areas. The noise impact of the future residential development would therefore be less than significant.

The proposed project would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. (Less than significant impact)

Construction
Project construction would cause some groundborne vibration, principally during grading and construction of homesites. Construction equipment may include trucks, bulldozers, and jackhammers. Peak particle velocities associated with common construction equipment are identified in Table 3.12-7. The sensitive receptors closest to the project are located approximately 63 feet from the proposed roadway and 137 feet from the proposed limits of staging area 1. Project equipment necessary for road construction would include trucks, bulldozers, graders, scrapers, and excavators. Vibration from this equipment would attenuate to safe levels (i.e., less than 0.05 in/sec) within 33 feet. There would be no vibration effect on nearby sensitive receptors (including effects during construction of the road terminus near the Jackson Oaks neighborhood).

Future construction of the 25 residences would have the same or similar vibrational effects as road construction. The vibration would attenuate rapidly over distance without having significant effects on neighboring properties.

Subdivision Improvements and Future Residences
Neither the proposed project nor future residential development within the subdivision would create a new permanent source of vibration. Maintenance and repairs to the infrastructure and future residences could cause temporary vibration similar to that of construction. The proposed project would not generate significant vibration impacts and no mitigation would be necessary.

Table 3.12-7: Peak Particle Velocities at Defined Distances

<table>
<thead>
<tr>
<th>Equipment</th>
<th>16.5 feet from source</th>
<th>33 feet from source</th>
<th>82.5 feet from source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jackhammer</td>
<td>0.067</td>
<td>0.024</td>
<td>0.004</td>
</tr>
<tr>
<td>Truck</td>
<td>0.118</td>
<td>0.043</td>
<td>0.012</td>
</tr>
<tr>
<td>Large bulldozer</td>
<td>0.154</td>
<td>0.055</td>
<td>0.012</td>
</tr>
</tbody>
</table>

NOTE: Vibration from a grader, scraper, or excavator would be similar to the vibration produced for a bulldozer.

Source: Flanagan 1993
The proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. *(Less than significant impact)*

**Construction**

Construction-related noise would be temporary and would not result in a permanent increase in ambient noise levels above levels existing without the project. Project construction would have no impact on permanent increases in ambient noise levels.

**Subdivision and Future Residences Improvements**

The future residential development would bring additional people and vehicles into the 25 residences within the proposed subdivision, generating some additional noise. Noise generated from outdoor activities on each lot would attenuate over the distance between residences and would not serve as a continuous noise source. Occupation of the future residences would not result in a significant permanent increase in ambient noise levels in the project vicinity. Permanent impacts to ambient noise levels would be less than significant and no mitigation would be required.

The proposed project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. *(Less than significant impact)*

**Construction**

Construction of the proposed roadway, utility, private recreation, and drainage improvements would result in a temporary increase in ambient noise levels within the immediate vicinity of construction activities. Construction-related noise emissions are identified in Table 3.12-6. Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, the distance between construction noise sources and noise sensitive receptors, and the noise environment in which the project is being constructed. Maximum noise levels generated by construction activities typically range from about 85 to 90 dBA at a distance of 50 feet. Sensitive receptors would include residences near the area of active construction as shown on Figure 3.12-1. The nearest sensitive receptors are over 100 feet from areas of earthwork or material staging and construction noises would attenuate over distance. Ambient noise levels in the vicinity of the project area are expected to be between 40 and 50 dB (Santa Clara County 1994a). While ambient noise levels are generally low in rural residential areas of Santa Clara County, there are existing temporary noise emissions that would be similar in volume to those generated by construction equipment. Baseline noise would be expected to include:

- Temporary use of landscaping equipment such as leaf blowers, weed whackers, and lawn mowers
- Vehicle and delivery truck use of area roadways
- Gas powered vehicles such as motorcycles

Construction of the roadway, infrastructure and future residences would result in temporary noise emissions above ambient noise level. This increase in noise would be limited to the hours of 7:00 AM to 7:00 PM, Monday through Saturday, excluding holidays. The increase in noise...
would also be limited to the 6-month construction period and would only affect those receptors near active construction areas. Construction noise levels would be similar to those experienced periodically in residential settings, such as noise from lawnmowers, weed whackers, leaf blowers, and delivery trucks. Temporary noise impacts from construction would therefore not be substantial and would be less than significant.

**Subdivision Improvements**

The proposed roadway, utility, private recreation, and drainage improvements would generate temporary noise associated with repairs and maintenance in the post-construction period. Repairs and maintenance could require the use of equipment identified in Table 3.12-5. While repairs and maintenance would result in a temporary increase in ambient noise levels, the increase in noise would be limited in duration and would occur over a limited area. The potential increase in ambient noise levels post-construction would not be substantial or significant.

**Future Residences**

Future residential development could result in temporary increases in noise levels associated with landscaping (e.g., weed whacker or chainsaw) and private parties or other events that could occur in residential areas, and would need to comply with the County noise ordinance. This potential increase in ambient noise levels would be consistent with noises generated by surrounding residential areas and the current grazing operations in the project area. Temporary increases in ambient noise levels resulting from the future residential development would be less than significant.

The proposed project is not located within an airport land use plan referral area or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, and would not expose people residing or working in the project area to excessive noise levels. *(No impact)*

The project is not located within an Airport Influence Area or within 2 miles of a public airport. The nearest public airport is located approximately 2.5 miles south-southwest of the project area. There would be no impact to people residing or working in the project area from noise associated with air traffic at a public airport.

The proposed project is not within the vicinity of a private airstrip, and would not expose people residing or working in the project area to excessive noise levels. *(No impact)*

The project is not located within the vicinity of a private airstrip. The nearest private airstrip is located approximately 10 miles south of the project area. There would be no impact to people residing or working in the project area from noise associated with air traffic at a private airstrip.
3.13 POPULATION AND HOUSING

3.13.1 Environmental Setting

Population
The population of Santa Clara County has grown significantly between 2000 and 2010. The County has experienced an average population increase of 0.59 percent each year, with a net increase of 99,057 (U.S. Census Bureau 2010b), which represents a 5.9 percent increase in population over the 10-year period. Santa Clara County’s current population of 1,781,642 is projected to increase to 2,063,100 by the year 2020 with continued growth to 2,310,800 by the year 2030 (Santa Clara County 2011).

The City of Morgan Hill, a municipality within Santa Clara County that borders the project area, has an SOI that includes the project area. Morgan Hill has grown an average of 1.29 percent annually between 2000 and 2010 (U.S. Census Bureau 2010a).

Housing
In 2010, Santa Clara County had approximately 631,920 housing units for approximately 1,781,642 people, with an average of 2.86 people per household (U.S. Census Bureau 2010b). The City of Morgan Hill reported approximately 12,859 housing units for a population of 37,882 with an average household size of 3.02 people (U.S. Census Bureau 2010a).

Employment
The total number of jobs in the County, held by both County residents and non-residents, was estimated in 2010 to be 843,854, with the total number of jobs in unincorporated areas of the County estimated at 40,310 (U.S. Census Bureau 2010c). By 2030, the County is projected to include approximately 1,292,490 jobs, 62,620 of which would be held in unincorporated County areas. This represents an increase of 27.8 percent Countywide and an increase of 24.2 percent in the unincorporated areas (ABAG 2009).

3.13.2 Regulatory Setting

Federal
There are no federal laws or regulations pertaining to population and housing that are applicable to the proposed project.

State
There are no state laws or regulations pertaining to population and housing that are applicable to the proposed project.
3.13 POPULATION AND HOUSING

Local
Santa Clara County General Plan 1994-2010 and Housing Element Update 2009-2014

The Santa Clara County General Plan (1994a; 1994b) and the Santa Clara County Housing Element Update 2009-2014 describe the housing needs of the County and cite the current jobs-to-housing imbalance as a source of concern. In 2008, the job/housing ratio was 1.45 and overcrowding in unincorporated Santa Clara County was greater than 10 percent, according to 2000 U.S. Census Bureau data (Santa Clara County 2010).

The Santa Clara County General Plan and Housing Element policies relevant to population and housing of the proposed project are listed below.

C-GD 40 Improved balance between employment and housing opportunities should include the need for:
   (a) increased overall supply and more varied types of housing;
   (b) housing costs commensurate with household income distribution; and
   (c) increased proximity of housing to employment centers.

C-HG 16 An adequate quantity of housing which is suitable for families with children shall be made available throughout the county.

C-HG 17 An adequate supply of affordable housing suitable for individuals at all stages of life should be available in every community.

SC 3.0 In the South County communities, jobs and housing should be balanced to minimize increases in housing costs, traffic congestion, and commute time and to optimize economic balance and capacity to provide services.

SC 3.1 The South County Cities and the County should seek to attain and maintain a reasonable balance between jobs within each City’s incorporated area and housing within each City’s Boundary Agreement Area through the use of:
   (a) general plan land use designations,
   (b) zoning and other land use controls,
   (c) growth rate controls on housing and job growth,
   (d) sewer capacity allocations, and
   (e) policies to attract industry that will hire local residents.

Association of Bay Area Governments
To meet current and projected housing needs in Santa Clara County, the Association of Bay Area Governments (ABAG) released the Housing Needs Determination Report, which calls for the addition of 1,090 new housing units to unincorporated Santa Clara County between 2007 and 2014 (ABAG 2008).
3.13 POPULATION AND HOUSING

3.13.3 Thresholds of Significance
The proposed project would result in a significant impact if it would:

- Induce substantial growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)
- Displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere

3.13.4 Impacts and Mitigation
The project would not significantly induce substantial growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure). (Less than significant impact)

The project would involve the construction of 25 new single-family residences, which would add to the housing supply in Santa Clara County. The new homes could be purchased by existing Santa Clara County residents. The proposed project could accommodate a population increase of approximately 72 people, based on the 2010 U.S. Census Bureau household population data for Santa Clara County (U.S. Census Bureau 2010). If all the homes were purchased by residents new to Santa Clara County, the growth would represent less than 0.01 percent of the 10-year projected growth. The addition of 72 new residents as a result of project construction would have a less than significant impact on County population.

Development of the 25 proposed residential lots was included in the County’s 2009 Housing Element Update. The addition of 25 households to the estimated 604,204 households in Santa Clara County would have a less than significant direct impact on population growth.

The proposal would involve the addition of approximately 2.2 miles of roadway and the extension of utility services to serve the 25 proposed new residences. Section 3.14: Public Services provides a full discussion of the project’s impact on utilities. The roadway, utility and private recreation improvements are included as part of the project, and would not indirectly induce growth. The project would have a less than significant indirect impact on unplanned growth.

The project would not significantly displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere. (Less than significant impact)

The project area is largely in an undeveloped area, but would include the demolition of two existing, 1,500-square-foot residences. Demolition of these structures would displace the inhabitants of these homes but would not result in the need to construct replacement housing because the project would result in a net increase of 23 residential units.

The project would have a less than significant effect on the displacement of housing and people and the need to construct replacement housing.
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3.14 PUBLIC SERVICES

The project area is located in unincorporated Santa Clara County within the Sphere of Influence (SOI) of the City of Morgan Hill. The proposed residences would receive several urban services from the City.

3.14.1 Environmental Setting

Fire Protection
The City of Morgan Hill is served by the Santa Clara County Fire Department (SCCFD). Although the project area is located within the jurisdiction of Santa Clara County, the City of Morgan Hill contracts with SCCFD to provide emergency medical, fire prevention, and fire suppression services within the City’s SOI, which includes the project area (City of Morgan Hill 2012). The project area is located in Santa Clara County on the border of the City of Morgan Hill, with the Morgan Hill community of Jackson Oaks located to the north and the Santa Clara County community of Rancho Robles located to the south. In the event of an emergency, two roadways would provide access to the project area: Maple Avenue to the southwest, and Oak Canyon Drive to the north. A series of dirt roadways are located within the subdivision area, but there are no improved roads.

SCCFD operates two fire stations in the City of Morgan Hill. The nearest fire station to the project area is Dunne Hill Fire Station, located at 2100 East Dunne Avenue. The station is approximately 2.3 miles (driving distance) from the project area.

In 2011, SCCFD responded to 18,681 calls, 71.43 percent of which were emergency medical calls. A response time of 7 minutes or less was achieved 91.1 percent of the time (SCCFD 2011).

SCCFD requires on-site water supply to be available in specified volumes, based on the size of the building. Table 3.14-1 identifies the water supply requirements for fire protection.

<table>
<thead>
<tr>
<th>Building Size</th>
<th>Volume of Fire Protection Water Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 10,000 sq. ft.</td>
<td>10,000 gallons</td>
</tr>
<tr>
<td>10,001 sq. ft. - 15,000 sq. ft.</td>
<td>30,000 gallons</td>
</tr>
<tr>
<td>Over 15,000 sq. ft.</td>
<td>45,000 gallons</td>
</tr>
</tbody>
</table>

Source: Santa Clara County 2011

Police Protection
The Santa Clara County Sheriff’s Office serves the unincorporated areas of Santa Clara County. The Sheriff’s Office has 586 full-time, sworn badge staff and 65 Reserve Deputy Sheriffs. The office has several divisions, including community relations, canine unit, search and rescue, dive team, traffic/motorcycle, crowd control, bomb squad, and other programs and units (Santa Clara County 2011).
3.14 PUBLIC SERVICES

Schools
Santa Clara County has 18 public school districts. The project area is located within the Morgan Hill Unified School District (MHUSD). MHUSD consists of 14 schools, including elementary schools, middle schools, high schools, a continuation school, a community adult school, and a home schooling program. The schools closest to the project area are Jackson Elementary School (0.65 mile northwest), Nordstrom Elementary School (1.3 miles northwest), Barrett Elementary School (1.3 miles west), and Live Oak High School (2.3 miles north).

Parks
There are 28 regional parks within Santa Clara County (Santa Clara Parks and Recreation Department 2012). There are nine city parks in the City of Morgan Hill (City-data.com 2012). Henry Coe State Park is approximately 3 miles east of the project area. Coyote Lake-Harvey Bear Ranch County Park borders the project area to the east. Other County and city parks close to the project area include Jackson Park in the Jackson Oaks community (0.65 mile north) and Anderson Lake County Park (approximately 1.0 mile northeast).

Other Public Services
Health Services
The Morgan Hill Community Health Foundation (Foundation) offers health and medical services to the project region. The Foundation offers urgent care services for medical minor medical issues. The urgent care clinic is located approximately 5 miles from the project area. The Foundation also offers a network of physicians within the City of Morgan Hill (Morgan Hill Community Health Foundation 2012).

The nearest hospital is the St. Louise Regional Hospital, which is located in the City of Gilroy and offers a variety of services, including emergency, oncology, surgical, stroke, and spiritual (St. Louise Regional Hospital 2012). St. Louise Regional Hospital is located approximately 7.5 miles (driving distance) from the project area.

Kaiser Permanente Gilroy Medical Offices provide primary care, medical support, and some specialty department services. No emergency services are available at the Kaiser Permanente Gilroy Medical Offices (Kaiser Permanente 2012). The facility is located approximately 10 miles south of the project area.

Libraries
The nearest library is a branch of the Santa Clara County Library system located within the City of Morgan Hill, approximately 6 miles from the project area (Santa Clara County Library 2012).

3.14.2 Regulatory Setting
Federal
There are no federal laws or regulations pertaining to public services that are applicable to the proposed project.
3.14 PUBLIC SERVICES

State

Fire Protection
The California Fire Code contains regulations related to construction and maintenance of buildings and the use of premises. Topics addressed in the Code include:

- Fire hydrants
- Automatic sprinkler systems
- Fire alarm systems
- Provisions intended to protect and assist first responders
- General and specialized fire safety requirements for new and existing buildings and premises

Local

Santa Clara County General Plan
The Santa Clara County General Plan (Santa Clara County 1994a; 1994b) policies relevant to public services and to the proposed project are described below.

R-HS 9 Development in rural unincorporated areas affected by natural hazards should be designed, located, and otherwise regulated to avoid or reduce associated risks to an acceptable level:

1. In areas of highest potential hazard, such as floodways, active landslides, fault traces, and airport safety zones, no new habitable structures shall be allowed.
2. In other areas of lesser hazards, there shall be no major structures for involuntary occupancy, such as schools, hospitals, correctional facilities or convalescent centers.

R-HS 10 In all hazard areas, projects shall be designed and conditioned to avoid placement of structures and improvements where they would:

(a) be directly jeopardized by hazards;
(b) increase the hazard potential; and/or,
(c) increase risks to neighboring properties.

R-HS 11 Proposals for General Plan amendments, zone changes, use permits, variances, building site approvals, and all land development applications subject to environmental assessment shall be reviewed for the presence of hazardous conditions, utilizing the best, most up-to-date information available. If a development proposal would require a major investment or addition to public infrastructure in areas subject to high hazards, objective estimates of the probable public costs of maintaining and repairing the infrastructure should be provided to decision-makers.
R-HS 12 Proposals shall be conditioned as necessary to conform with County General Plan policies on public safety. Projects which cannot be conditioned to avoid hazards shall be conditioned to reduce the risks associated with natural hazards to an acceptable level or shall be denied.

3.14.3 Thresholds of Significance
The proposed project would result in a significant impact if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:
  (a) Fire protection
  (b) Police protection
  (c) School facilities
  (d) Parks
  (e) Other public facilities

3.14.4 Impacts and Mitigation
With the incorporated of identified mitigation measures, the project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection, police protection, school facilities, parks, and other public facilities. *(Less than significant impact with incorporation of mitigation measures)*

**Construction**
The project would involve construction of the roadway, utility, private recreation, and drainage infrastructure over a 6-month period, whereas future residential construction would occur over a multi-year period. During construction, there would be an increased risk of fires in the project area as a result of construction personnel smoking and equipment that could spark and ignite a wildfire. The potential increase in fire hazard would be mitigated by Mitigation Measures Hazards-1 through Hazards-3.

Construction would not result in a significant increase in demand for fire protection. Construction personnel would not occupy the project area and would only be present in the project area during hours of construction operations during the period of construction. Construction would therefore not increase demand for police protection services. No additional fire protection or police protection facilities would need to be constructed as a result of the proposed project construction.
The construction workers would not increase demand for schools, parks, or other public facilities and would have no impact on these facilities because the number of workers needed would be limited and they would likely come from the local area.

**Subdivision Improvements**
The proposed project would not create any additional use of government facilities in the absence of future residential development. The proposed project subdivision improvements would have no impact on government facilities.

**Future Residences**
Future residential development would result in the addition of 25 new single-family residences with an estimated 72 residents in unincorporated Santa Clara County that would use the public services of the project region.

The 25 future residences would result in a small increase in demand for fire protection services. The additional 25 residences could be serviced by existing fire protection districts. Fire protection services would be provided by the City of Morgan Hill through an agreement with SCFFD. In emergencies, fire protection crews would have sufficient access to the site from Morgan Hill through the Jackson Oaks Community. The Morgan Hill Fire Protection District is located 2.3 miles northwest of the project area and could provide fire protection services to residents within acceptable service times. The proposed residential development would not create a need for new or altered fire protection facilities.

The addition of 25 residences would also result in a small increase in demand for police protection services in the project region. The additional residents would be served by existing police departments and would, therefore, not warrant the need for new or physically altered governmental facilities.

MHUSD uses a generation rate of 0.7 students per single-family residence to predict student enrollment. Using this generation rate, the future residential construction could result in up to 18 new students. The potential increase in students resulting from the project would not cause overcrowding in the district and would not result in the need for new facilities (Espinosa pers. comm. 2012).

The proposed project includes the construction of community recreational facilities that would not be publically accessible. The additional residents within the project area would not create a need for new or altered public recreational facilities or parks.

The addition of 72 residents in the project area would not result in the need for new or physically altered medical facilities or libraries, as the existing facilities would be able to accommodate the small increase in demand that would occur. The additional demand for public services as a result of the project would not result in a need for new or altered government facilities. The impacts of the 25 future residences on public services would be less than significant.
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3.15 TRANSPORTATION AND TRAFFIC

3.15.1 Environmental Setting

Existing Transportation System

Highways

The only highway in the vicinity of the project is US-101, located approximately 2 miles west of the project area. This highway is maintained by Caltrans.

Local Roadways

Roadways in the project vicinity are identified on Figure 2.2-2. The primary entrance to the subdivision area is from Carey Lane at the east end of Maple Avenue. Local roadways connecting to the project area include Foothill Avenue and Maple Avenue. The project area can be accessed by exiting US-101 at Tennant Avenue, traveling east on Tennant Avenue to Hill Road, south on Hill Road to Maple Avenue, and then east on Maple Avenue to Carey Lane. The project area can also be accessed from the San Martin Avenue exit on US-101. From US-101, vehicles travel east on San Martin Avenue to Foothill Avenue, north on Foothill Avenue to Maple Avenue, and east on Maple Avenue to Carey Lane. Foothill Avenue is located west of the project area. Maple Avenue and Paseo Robles Avenue border the project area to the south. Tennant Avenue, a two-lane roadway located west of the project area and north of Maple Avenue, provides access to US-101.

Foothill Avenue is a two-lane collector roadway that measures 21 feet shoulder-to-shoulder. According to the Hexagon Transportation Consultants (Hexagon) 2010 Traffic Study Memorandum (included in Appendix F), the posted speed limit on Foothill Avenue is 45 mph. Maple Avenue is a two-lane rural roadway that provides direct access to the project area. Maple Avenue measures 21 feet shoulder-to-shoulder and has no posted speed limit (Hexagon 2010). The intersection of Foothill and Maple Avenues is a two-way, stop-controlled intersection.

Other roads leading to the project area include Oak Canyon Drive, which terminates at the northeastern property boundary.

Traffic Volumes and Levels of Service

Roadways and intersections are rated at various levels of service (LOS). LOS is a measure of roadway operating conditions, ranging from LOS A, which represents the best range of operating conditions, to LOS F, which represents the worst. Basic definitions of the LOS are presented in Table 3.15-1. LOS can be estimated based on the road’s traffic volume-to-road capacity (v/c) ratio, and by the average delay experienced by vehicles at an intersection.

Hexagon conducted a traffic study for the proposed project in August 2010. The traffic study analyzed traffic volume for the roadway segment of Maple Avenue between Foothill and Paseo Robles Avenue and the LOS at the intersection of Foothill and Maple Avenues.
Table 3.15-1: Level of Service Criteria for Roadways and Unsignalized Intersections

<table>
<thead>
<tr>
<th>LOS</th>
<th>v/c</th>
<th>Traffic Flow Characteristics</th>
<th>Delay at Intersection (sec/veh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.00-0.60</td>
<td>Free flow; insignificant delays</td>
<td>0 – 10</td>
</tr>
<tr>
<td>B</td>
<td>0.61-0.70</td>
<td>Stable operation; minimal delays</td>
<td>&gt;10 – 15</td>
</tr>
<tr>
<td>C</td>
<td>0.71-0.80</td>
<td>Stable operation; acceptable delays</td>
<td>&gt;15 – 25</td>
</tr>
<tr>
<td>D</td>
<td>0.81-0.90</td>
<td>Approaching unstable flow; queues develop rapidly (no excessive delays)</td>
<td>&gt;25 – 35</td>
</tr>
<tr>
<td>E</td>
<td>0.91-1.00</td>
<td>Unstable operation; significant delays</td>
<td>&gt;35 – 50</td>
</tr>
<tr>
<td>F</td>
<td>&gt;1.00</td>
<td>Forced flow; jammed conditions</td>
<td>&gt;50</td>
</tr>
</tbody>
</table>

NOTE: sec/veh = seconds per vehicle

Source: Transportation Research Board 2000

**Traffic Volume**
Traffic counts were performed for the Maple Avenue roadway segment during a 24-hour period between August 17 and August 18, 2010. The road segment of Maple Avenue between Foothill Avenue and Paseo Robles Avenue has an average daily traffic volume (ADT) of 538 vehicles (Hexagon 2010). Maple Avenue is classified as a rural roadway with a capacity of 2,500 daily trips. Based on traffic volume, the road segment has a v/c of 0.22 and is operating at LOS A.

**Level of Service**
Traffic conditions at the intersection of Foothill and Maple Avenues were analyzed during peak weekday traffic hours (7:00 AM – 9:00 AM and 4:00 PM – 6:00 PM) on August 12, 2010. LOS for intersections is assessed based on the expected worst delay. The worst delay is the time it would take a vehicle on a minor street of an unsignalized intersection to make a left-hand turn onto a major street. During AM peak traffic, the worst delay at the intersection of Foothill and Maple Avenues was 9.0 seconds. During PM peak traffic, the worst delay was 9.3 seconds (Hexagon 2010). This intersection is, therefore, currently operating at LOS A.

**Alternative Transportation**

**Pedestrian and Bicycle Facilities**
There are currently no pedestrian or bicycle facilities in the project vicinity. The nearest bike lanes to the project area are located along East Dunne Avenue, north of the project area, and along Tennant Avenue west of US-101 (Valley Transportation Authority [VTA] 2012). There is also a proposed bike lane along Tennant Avenue between US-101 and Foothill Avenue (City of Morgan Hill 2008). The Bay Area Ridge Trail is proposed to be located east of the project area.

**Transit and Rail Service**
There is currently no transit or rail service in the project vicinity. The demand for transit facilities is minimal because there is no nearby connecting development that can be served by these modes of transportation (Hexagon 2010). No transit facilities have been proposed by VTA.
in the project vicinity (VTA 2011). A Caltrain station is located in Morgan Hill approximately 2.5 miles northwest of the project area. Caltrain runs parallel to and west of US-101 (VTA 2012).

**Air Transit**
There are no aviation facilities within 2 miles of the project area. The nearest airport to the project area is South County Airport of Santa Clara County, which is located approximately 2.5 miles south-southwest of the project area.

### 3.15.2 Regulatory Setting

**Federal**
There are no federal laws or regulations pertaining to transportation and traffic that are applicable to the proposed project.

**State**

**Caltrans**
Caltrans has the discretionary authority to issue special permits for the movement of vehicles/loads exceeding statutory limitations on the size, weight, and loading of vehicles contained in Division 15 of the California Vehicle Code. Requests for such special permits require the completion of an application for a Transportation Permit.

**Local**

**Santa Clara County General Plan**
The Santa Clara County General Plan (Santa Clara County 1994) Traffic and Circulation Chapter policies relevant to transportation and traffic of the proposed project are listed below.

<table>
<thead>
<tr>
<th>C-TR 12</th>
<th>It is the goal of this plan to achieve a level-of-service (LOS) no lower than D at peak travel periods on city streets, county roads, expressways, and state highways. However, in certain instances, a lower level of service may be acceptable when LOS D cannot practically be achieved.</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-TR 6</td>
<td>Pathways and/or sidewalks which would provide safe, non-motorized circulation routes (i.e., pedestrian, equestrian, and bicycle) should be provided within identified rural residential areas.</td>
</tr>
<tr>
<td>R-TR 9</td>
<td>Rural roads should be designed and built to standards that will assure driving safety and provide access for emergency vehicles.</td>
</tr>
<tr>
<td>R-TR 11</td>
<td>New development which would significantly impact private or public roads should be allowed only when safety hazards and roadway deterioration will be mitigated to a less than significant level.</td>
</tr>
<tr>
<td>R-TR 14</td>
<td>Environmental impacts of roadway construction and expansion should be mitigated to a less than significant level.</td>
</tr>
</tbody>
</table>
Valley Transportation Authority
VTA has jurisdiction over public transit in Santa Clara County, and is responsible for developing public transit projects to meet the growing transportation needs of the County. There are currently no new or proposed VTA projects in the project vicinity.

3.15.3 Thresholds of Significance
Potential project impacts to transportation and traffic were evaluated by determining the sensitivity, significance, or rarity of each resource that could be adversely affected (either directly or indirectly) by the proposed project, and by using thresholds of significance to evaluate the significance of potential impacts. Guidance for evaluating significance thresholds is based on the CEQA Environmental Checklist (CEQA Guidelines, Appendix G). Using these guidelines, the proposed project would result in a significant impact if it would:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio, or congestion at intersections)
- Exceed, either individually or cumulatively, an LOS standard established by the County congestion management agency for designated roads or highways
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- Result in inadequate emergency access
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts or bicycle racks)
- Not provide safe access, obstruct access to nearby uses, or fail to provide for future street right-of-way

3.15.4 Impacts and Mitigation
The proposed project would not cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio, or congestion at intersections). (Less than significant impact)

Construction
Construction of the roadway, utility, private recreation, and drainage improvements would not affect safe access for emergency vehicles. There are currently no paved access roads within the project area. Construction of the project would not result in lane closures or road closures, or otherwise impede emergency vehicle access to the surrounding community.

Construction of the proposed project would not substantially increase traffic in relation to the existing traffic load and capacity of the street system. During construction an estimated peak of 30 workers are expected to commute to the project area daily for a 4-month period. This traffic would result in an increase of 60 daily trips on area roadways. Additional truck traffic would increase for delivery of materials and equipment to the project area for construction and
3.15 TRANSPORTATION AND TRAFFIC

watering during earthmoving activities. An estimated total of 1,242 round-trip truck trips would be required to deliver materials to the work site throughout the 6 months of project construction. The increase in truck traffic is typically greatest during a 2- to 3-week period during construction staging. Truck traffic for delivery of materials would not substantially increase congestion because trucks would be delivering materials throughout the day during construction work hours (7:00 AM – 7:00 PM) and not specifically during peak traffic hours (7:00 AM – 9:00 AM and 4:00 PM – 6:00 PM). Construction equipment (e.g., bulldozers, graders, and scrapers) would remain on site throughout construction activities and would not affect traffic on area roadways after initial transport to the project area. Construction of the proposed project could result in an increase in traffic congestion during peak hours when workers are commuting to and from the project area. A temporary increase of 30 vehicles during AM and PM peak traffic would not substantially increase congestion.

Construction of the proposed residential development could result in a temporary increase in traffic congestion if mass grading of all 25 homesites and the related export of material was to occur concurrently. This impact on traffic would be less than significant because the capacity of Maple Avenue is 2,500 vehicles, and current ADT for Maple Avenue is 538. The low level of baseline traffic on area roadways allows for a large increase in traffic volumes before significant congestion would occur on area roadways. Concurrent construction of 25 homes could result in a sizable traffic increase (peak traffic volume of more than 100 truck trips per day), the impact would be less than significant because there is sufficient capacity on area roadways to accommodate the increase in traffic.

Subdivision Improvements

Once construction of the subdivision infrastructure improvements is complete, these improvements would likely generate minimal traffic until such time as residences are constructed on the 25 proposed residential lots. Maintenance of the new subdivision infrastructure improvements would generate a minimal and sporadic amount of vehicle traffic; otherwise, no traffic would be generated by these proposed improvements.

Future Residences

Post-construction future residential development would result in a minor increase in traffic on area roads. The projected increase in ADT is 239 daily trips (Hexagon 2010), with an increase in AM peak-hour traffic of 19 trips and PM peak-hour traffic of 25 trips. The additional traffic would result in an expected worst delay at the intersection of Foothill and Maple Avenues of 9.1 seconds during AM peak-hour traffic and 9.3 seconds during PM peak-hour traffic. Both Maple Avenue and the intersection of Maple and Foothill Avenues would continue to operate at LOS A. Future residential development would not result in either a substantial increase in traffic congestion, or a worsening of the LOS. The future residential development would result in limited additional traffic and would not cause a deterioration of area roadways or create a safety hazard.
The proposed project would not exceed, either individually or cumulatively, an LOS standard established by the County congestion management agency for designated roads or highways. (Less than significant impact)

Santa Clara County has established an LOS standard of D or better for the project area (Santa Clara County 1994). VTA is the agency responsible for developing the congestion management program for Santa Clara County. VTA has not established LOS standards for the project area. Construction of the project would not cause area roads to operate at an LOS lower than D during peak travel. The capacity of Maple Avenue is 2,500 vehicles. The ADT for Maple Avenue is 538 (Hexagon 2010). An LOS lower than D for Maple Avenue would occur if the ADT increased by 2,275 trips or more. Approximately 1,336 y$^3$ of fill material would need to be imported for the construction of the proposed subdivision improvements. This import of materials could require approximately 134 additional truck trips to transport the material (assuming fill material is imported in 10-y$^3$ increments). The temporary increase in traffic volume as a result of construction would be minimal relative to the capacity of Maple Avenue, and construction traffic (approximately 30 workers daily) would not cause Maple Avenue to operate at an LOS lower than D.

The increase in truck traffic and worker vehicle traffic associated with construction of the proposed future residential development would not result in an LOS worse than LOS D. If construction of the 25 homes occurs over the span of a multi-year period, the increase in traffic at any one time would be minimal. While concurrent construction of homes could increase congestion, it would not result in an LOS worse than D because the current traffic volume on Maple Avenue is small relative to the roadway capacity. The future residential use of area roadways would also have a minimal impact on traffic and LOS. The area roads would continue to operate at LOS A with the additional traffic.

The proposed project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. (No impact)

The proposed project and future residential development would not result in a change in air traffic patterns because the nearest airport to the project site is 2.5 miles south-southwest of the project area. Construction of the 25 residences would not result in a need for additional air traffic and would not change the location of air traffic. The proposed project and future residential development would have no impact on air traffic patterns.

The proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (Less than significant impact)

Construction

Construction of the roadway, utility, private recreation, and drainage improvements would not substantially increase traffic hazards. Project construction would be conducted within the project area and away from area traffic and roadways. Project construction would not result in lane or roadway closures or otherwise create a traffic hazard. Construction of the proposed project would not have a significant impact on traffic hazards.
Construction traffic for future residential development would primarily be contained within the project area and would not result in lane or roadway closures, or otherwise substantially increase traffic hazards. Construction of the future residential development would use the newly constructed roads and no additional roads would be constructed. Construction of future residential development would have a less than significant impact on traffic hazards.

Subdivision Improvements
The roadway, utility, and drainage improvements have been designed in accordance with County design standards. The traffic circle entrance at Maple Avenue would not increase hazards for traffic on Maple Avenue because the entrance would be constructed within the project area and would not affect traffic on Maple Avenue. Post-construction, the roadway, utility, and drainage improvements would have a less than significant impact on traffic hazards.

Future Residences
The future residential development would not create an incompatible use for area roadways. The residential use of the new Coyote Highlands community and area roadways would be consistent with the residential zoning for the area. The roads would be designed according to County standards and would consider safety in road grades and turns. Although the proposed future residential development would result in a minor increase in area traffic, it would have a less than significant impact on traffic hazards.

The proposed project would not result in inadequate emergency access. (No impact)

Construction
Construction of the proposed project would not affect emergency access. There are currently no paved access roads within the project area. Construction of the project would not result in lane closures or road closures, or otherwise impede emergency vehicle access to the surrounding community. Construction of the proposed project and proposed future residential development would have no impact on emergency access in the area.

Subdivision Improvements and Future Residences
The proposed roadway improvements would have a beneficial impact on emergency access in the area. In case of emergency (e.g., flooding, earthquake, or wildfire) the primary roadway in Coyote Highlands would provide residents of Jackson Oaks and Holiday Lakes Estates with a secondary access point for emergency evacuation.

The proposed project would not conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts or bicycle racks). (No impact)
There are no existing or proposed public transit, bicycle, or pedestrian facilities within the project vicinity, and the proposed project would not decrease the performance or safety of existing or proposed facilities. R-TR-6 of the County General Plan requires safe non-motorized circulation routes within rural residential areas. Although the project would not include sidewalks, private hiking and equestrian trails for the exclusive use of subdivision area residents and their guests would be established within the open space areas and along the primary and secondary access roadways within the subdivision area, as identified on Figure 2.5-4 and in the Coyote Highlands Resource Management Plan (Buffington 2012). The
hiking and equestrian trails would provide non-motorized circulation within the subdivision area, but would not connect with off-site trails or paths. The proposed Bay Area Ridge Trail would be located east of the project area. There would be no linkage between the on-site trails and the proposed Bay Area Ridge Trail or other off-site recreational facilities. Therefore, the proposed project would not provide non-motorized access to off-site areas.

The low traffic volumes on area roadways allow bicyclists to “share the road.” The proposed project would not substantially increase traffic volume or decrease the safety of bicyclists on area roadways. The proposed roadway within the project area would be a private roadway and no public access to the project area is proposed. The lack of public transit and bicycle facilities within the project area is consistent with the overall use and rural nature of the area as well as the lack of any public transit and bicycle facilities within 1 mile of the project area. The proposed project, therefore, would have a less than significant conflict with plans and policies regarding public transit, bicycle, and pedestrian circulation routes.

**The proposed project would have no impact on safe access, obstruct access to nearby uses, or fail to provide for future street right-of-way. (No Impact)**

The proposed project involves construction of a subdivision and infrastructure improvements would be constructed from the current terminus of Maple Avenue. There are no existing roadways within the area of proposed construction or future residential development. No road closures or other impacts to access of nearby areas are proposed as a part of the project. Access to nearby uses would remain the same during construction and future use of the area. There are no proposed street right-of-ways within the subdivision area that would be impacted by the proposed project.
3.16 UTILITIES AND SERVICE SYSTEMS

3.16 UTILITIES AND SERVICE SYSTEMS

3.16.1 Environmental Setting

Utilities

Electricity
PG&E is the electric utility provider in the area. PG&E provides electricity to the City of Morgan Hill, located north of the subdivision, and to areas of unincorporated Santa Clara County, south and west of the subdivision area (Cobian pers. comm. 2012). The subdivision area is undeveloped and does not contain power lines or electric infrastructure of any kind. The nearest electric lines to the project area are located along Maple Avenue to the south and Oak Canyon Drive to the north.

Natural Gas
The Jackson Oaks and Holiday Lakes Estates neighborhoods abutting the subdivision area to the north currently receive natural gas from PG&E. Natural gas service is not provided to residents of unincorporated Santa Clara County south or west of the subdivision area (Cobian pers. comm. 2012). The subdivision area does not contain natural gas infrastructure. The nearest natural gas line to the project area is along Oak Canyon Drive north of the subdivision area.

Water
The City of Morgan Hill is the only municipal water purveyor in the project vicinity. Residences north of the project area within the Jackson Oaks and Holiday Lake Estates communities are supplied municipal water through the City of Morgan Hill. Residents within unincorporated Santa Clara County south and west of the project area use groundwater from private wells.

There is limited water infrastructure located within the subdivision area. One of the five developed springs in the project area is connected to a 10,000-gallon water storage tank that currently provides water to two on-site and two off-site residences. There is no existing infrastructure to distribute water throughout the subdivision area.

Service Systems

Storm Drainage
Stormwater follows natural sheet flow drainage paths into existing creeks in the project area. The project area contains three creeks: Fischer Creek along the northern boundary; Foothill Creek in the center of the project area; and Corralitos Creek along the southern boundary. Small portions of the project area also drain to off-site creeks. The northeastern corner of the project area drains to Coyote Creek and the southern portion of the project area drains to South Corralitos Creek. Along Corralitos Creek there is a culvert crossing where a temporary access road is used to enter the south end of the proposed subdivision area. Stormwater drains naturally from existing dirt roads onto undeveloped landscape, and there is no existing roadway drainage system within the project area.
Wastewater
The Jackson Oaks Community north of the project area receives wastewater treatment services from the City of Morgan Hill. Areas south and southwest of the project area within unincorporated Santa Clara County use private septic systems and leach fields for wastewater treatment. There is limited wastewater infrastructure located within the subdivision area. The two on-site residences use on-site private septic systems and associated leach fields. The results of the On-Site Sewage Feasibility Report (Brooks 2010) included percolation tests that identified suitable conditions for septic leach fields within the subdivision area.

Solid Waste
Unincorporated areas of Santa Clara County receive solid waste services from GreenWaste Recovery, Inc., a San Jose company. The GreenWaste Material Recovery Facility (MRF) accepts up to 2,000 tons of waste per day (GreenWaste 2012). The MRF has an average recovery rate of 98 percent for recyclable materials and 75 percent of municipal solid waste (GreenWaste 2012). Solid waste from the MRF is transported to the Kirby Canyon Recycling and Disposal Facility (Kirby Canyon) in Morgan Hill.

Kirby Canyon provides waste management services for nonhazardous solid wastes, including construction and demolition waste. The landfill also accepts treated medical wastes and various alternative daily cover materials such as treated auto-shredder waste and petroleum hydrocarbon-contaminated soils (Kirby Canyon 2002). The landfill is expected to operate until 2047 (Vien pers. comm. 2012).

Other Services
The Jackson Oaks community, which borders the project area to the north, receives cable television from Charter Communications. Telephone service is provided by Verizon and AT&T (City of Morgan Hill 2012).

3.16.2 Regulatory Setting
Federal
There are no federal laws or regulations pertaining to utilities that are applicable to the proposed project.

State
Senate Bill 610
Senate Bill (SB) 610 requires preparation of a Water Supply Assessment for any development whose approval is subject to CEQA and that meets the definition of “project” under CWC section 10913 (i.e., a residential development project of more than 500 dwelling units or other types of development) (e.g., commercial buildings, industrial parks, and hotels) expected to use a comparable amount of water.

2010 California Green Building Standards Code, Section 4.408
The 2010 California Green Building Standards Code establishes minimum green building standards for the majority of residential and commercial new construction projects within California.
Section 4.408 establishes state-wide standards for construction waste reduction, disposal, and recycling. This section requires the reduction of most nonhazardous construction and demolition waste by at least 50 percent, the use of a construction waste management plan, and documentation demonstrating compliance with the waste management plan.

Local

Santa Clara County General Plan
The Santa Clara County General Plan was adopted by the County in 1994. The following policies are relevant to the proposed project in regards to utilities (Santa Clara County 1994):

R-RC 9  Development in rural unincorporated areas shall be required to demonstrate adequate quantity and quality of water supply prior to receiving development approval.

R-RC 12  Excessive concentrations of septic systems shall be avoided, especially in areas vulnerable to groundwater contamination or in which normal functioning may be impaired by hydrologic constraints.

R-HS 42  All new septic systems shall be located only in areas where:

(a) there is reasonable assurance that they will function effectively over a long period;
(b) they can be designed to have a minimum negative impact on the environment; and
(c) they will not contaminate wells or surface and groundwater supplies.

R-HS 43  Septic systems shall not be allowed where site characteristics impede their operation, including:

(a) high groundwater conditions;
(b) soils with wastewater percolation rates in excess of 1 minute per inch or less than 120 minutes per inch;
(c) limited depth to bedrock; or
(d) gradients in excess of 20 percent without appropriate studies.

C-RC 64  County-wide solid waste management efforts shall be guided by the hierarchy of strategies outlined below, emphasizing resource recovery in accordance with state law:

(a) Source reduction and reuse,
(b) Recycling and composting,
(c) Transformation, and
(d) Landfilling as final option.

C-RC 70  Neighborhood and community composting centers should be explored and evaluated for purposes of reducing landfilled yard waste.
Santa Clara County Code of Ordinances, Green Building Regulations

Title C, Chapter III, §C3-52(a) and C3-53. The Green Building Regulations (Santa Clara County 2012) seek to enhance public health and welfare and assure that green building principles and practices are incorporated into new development to limit impacts to the natural and human environment within unincorporated Santa Clara County. The provisions referenced are designed to achieve the goals listed below:

- Increase energy efficiency in buildings.
- Reduce potable water demand.
- Encourage natural resource conservation.
- Reduce waste generated by construction projects.
- Provide durable buildings that are efficient, cost-effective, and economical to own and operate.
- Promote the health and productivity of residents and workers who occupy and live in buildings within the County.

3.16.3 Thresholds of Significance

The proposed project would result in a significant impact if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Require new or expanded entitlements to have sufficient water supplies available to serve the project.
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments.
- Not be able to be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs.
- Be in non-compliance with federal, state, and local statutes and regulations related to solid waste.
- Employ equipment that could interfere with existing communications or broadcast systems.
3.16 UTILITIES AND SERVICE SYSTEMS

3.16.4 Impacts and Mitigation

The project would not significantly exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. (Less than significant impact)

Construction

Wastewater generated during construction would consist of waste from temporary restroom facilities, such as port-o-lets. The waste disposal would be at an authorized location and would not exceed wastewater treatment requirements. There would be no exceedance of wastewater treatment requirements.

Subdivision Improvements

There would be no wastewater generated by the presence or maintenance of the roadway, utility, and drainage improvements. There would be no impact related to exceedance of wastewater treatment standards.

Future Residences

Future residential development would involve the construction of septic systems and associated leach fields on each residential lot to address the treatment and disposal of wastewater. The leach fields would be restricted to areas within a mapped septic zone for each residential lot. The septic systems would meet the wastewater treatment requirements of RWQCB and the County sewage disposal requirements, and the impact to wastewater treatment requirements would be less than significant.

The project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than significant impact)

Construction

Water Treatment

Approximately 1.8 million gallons of water would be used for roadway, utility, private recreation, and infrastructure construction purposes, such as for dust control. Water requirements are highly weather dependent and could vary by as much as 50 percent from this estimate. Water used during construction would come from municipal water sources. The additional 1.8 million gallons of water required for construction would not require construction of a new water treatment facility or expansion of an existing facility. The impact to water treatment facilities would be less than significant.

Water for residential construction would be obtained from 3 to 5 groundwater wells that would be constructed as a part of the infrastructure development. There are no plans to treat the groundwater. The use of groundwater from the on-site wells for construction would not necessitate construction of additional water treatment facilities.

Wastewater Treatment

Construction activities would generate wastewater that would be collected in the on-site portable toilets. The small amount of wastewater generated by the construction workers would not exceed treatment capacity or require the construction of new facilities. Construction-related impacts on the need for expanded wastewater treatment facilities would be less than significant.
Subdivision Improvements
There would be no post-construction impacts on water or wastewater treatment requirements related to use, maintenance, or presence of the roadway, utility, and drainage improvements.

Future Residences
Water Treatment
The future residences would receive water from three to five new wells. Dual shared water storage tanks would be built at a location east of the subdivision area and would be large enough to meet the requirements for the development. Water treatment facilities are not expected to be required for the residential development. The project would, therefore, have no impact related to construction of new water treatment facilities.

Wastewater Treatment
Each of the 25 future residences would have its own septic system and associated leach field. The leach fields would be restricted to areas within mapped septic zones for each residential lot. There would be no impact on water or wastewater treatment facilities.

With the incorporation of identified mitigation measures, the project would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than significant impact with incorporation of mitigation measures)

Construction
The project would include construction of a stormwater drainage system and associated on-site stormwater collection and percolation infrastructure, including piping, catchment basins, energy dissipaters, and bioswales in and adjacent to primary and secondary access road rights-of-way. Culverts and other drainage improvements where the proposed roadway would cross existing creeks, drainages, swales, and wetlands would also be constructed. No untreated water flow would be allowed to be released into natural waterways during or after construction. All development would conform to the BMPs established under the NPDES permit that would be issued by the County.

Temporary BMPs would be installed to prevent sediment erosion during construction activities. Sediment would be captured by using BMPs such as straw wattles, silt fences, straw bales, earthen dams, and straw mulch, as required under Mitigation Measure Hydrology-1.

Stormwater captured from graded slopes and paved access roads and roadside swales would be discharged into the nearest natural waterway after treatment for contaminants and sediments at each discharge point. Treatment would involve the use of permanent bio-filter swales. Other permanent BMPs would include the installation of filters at selected catch basins, and the planting of vegetation on all graded slopes. A permanent bio-filter basin would be constructed in the southern portion of the property east of the new roadway. The bio-filter basin would provide additional water quality treatment to runoff captured from the proposed roadway.
The construction of the new stormwater drainage facilities would result in less-than-significant environmental impacts with the implementation of temporary and permanent BMPs and adherence to SWPPP and permit requirements.

Construction of the residential development may require the construction of small drainage features to direct drainage around the residential development and into the stormwater drainage system. The new drainage features would be constructed to use the existing drainageways to the extent feasible. Future drainage plans would be reviewed during the building permit process and would comply with County requirements for drainage. As analyzed in Section 3.9: Hydrology, the future residential development would not significantly change area drainage patterns. The additional stormwater drainage features that would be required for the individual residences would not have a significant environmental impact.

Subdivision Improvements and Future Residences
No additional stormwater infrastructure would be needed after completion of construction of the subdivision improvements and future residences. The infrastructures installed during construction would be adequate to serve the needs of the residential development and infrastructure.

The project would not require significant new or expanded entitlements to have sufficient water supplies available to serve the project. (Less than significant impact)

Construction
Approximately 1.8 million gallons of water would be used for roadway, utility, private recreation, and drainage infrastructure construction. Water used during construction would come from municipal water sources. The project area is located within the Llagas Creek groundwater basin, which has a perennial yield of approximately 46,000 afy. 1.8 million gallons of water would be available for use during construction. The impact to water supply from project construction would be less than significant.

Water used for construction of the future residences would use groundwater from new wells that would be developed during infrastructure construction.

Subdivision Improvements
The presence, use, and maintenance of the roadway, utility, and drainage improvements would not require water. There would be no impact on the water supply.

Future Residences
The future residences would receive water from three to five new wells that would be developed during roadway and infrastructure construction. Dual shared water storage tanks would be built at a location on the east side of the project area and would have a capacity of approximately 150,000 gallons.

One of the five developed springs in the project area is connected to a 10,000-gallon water storage tank that currently provides water to two on-site and two off-site residences. The two
3.16 UTILITIES AND SERVICE SYSTEMS

on-site residences within the subdivision area would be demolished and would no longer receive water from the tank.

The project would not result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments. (No impact)

Construction
Construction would not create additional demand for wastewater treatment as discussed above. Construction activities would have no impact on wastewater treatment providers.

Subdivision Improvements and Future Residences
The presence, use, and maintenance of the roadway, utility, and drainage improvements would not generate wastewater. There would be no impact on local wastewater treatment providers.

All wastewater would be treated on site using individual septic systems and leach fields for each future residence. There would be no impact to wastewater treatment providers.

The project would not result in a significant impact in regard to being served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs. (Less than significant impact)

Construction
The project includes the construction of approximately 2.2 miles of roadway. Effort has been made to balance cut and fill on the site. In the event that the project generates excess cut material, the excess material would be moved to a storage location on the property to the immediate east of the subdivision area for a maximum storage period of 12 months. If excess cut material cannot be used within the 12-month period, the materials would be transported to a location in San Benito County for construction and agricultural use. Excess material from roadway, utility, private recreation, and drainage development would not be sent to a landfill and would have no impact on the capacity of landfills.

The proposed project includes the demolition of two 1,500-square-foot structures in the project area. Each structure would generate about 156 y³ of construction and demolition waste (Townsend 2000). This volume could be decreased through recycling efforts, as required by the 2010 California Green Building Standards Code.

The construction of an average 2,000-square-foot home generates 16.6 y³ of waste (Sustainable Sources 2012). Assuming that the construction of a house within the Coyote Highlands subdivision, with a maximum of 8,000 square feet, would generate about 66.4 y³ of waste, this would result in a total of 1,660 y³ of waste for all 25 residences. This volume could be reduced through recycling efforts. Under the 2010 California Green Building Standards Code, Section 4.408, a minimum of 50 percent of nonhazardous construction and demolition debris must be recycled. The Kirby Canyon Landfill would have adequate capacity to serve the demolition of the two existing residences and the construction of the project 25 proposed residences (Vien pers. comm. 2012). The impact of construction on solid waste capacity would be less than significant.
Subdivision Improvements
No solid waste would be generated by the presence or use of the roadway, utility, and drainage facilities. Maintenance of the roadway may sporadically generate waste. This waste, if any, would have a less-than-significant impact on nearby landfills because it would be of a nominal amount.

Future Residences
Residential solid waste generation is estimated at approximately 4.43 pounds per person per day (USEPA 2012). Using the estimate of 2.86 persons per residence, each residence would produce approximately 4,624 pounds of solid waste per year. The 25-residence development would, therefore, generate approximately 115,600 pounds (241 y³) of solid waste per year. A portion of the waste would be recycled. The GreenWaste Material Recovery Facility has an average recovery rate of 75 percent for municipal solid waste. The Kirby Canyon Landfill has adequate capacity to accept this amount of waste on an annual basis (Vien pers. comm. 2012). The impact of future residential development on landfill capacity would be less than significant.

The project would be in compliance with federal, state, and local statutes and regulations related to solid waste. (No impact)
Project construction and development would comply with all applicable federal, state, and local statutes and regulations related to solid waste. The project would have no impact related to conflict with solid waste regulations.

The project would not employ equipment that could interfere with existing communications or broadcast systems. (No impact)
Project construction and the future use of the subdivision improvements and future residence would not interfere with any existing telecommunications or broadcast systems. Project features include residential structures and roadways that would not generate interference.
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3.17 ENERGY CONSERVATION

This section addresses the potential energy conservation-related impacts that could result from implementation of the proposed project. This section was prepared pursuant to CEQA Guidelines Section 15126(c) and Appendix F (Energy Conservation of the Guidelines), which require that EIRs include a discussion of the potential energy impacts of proposed projects with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The information in this section is based largely on data and reports produced by the California Energy Commission (CEC) and the Energy Information Administration of the U.S. Department of Energy.

3.17.1 Environmental Setting

Regional Setting
California’s energy system includes electricity, natural gas, hydroelectric, nuclear, petroleum, and renewable resources. California’s energy system provides 71 percent of the electricity, 12 percent of the natural gas, and 38 percent of the petroleum consumed in or used for the state (CEC 2012b). The rest of the state’s energy is imported from outside the state and includes: electricity from the Pacific Northwest (8 percent) and the Southwest (21 percent); natural gas purchases from Canada (22 percent), the Rocky Mountain States (23 percent), and the Southwest (42 percent); and crude oil imported from Alaska (12 percent) and foreign sources (50 percent) (CEC 2012b).

The production of electricity requires the consumption or conversion of energy resources including water, wind, oil, gas, coal, solar, geothermal, and nuclear sources. California’s 2011 power mix (including both in-state and imported energy sources) is shown in Table 3.17-1 below.

On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order # S-14-08, which raised California’s renewable energy goals to 33 percent by 2020 and improved processes for licensing renewable projects. The Executive Order is intended to advance California’s transition into a clean energy economy and directs state agencies to create comprehensive plans to prioritize regional renewable projects based on an area’s renewable resource potential and the level of protection for plant and animal habitat.

The electricity generated and used in California is distributed via a network of transmission and distribution lines commonly called the power grid. The California Independent System Operator (CAISO), a non-profit public benefit corporation, operates the majority of California’s high-voltage wholesale power grid and is responsible for balancing the demand for electricity with an equal supply on a daily and long-term basis.
### Table 3.17-1: Source of Power for California in 2011

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>Percent of California Power Mix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>8.4</td>
</tr>
<tr>
<td>Large Hydroelectric</td>
<td>13.4</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>36.5</td>
</tr>
<tr>
<td>Nuclear</td>
<td>15.7</td>
</tr>
<tr>
<td>Oil</td>
<td>0.0</td>
</tr>
<tr>
<td>Other Fossil Fuels</td>
<td>0.0</td>
</tr>
<tr>
<td>Renewables</td>
<td>14.5</td>
</tr>
<tr>
<td>Biomass and Waste</td>
<td>2.2</td>
</tr>
<tr>
<td>Geothermal</td>
<td>4.7</td>
</tr>
<tr>
<td>Small Hydroelectric</td>
<td>2.2</td>
</tr>
<tr>
<td>Solar</td>
<td>0.4</td>
</tr>
<tr>
<td>Wind</td>
<td>5.1</td>
</tr>
<tr>
<td>Unspecified Sources</td>
<td>11.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: CEC 2011

### Local Setting

Electricity is provided to Santa Clara County by the Pacific Gas and Electric Company (PG&E). PG&E provides service to approximately 15 million people throughout a 70,000 square mile service area in Northern and Central California. PG&E’s service area extends from Eureka to Bakersfield (north to south), and from the Sierra Nevada to the Pacific Ocean (east to west). PG&E produces and purchases energy from a mix of conventional and renewable generating sources.

The majority of the project site does not currently receive electric or natural gas services. The only exceptions are the two existing residences located at the bottom of the hillside, which both receive electricity services from PG&E. County requirements dictate that, prior to any development within an area not currently served by PG&E, an applicant must first submit written verification that electricity will be provided to the project area by PG&E.

### 3.17.2 Regulatory Setting

#### Federal

*Energy Policy and Conservation Act*

The Energy Policy Act of 1975 was established in response to the oil crisis of 1973, which increased oil prices due to a shortage of reserves. This act required that all vehicles sold in the U.S. meet certain fuel economy goals. The fuel economy standard for new passenger cars since
3.17 ENERGY CONSERVATION

1990 has been 27.5 miles per gallon, and the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) since 1996 has been 20.7 miles per gallon. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. This act indirectly applies to the project due to its requirements for increased fuel economy standards, particularly for construction equipment.

Energy Policy Act of 2005
The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand for these resources. For example, under this act, consumers and businesses can attain federal tax credits for purchasing fuel-efficient appliances and products, buying hybrid vehicles, building energy efficient buildings, and improving the energy efficiency of residential and commercial buildings. Another provision of this act increases the amount of biofuel that must be mixed with gasoline sold in the United States.

State
State of California Integrated Energy Policy
The Legislature passed Senate Bill 1389 in 2002, which required the CEC to develop an integrated energy plan biannually for electricity, natural gas, and transportation fuels for inclusion in the California Energy Report. The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. The plan identifies a number of strategies to further this policy, including assistance to public agencies and fleet operators in implementing incentive programs for Zero Emission Vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

The 2009 Integrated Energy Policy Report (CEC 2012a) focuses on the following issues:

- Anticipated operational and physical changes to California’s electric system through 2020
- How the State’s energy efficiency goals interact with electrical and natural gas demand forecasting methods; recommended changes to electricity procurement
- Vulnerability of the State’s nuclear plants to major seismic events; and other energy issues


Local
Santa Clara County General Plan
The County General Plan contains goals, strategies and policies for the County as a whole, as well as rural unincorporated areas outside of cities and remaining unincorporated areas (called
3.17 ENERGY CONSERVATION

pockets and islands) within cities' urban service areas (Santa Clara County 1994). The policies relating to energy resources are summarized as follows:

C-RC 77  Energy efficiency and conservation efforts in the transportation, industrial, commercial, residential, agricultural and public sectors shall be encouraged at the local, county (sub-regional), and regional level.

C-RC 78  The objectives of the state energy plan should be implemented at the local and regional level through an overall strategy consisting of:

(a) Reducing transportation energy demand and oil-dependency;
(b) Conserving energy in residential, commercial, agricultural, and industrial sectors; and
(c) Increasing consumer and general public awareness through education.

C-RC 79  Energy use and fossil fuel dependency in the transportation sector should be reduced by the following general means:

(a) Growth management policies and implementation to minimize increases in the extent of the urbanized area and to promote balanced, compact urban development;
(b) Land use and development standards which support alternative transportation modes;
(c) Travel demand management, TDM, and transportation system operational efficiency;
(d) Expanded transit service; and
(e) Increased availability and use of alternative fuels.

3.17.3 Thresholds of Significance
Appendix F of the CEQA Guidelines provides guidance for assessing energy conservation-related impacts of projects. The goal of this guidance is to conserve energy by:

1. Decreasing overall per capita energy consumption;
2. Decreasing reliance fossil fuels such as coal, natural gas, and oil; and
3. Increasing reliance on renewable energy sources.

Under CEQA, it is appropriate to evaluate the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy. Accordingly, the project would cause a significant impact to energy resources if it would:

- Fail to include means for avoiding or reducing wasteful, inefficient, and/or unnecessary consumption of energy; or
- Not comply with existing energy standards, including standards for energy conservation.
3.17 ENERGY CONSERVATION

3.17.4 Impacts and Mitigation
The project would include means for avoiding or reducing wasteful, inefficient, and/or unnecessary consumption of energy. (Less than Significant Impact)

Electrical Power Use
Project-related electrical power use would be minimal during project construction, as most construction energy needs would be met through the use of diesel and gasoline fuels for vehicles, equipment, and power generators. Installation of electricity infrastructure to serve the future residences would occur during project construction, but this infrastructure would not be used until future residences are constructed.

Construction and occupation of future residences would result in electricity use. The County requires the developer to submit written verification from the electric utility company serving the development that all easements and financial obligations have been satisfied prior to recording the final subdivision map. The future residences would be required to comply with CEC Title 24 energy efficiency standards. These residences would also be required to comply with the County’s Green Building regulations, which are designed to reduce generation of waste during construction activities, promote energy efficiency, reduce potable water demand, and encourage natural resource conservation. The County’s green building standards for private development would require developers of future residences to submit a GreenPoint Rated1 or Leadership in Energy and Environmental Design (LEED)2 for Homes Project Checklist to certify compliance with the County’s standards. Compliance with state and County energy efficiency and green building requirements would ensure that impacts from wasteful, inefficient, and/or unnecessary consumption of electrical energy are less than significant.

Gasoline and Diesel Fuel Use
Project-related gasoline and diesel fuel use for gasoline- and diesel-powered vehicles and construction equipment would occur during project construction and future residential construction. Gasoline and diesel fuel consumption is necessary to perform construction activities; however, the project would be required to comply with the County’s Basic Construction Mitigation Measures for construction projects, which includes limits on vehicles idling times and requires that all construction equipment be maintained and properly tuned in accordance with manufacturer’s specifications. Compliance with these County measures would avoid unnecessary use of fossil fuels and would ensure that impacts from wasteful, inefficient, and/or unnecessary consumption of gasoline and diesel fuel energy are less than significant.

The project would comply with existing energy standards, including standards for energy conservation. (No impact)
The project would meet all applicable state and federal energy policies and standards. The project would also be consistent with the applicable Energy Conservation Policies established in

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1 “GreenPoint Rated” is a residential green building rating system developed by the Build It Green organization.
2 “LEED” is a green building rating system developed by the U.S. Green Building Council.
3.17 ENERGY CONSERVATION

the Resource Conservation Chapter of the County General Plan (see policies in Section 3.17.2). The project would not obstruct energy efficiency and conservation efforts in the residential sector and would have no impact on other sectors. Compliance with state and County energy efficiency and green building requirements would meet the County’s objective of conserving energy in the residential sector. The potential for the project to induce growth is analyzed in Section 3.13, Population and Housing, while the transportation and traffic impacts of the project are analyzed in Section 3.15, Transportation and Traffic. Prior to receiving County approval for the subdivision request, the applicant would also be required to submit written verification that electricity will be provided to the project area by PG&E. The project would therefore comply with existing energy standards, including standards for energy conservation.
4 CUMULATIVE AND GROWTH INDUCING IMPACTS

4.1 INTRODUCTION
This section provides a discussion of the potential cumulative and growth-inducing impacts associated with the proposed project, according to CEQA requirements. Cumulative impacts are defined as two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental effects. Section 15130(a) of the CEQA Guidelines states that:

An EIR shall discuss cumulative impacts of a project when the project’s incremental effect is cumulatively considerable….Where a lead agency is examining a project with an incremental effect that is not ‘cumulatively considerable’, a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

This section describes the evaluation of which, if any, cumulative projects in the vicinity of the proposed project could contribute to cumulative environmental effects in the area. The potential for cumulative impacts associated with the proposed project are discussed for each resource section addressed in the EIR. A discussion of the potential for growth-inducing impacts to be generated by the proposed project follows the cumulative impact discussion.

4.2 CUMULATIVE PROJECTS
The cumulative impact analysis considers impacts of the proposed project along with the potential impacts of other reasonably foreseeable projects in the project vicinity. Of greatest relevance are projects within the City of Morgan Hill or the San Martin community in unincorporated Santa Clara County.

Projects planned within the vicinity of the proposed project include a potential alignment of the Bay Area Ridge Trail and the Southeast Quadrant (SEQ): Sports-Recreation-Leisure and Agriculture (Figure 4.2-1).

The SEQ: Sports Recreation-Leisure and Agriculture project consists of two new land use designations (Sports-Recreation-Leisure and Agriculture) for areas within Morgan Hill referred to as the SEQ. Within the SEQ, there are six projects that are planned. These projects are identified in Table 4.2-1.
4 CUMULATIVE AND GROWTH INDUCING IMPACTS

Figure 4.2-1: Cumulative Projects in the Project Region

Cumulative Projects Legend

1. Bay Area Ridge Trail
2. South County Catholic High School
3. Craiker Sport Retail / Restaurant Uses
4. Pularico Sports / Recreation / Leisure Uses
5. Jacoby Sports / Recreation / Leisure Uses
6. Chaila Planned Development
7. City of Morgan Hill Outdoor Sports Center
### Table 4.2-1: Cumulative Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bay Area Ridge Trail</td>
<td>The Bay Area Ridge Trail is a planned multi-use 500-mile ridgeline trail that encircles the San Francisco Bay Area through nine counties. There is a potential future alignment of the trail that would span the eastern border of the subdivision area. This proposed alignment would be directly adjacent to the proposed stockpile and water tank.</td>
<td>In early planning stages.</td>
</tr>
<tr>
<td>2. South County Catholic High School</td>
<td>This project involves developing a private high school over 40 acres located north of Tennant Avenue and east of Murphy Avenue. At buildout, the facility would include approximately 65 classrooms to accommodate up to 1,600 students. The project would be constructed and occupied in phases. The first phase proposes to accommodate 600 students over a 5-year timeframe. The projected building area would include 65 classrooms, a gymnasium, and other buildings. Sports fields and facilities would be developed in the later phases. The applicant may propose interim, joint use of nearby City aquatics and athletic field facilities for the time before private school sports facilities are available.</td>
<td>Notice of Preparation prepared in October 2010. A Draft EIR has not been prepared.</td>
</tr>
<tr>
<td>3. Craiker Sports Retail/Restaurant Uses</td>
<td>This project involves developing 43,000-square feet of sports retail and a sports-themed restaurant on 4 acres, located immediately south of the City of Morgan Hill Aquatics Center at the northeastern comer of Condit Road and Tennant Avenue.</td>
<td>Notice of Preparation prepared in October 2010. A Draft EIR has not been prepared.</td>
</tr>
<tr>
<td>4. Puliafico Sports-Recreation-Leisure Uses</td>
<td>This project area is located on 40 acres along the south side of Tennant Avenue, owned by the Puliafico Family. The applicants propose to develop their land with sports-recreation-leisure uses, including outdoor sports fields and a possible indoor facility to house recreational uses such as indoor soccer, batting cages, volleyball courts and a ropes challenge course.</td>
<td>Notice of Preparation prepared in October 2010. A Draft EIR has not been prepared.</td>
</tr>
</tbody>
</table>
### Table 4.2-1 (Continued): Cumulative Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Chiala Planned Development</td>
<td>This project is located on 306 acres in the easternmost portion of the Southeast Quadrant, owned by the Chiala Family. The property owners propose a Planned Development for large-lot residential, open space, agricultural preserve, and various sports-recreation-leisure uses. The sports-recreation leisure uses may include internationally sanctioned, professional-quality cricket grounds; an equestrian facility; a culinary center; and small-scale visitor accommodations. The entire Chiala property is proposed to be included within the City limits. However, the property would not be added to the City's urban service area. The project applicant proposes to establish a private water company to serve the entire planned development and remain on septic systems. Restrictions recorded on title would preclude the residential lots from being included in the urban service area in the future. The plan may evaluate extending urban services into the northeast corner if it promotes the goals of agricultural preservation.</td>
<td>Notice of Preparation prepared in October 2010. A Draft EIR has not been prepared.</td>
</tr>
<tr>
<td>7. Outdoor Sports Center</td>
<td>This project reflects the City's planned continued use of the Outdoor Sports Center in its current soccer field configuration, but with expanded community use. It would involve potential construction of an additional four soccer fields, as determined by future demand.</td>
<td>Notice of Preparation prepared in October 2010. A Draft EIR has not been prepared.</td>
</tr>
</tbody>
</table>

Source: City of Morgan Hill 2010

### 4.3 CUMULATIVE IMPACTS

The resource areas addressed below have the potential to be affected by the proposed project and are discussed in relation to the potential cumulative impacts of the proposed project impacts combined with those of the cumulative projects. For the purpose of this analysis it is assumed that the roadway, utility, private recreation, and drainage improvement elements of the proposed project would be constructed prior to the cumulative projects identified in Table 4.2-1, while the future residences would be constructed during or after the cumulative projects. An EIR has not been prepared by City of Morgan Hill for projects 2 through 7, and these projects are not expected to be approved until after the Coyote Highlands Subdivision has been approved, and the location of the Bay Area Ridge Trail in the project vicinity has not been finalized and there is no proposal to construct the trail in the near future. All or portions of the future residential development may be constructed at the same time as other cumulative projects.
4.3.1 Aesthetics and Visual Resources
Cumulative impacts related to aesthetics occur when a proposed project and other relevant project(s) are being constructed simultaneously and in close proximity to one another, creating a substantially aesthetically unpleasing landscape, or when the proposed project and other relevant projects result in a substantial negative change in the foreground of one or more areas. The proposed project would have less than significant impacts related to aesthetics with the implementation of mitigation. No relevant projects in the region would occur or are occurring in close enough proximity to the proposed project to result in the aggregation of impacts. Cumulative impacts would not occur.

4.3.2 Agricultural and Forestry Resources
Cumulative impacts to agriculture occur when a proposed project and other project(s) result in the loss of designated Farmland that is cumulatively considerable. Projects 2 through 7 identified in Table 4.2-1 would result in the loss of Prime Farmland, Farmland of Statewide Importance, Unique Farmland and Farmland of Local Importance. These projects would have a cumulatively significant impact on designated Farmland. The proposed project would not contribute to significant impacts to agriculture because there is no designated Farmland within the project area. There would be a small loss of grazing land as a result of the proposed roadway, utility, private recreation, and drainage infrastructure, and future residential development. However, agricultural uses would continue on the majority of the project area as described in Section 3.2. The proposed project would have a less than significant contribution to cumulatively significant agricultural impacts.

4.3.3 Air Quality
A cumulative impact to air quality occurs when the proposed project and other project(s) would result in the violation of an air quality standard or conflict with an air quality plan. Neither the proposed project nor any of the cumulative projects would result in a new stationary source of air pollution. The proposed project would have an insignificant impact on air quality and is consistent with both the County’s General Plan and the BAAQMD Clean Air Plan, and would have a less than significant air quality impact with the implementation of the identified mitigation measures. Cumulative projects are or would be required to adhere to air quality rules and regulations. Construction of the proposed project at the same time as the other cumulative projects could result in cumulative air quality impacts from dust and equipment emissions; however, these cumulative impacts would not be significant because those projects would also apply standard construction air quality BMPs. The BMPs were defined to avoid significant air quality impacts. Construction dust from earthmoving activities in areas of serpentinite would be controlled by adhering to BAAQMD policies and would not combine to cause a significant cumulative impact. Cumulative impacts would be less than significant.
4.3.4 Biological Resources
Cumulative impacts related to biological resources occur when the proposed project and other cumulative project(s) cause a substantial aggregation of impacts to sensitive species and/or habitat, wetlands, established wildlife corridors, or biological policies. Construction of the cumulative projects would result in impacts to biological resources, and many of those projects would impact the same types of biological resources that would be impacted by the construction activities of the proposed project. It is expected that each of the cumulative projects would have to mitigate these impacts through the CEQA, Fish and Game Code 1602, or Clean Water Act Section 404/401 permitting processes, as well as through the ESA Section 7 consultation process and, possibly, CESA consultation. As a result, the cumulative projects are expected to implement mitigation for substantial impacts to biological resources similar to the mitigation that is being required of the proposed project. With implementation of the mitigation defined in Section 3.4, the proposed project would not contribute to significant cumulative impacts to biological resources.

If approved, the Santa Clara Valley HCP/NCCP would provide for the long-term conservation of both common and rare species and habitats throughout much of Santa Clara County, including the project vicinity. The Santa Clara Valley HCP/NCCP will define measures to offset future cumulative impacts to biological resources in the region.

4.3.5 Cultural Resources
Cumulative impacts related to cultural resources occur when the proposed project and other cumulative project(s) cause a substantial aggregation of impacts from disturbance or destruction of historical, archaeological, or paleontological resources, or to human remains. The proposed project and the Chiala Planned Development would each result in impacts to the Kellogg and Achilles properties, which are potentially significant historic resources. The impacts that are potentially significant are being mitigated by the proposed project as described in Section 3.5. The future Chiala Planned Development would be required to implement similar mitigation and maybe required to preserve the historic structures within their property. With implementation of the mitigation measures identified in Section 3.5, the proposed project would not contribute significantly to impacts to these historic resources. Cumulative impacts to cultural resources would be less than significant.

4.3.6 Geology and Soils
Cumulative impacts related to geology and soils could occur if the proposed project and other cumulative project(s) cause a substantial aggregation of impacts with regards to soil erosion, collapse as a result of subsidence, and/or loss of a mineral resource. The proposed project would not result in subsidence or loss of a mineral resource. Other proposed project and other cumulative projects would be required to comply with the NPDES Construction General Permit and implement BMPs during construction. As a result, the proposed project and other cumulative projects would not have a cumulatively significant impact on soil erosion. Impacts to geology and soils from the proposed project and other cumulative projects would be less than significant.
4.3.7 Greenhouse Gas Emissions
Climate change, as a result of the emission of greenhouse gases, is a global concern and is a result of cumulative aggregation of natural and human actions world-wide. Any proposed project emitting greenhouse gases has the potential to contribute to impacts to greenhouse gases and global warming. Neither the proposed project nor any of the cumulative projects would result in a new stationary source of greenhouse gases.

The primary emission of greenhouse gases would be from diesel powered equipment during construction. The proposed project would have less than significant impacts regarding greenhouse gases with the implementation of identified mitigation measures. Aggregation of impacts would occur from the proposed project and other cumulative projects. The proposed project would comply with the Climate Change Scoping Plan (Scoping Plan) approved by the CARB, which includes recommended strategies and sector targets for implementation to meet the goals of AB 32. Other cumulative projects would be encouraged to implement all feasible mitigation measures to achieve maximum GHG reductions. The proposed project would not substantially contribute to a cumulative impact. Cumulative impacts would be less than significant.

4.3.8 Hazards and Hazardous Materials
Cumulative impacts related to hazards and hazardous materials could occur through the transport, use, disposal, or accidental spill of hazardous materials, or through the unearthing of contaminated soils at the proposed project and cumulative project(s) areas. The proposed project would have a less than significant impact on hazards or hazardous materials through implementation of standard mitigation measures to prevent and contain a potential accidental spill of potentially hazardous materials required by construction equipment. There is no known plume of hazardous materials that would be unearthed by the proposed project and other cumulative projects. The proposed project would have a less than significant contribution to cumulative impacts to hazards and hazardous materials.

4.3.9 Hydrology and Water Quality
Cumulative impacts related to hydrology and water quality could occur if the proposed project and cumulative project(s) cause a substantial aggregation of impacts with regard to violation of water quality standards from regular discharges or polluted stormwater runoff, increased soil erosion, groundwater depletion or interference with groundwater recharge, increased runoff, or flooding due to construction in flood hazard areas or failure of a dam or levee. The proposed project would not result in increased flooding or failure of a dam or levee. Mitigation would be implemented so the proposed project would result in no net increase in runoff under post-project conditions. The proposed project would use groundwater resources; however, the proposed water wells would be located in a different groundwater basin than the cumulative projects and would not substantially contribute to cumulative impacts to groundwater supply. The proposed project and cumulative projects could contribute to polluted stormwater runoff as a result of concurrent construction and ground disturbance, and these impacts would be less than significant with implementation of standard BMPs as required by the NPDES Construction
General Permit. The proposed project would have a less than significant cumulative impact on hydrology.

4.3.10 Land Use, Planning, and Recreation
Cumulative impacts related to land use and planning could occur if the proposed project and other cumulative project(s) conflicted with the Santa Clara County General Plan, Morgan Hill General Plan, and other regulatory policies. The proposed project would have a less than significant impact with regard to land use and planning. Cumulative projects 2 through 7 are being proposed as part of an amendment to the City of Morgan Hill’s General Plan to allow for increased recreational uses and annexation of the lands within the SEQ. While relevant projects 2 through 7 would result in an impact to land use necessitating an amendment to the City of Morgan Hill’s General Plan, the proposed project would not contribute to this impact. Implementation of the proposed project would not result in a cumulative impact to land use and planning.

Cumulative impacts related to recreation could occur if the proposed project and cumulative project(s) are constructed concurrently in close proximity to a recreation resource or would cause accelerated deterioration of existing recreational facilities. The proposed project would be constructed in close proximity to a proposed alignment of the Bay Area Ridge Trail. If the Bay Area Ridge Trail were to be implemented in the alignment near the project area, the proposed project would have an impact on the recreational resource. This impact would be less than significant as the proposed project would not have direct access to the Bay Area Ridge Trail and would not preclude development of the Bay Area Ridge Trail within the alignment adjacent to the project area. The aesthetic impact on the Bay Area Ridge Trail as a result of the proposed project would also be less than significant as the Bay Area Ridge Trail traverses alongside other residential developments and the proposed project would be similar to the visual setting of the trail in other areas. The cumulative impact from implementation of the proposed project and the Bay Area Ridge Trail would be less than significant. Cumulative projects 3, 4, 5, and 7 would result in the construction of new recreational facilities. Due to the distance between these recreational facilities and the project area, there would be no impact as a result of the project on recreation in these areas. The project would not result in significant cumulative land use impacts.

4.3.11 Mineral Resources
The proposed project would have no impact to minerals and would therefore not contribute to cumulative impacts to minerals.

4.3.12 Noise
Cumulative impacts related to noise occur when two or more projects, in relatively close proximity to one another, are being constructed or are operating simultaneously and are producing noise above average ambient noise levels or at levels that are unacceptable. The proposed residential construction would not contribute to cumulative noise levels. The
proposed residential construction would be approximately 1 mile from the Chiala Planned Development. Noise levels would attenuate over this distance. Construction of the Bay Area Ridge Trail, if and when dedicated, adjacent to the project area would not produce noise within the vicinity of sensitive receptors and there would be no cumulative impact to noise as a result of the proposed project and the cumulative projects.

4.3.13 Population and Housing
Cumulative impacts related to population and housing occur when a proposed project and other cumulative project(s) remove a significant amount of housing or directly induce substantial population growth. The proposed project would result in the creation of an additional 25 residences and would not result in the loss of housing. The impact on population growth is discussed in Section 4.4 below. The proposed project would not result in a cumulatively significant impact on population or housing.

4.3.14 Public Services
Cumulative impacts related to public services could occur if the proposed project and other cumulative project(s) result in the need of new or expanded capacity for wastewater treatment, water supply, landfill disposal, or other governmental facilities and services. The proposed project would provide its own water and would use septic leach fields for sewage disposal. The proposed project would therefore not contribute to cumulative impacts to water or wastewater services. The proposed project and cumulative projects would result in increased landfill disposal. However, this increase would be less than significant due to landfill capacity. Proposed projects 4, 5, and 7 would result in additional parks and would not create a need for additional recreational facilities. Implementation of the proposed project and the Chiala Proposed Development would result in cumulative impacts to public schools. The proposed project’s addition of approximately 18 students to the K-12 school system would not contribute significantly to cumulative impacts to public schools. The proposed project would have a less than significant cumulative impact to public services.

4.3.15 Transportation and Traffic
Cumulative impacts related to transportation and traffic could occur if the proposed project, in conjunction with other cumulative project(s), caused a significant reduction in the level of service of roads in the project area or created a significant amount of traffic or congestion. The proposed project and the Chiala Proposed Development would contribute to increased traffic on Maple Avenue and Carey Lane. As discussed in Section 3.15, the capacity of Maple Avenue substantially exceeds the current traffic volume. There would be a cumulative impact as a result of the proposed project and Chiala Proposed Development on traffic. However, this impact would be less than significant because the area roadways have the capacity to handle the combined increase in traffic.
4.3.16 Utilities and Service Systems
Cumulative impacts related to utilities could occur if the proposed project and other cumulative project(s) exceed the capacity for water supply, wastewater treatment facilities, or other utilities. As discussed for public services, the proposed project would provide its own water and wastewater services. The proposed project would use groundwater resources from a separate groundwater basin than the other cumulative projects. The proposed project would not contribute to significant impacts to utilities.

4.3.17 Energy Conservation
Cumulative impacts related to energy conservation could occur if the proposed project and other cumulative project(s) created wasteful, inefficient, or unnecessary consumption of energy, or did not comply with existing energy standards, including standards for energy conservation. The cumulative projects would all involve the unavoidable use of energy for construction and operation, and would be required to comply with the CEC Title 24 energy efficiency standards and the County’s Green Building regulations. Conformance with these standards and regulations would avoid wasteful, inefficient, or unnecessary consumption of energy, and would ensure that all cumulative projects would comply with existing energy standards. The proposed project would therefore not contribute to significant cumulative impacts related to energy conservation.

4.4 GROWTH INDUCING IMPACTS
Section 15126.2(d) of the CEQA Guidelines requires preparers of an EIR to consider the growth-inducing impacts of a proposed project. Section 15126.2(d) states that the EIR should:

Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects that would remove obstacles to population growth.

The proposed project would add 25 residences to unincorporated Santa Clara County, but would not add permanent jobs to the existing employment base. The 25 residences would be expected to house approximately 72 residents. The construction labor required during roadway and infrastructure development and residential construction is expected to come from the local labor force, thereby not resulting in increased demands for additional housing for construction labor or for community services and facilities.

The projected annual growth rate of Santa Clara County is approximately 28,000 residents annually. This growth rate substantially exceeds the 72 residents that would be housed within the residential units proposed by the project. Santa Clara County is known to experience a housing and jobs imbalance whereby additional homes are needed to serve the current population (Santa Clara County 2010). The proposed project would therefore not produce unplanned growth impacts.
Construction of the roadway and utilities to the site (primarily for water service) are sized to accommodate the 25 future residences. All future housing sites would be served by septic systems and leach fields for each individual home. The project would not, therefore, foster significant economic or population growth in unincorporated Santa Clara County.

4.5 **SIGNIFICANT EFFECTS THAT CANNOT BE AVOIDED**

Section 15126.2(b) of the CEQA Guidelines requires preparers of an EIR to identify significant environmental effects that cannot be avoided if a proposed project is implemented. Section 15126.2(b) states that the EIR should:

> Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance.

All potential significant impacts associated with the proposed project are identified in the Environmental Analysis (Chapter 3) and are summarized in the Executive Summary. The project would not result in any impacts that cannot be reduced to a less than significant level through the implementation of identified mitigation measures.

4.6 **SIGNIFICANT IRREVERSIBLE CHANGES**

Section 15126.2(c) of the CEQA Guidelines requires that an EIR identify any significant effect on the environment that would be irreversible if the project were implemented. CEQA Guidelines Section 15126.2(c) describes irreversible environmental changes as follows:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project.

Construction of the project would require the use of some nonrenewable resources, such as fuel for construction vehicles and equipment and asphalt, concrete, plastic, and metals for the construction of the roadway, subdivision improvements, and future residences. The temporary construction-related use of vehicle fuel would not result in a significant use of nonrenewable resources, and would not commit future generations to similar uses. The volume of other nonrenewable resources that would be used for project construction would not represent a significant use of nonrenewable resources, and many of these resources (such as asphalt, concrete, plastic, and metals) could be reclaimed in the future and put toward other uses.
Future residences would represent a new demand for energy resources. The amount of energy demand created by 25 new residences would be minimal compared to the existing energy demand in the County as a whole, and would represent a less than significant increase in energy use.

Accidents, such as the release of hazardous materials, could trigger irreversible environmental damage. Project construction would involve the transport and use of some hazardous materials, including fluids for construction vehicle operation and maintenance such as fuels, oils, and coolant. These hazardous materials would be used and disposed of in accordance with all state and local regulations. Considering the types and minimal quantities of hazardous materials that would be used at the site, accidental release of substantial quantities of hazardous materials is unlikely. Mitigation measures Hazards-1 through Hazards-4 would also be implemented to reduce the potential impacts of construction accidents to a less than significant level. Compliance with state and federal regulations and safety requirements and implementation of identified mitigation measures would ensure that public health and safety risks are maintained at acceptable levels, so that significant irreversible changes from accidental releases are not expected.
5 ALTERNATIVES TO THE PROJECT

5.1 INTRODUCTION

5.1.1 CEQA Requirements
Section 15126.6 of CEQA requires that an EIR describe a range of reasonable alternatives to the project that would feasibly attain the basic project objectives and avoid or substantially lessen any significant effects of the project. Alternatives may be eliminated from detailed analysis in the EIR if they fail to meet the most basic of project objectives, are determined to be infeasible, or cannot be demonstrated to avoid or lessen significant environmental impacts. The analysis in this EIR shows that all significant and potentially significant impacts can be mitigated to levels below significance.

5.1.2 Project Objective and Purpose
The objective of the project is to provide for low-density residential development on the subject property, while maintaining the existing open space and livestock grazing uses in perpetuity.

5.1.3 Significant Environmental Impacts
This EIR discloses that the proposed project would have potentially significant impacts in several environmental categories. These categories include:

- Aesthetics and Visual Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Public Services
- Utilities and Service Systems

In each of these categories, mitigation measures have been identified that would reduce the environmental impact to a level below significance.

Per Section 15126.6 (b) of the CEQA Guidelines, “the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.” This alternatives analysis
therefore focuses on potential project alternatives that would avoid or substantially lessen environmental impacts of the project on the environmental categories listed above.

5.2 ALTERNATIVES CONSIDERED BUT REJECTED

Section 15126.6(c) of the CEQA Guidelines permits the elimination of an alternative from detailed consideration due to:

- Failure to meet most of the basic project objectives
- Infeasibility
- Inability to avoid significant environmental impacts

Section 15126(f)(1) of the CEQA Guidelines states that “Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries…and whether the proponent can reasonably acquire control or otherwise have access to the alternative site. No one of these factors establishes a fixed limit on the scope of reasonable alternatives.”

Two potential alternatives to the proposed project that were initially considered but determined infeasible and eliminated from further analysis include an Alternative Project Location and an Alternative Road Design.

5.2.1 Alternative Project Location

The proposed project entails a 25 residential lot subdivision over 588 acres within the foothills of the Diablo Range, east of the City of Morgan Hill. The subject property where the subdivision is proposed represents one of the last privately owned, large lot, vacant properties located in Santa Clara County within the lower foothills of the Diablo Range. There are no vacant parcels of a similar nature located within the immediate vicinity of the project (Morgan Hill, San Martin, Gilroy area).

Farther north, there are vacant hillside properties within the Diablo Range of a similar size. These properties include land holdings of the United Technology Corporation located east of Highway 101 and south of Metcalf Road, and land holdings of YCS/Young Ranch located east of Highway 101 and north of Metcalf Road. Both of these hillside parcels are large lot, privately held properties within the foothills of the Diablo Range. The County has received a Preliminary Cluster Subdivision proposal for the development of 35 residences on the YCS/Young Ranch property. As disclosed within mapping prepared for the Santa Clara Valley Habitat Plan and materials submitted with the Young Ranch Preliminary Cluster Subdivision proposal, both of these properties contain very sensitive biological habitat (serpentine bunchgrass) that supports a number of endangered plant and wildlife species. Proposed relocation of the Coyote Highlands subdivision proposal to one of these two properties would likely result in much greater biological impacts than those of the proposed project, in addition to similar if not greater environmental impacts related to aesthetics and geologic hazards.
5 ALTERNATIVES TO THE PROJECT

Other alternative locations for the project could include land on the Santa Clara Valley floor, within the rural unincorporated area. These alternative locations could include lands downslope (below) the property, located off of Maple Avenue or Tennant Avenue. Much of this land is in agricultural production and has been designated as Prime Farmland by the State Department of Conservation. Much of this property has a land use and zoning designation of Agriculture, which does not allow for residential cluster subdivisions. While a residential subdivision could potentially occur in this area and could lessen potential environmental impacts to biological resources, aesthetics, and geologic hazards, such development would likely result in greater impacts associated with agricultural resources.

For the reasons listed above, in addition to the fact that none of these lands are under the ownership of the project proponent, alternative project locations are not considered viable project alternatives and are not discussed further in this Draft EIR.

5.2.2 Alternative Road Design

Many of the potential environmental impacts from the proposed project result from construction of the main access road, beginning from the terminus of Maple Avenue. An alternative road design could potentially avoid these potentially significant impacts. Due to the steep topography of the site, there are limited options for providing road access onsite. In addition to the main road access as proposed under the project, alternative points of access could include a road extension from Oak Canyon Drive, which terminates on the northeastern side of the property, and improvement of the existing ranch road, located on the northwestern side of the property.

While an extension of Oak Canyon Drive could avoid many of the significant environmental impacts associated with the access road improvements (Aesthetics, Biological Resources, and Geologic Hazards), secondary emergency vehicle access would still be required for the cluster subdivision per County requirements. Improvement of another road access would therefore still be required, using either the ranch road alignment or the main road alignment as currently proposed.

The ranch road located on the northwestern side of the property currently provides access to the property and could be considered as an alternative road option. However, due to steep terrain, the magnitude of road improvements required (widening, construction of retaining walls), and location within an area of greater visibility from the Santa Clara Valley floor, improvement of this road would result in greater environmental impacts related to Aesthetics and Geologic Hazards than the proposed project. For these reasons, an alternative road design is not discussed further in this Alternatives analysis.

5.3 CONSIDERED ALTERNATIVES

Three alternatives to the proposed project, including the No Project Alternative, are considered in this EIR and described below. Table 5.3-1 at the end of the section provides a comparison of
these alternatives and the proposed project, and indicates whether each alternative would result in greater, lesser, or equal impacts when compared with the proposed project.

5.3.1 Alternative A - No Project Alternative
Description of Alternative A
Section 15126.6(e) of the CEQA Guidelines requires consideration of the environmental consequences if the project is not constructed. The No Project Alternative would result if the current application is not approved, the project area is not subdivided into 25 residential lots and 5 open space lots, and the future residences are not built. Under the No Project Alternative, these activities do not occur and the impacts identified in Chapter 3 would be avoided.

Under the No Project Alternative, current land uses and management of the property would be expected to continue. Currently, the subject property is used for cattle grazing and it is expected that this use would continue onsite. The existing residences located onsite on Carey Avenue would continue to be used.

The southern 100 acres of the subdivision area is a legal lot under separate ownership (Fountain Oaks LLC) from the remaining parcels in the Coyote Highlands subdivision area. On February 6, 2007, the County approved a two-lot subdivision for this subject parcel (two 50-acre lots respectively) that would result in the development of two new single-family homes (Chiala Subdivision - County File # 9419). The approval of the proposed 25-lot subdivision would supersede this two-lot subdivision. However, under the No Project Alternative, if the proposed 25-lot subdivision would not go forward, it is reasonably foreseeable that the property owner would pursue development of the approved two-lot subdivision. Improvements associated with this two-lot subdivision would include construction of a new access road from the eastern terminus of Maple Avenue approximately one-third of the way onto the 100 acre parcel to provide access to two single-family homes. Per the approved subdivision plans, the new single-family homes would be located on the southern third of the property.

The potential environmental impacts that would result from construction of the two-lot subdivision were evaluated in an Initial Study and Mitigated Negative Declaration (IS/MND), published by the County on November 3, 2006. This Initial Study disclosed that the implementation of the two-lot subdivision could result in potentially significant impacts related to Aesthetics, Biological Resources, Hydrology, and Traffic.

The remainder of the Coyote Highlands property consists of eight existing legal lots owned by Coyote Highlands LLC. Seven of the parcels abut the western property line and could be accessed from Carey Lane and the existing ranch road (Figure 2.2-2). The eighth parcel, comprising the eastern one-third of the Coyote Highlands LLC holding, could be accessed from Oak Canyon Drive. Under the current zoning designation and County policy, the property owner could propose a new single-family residence on each of these eight existing legal lots. It is unknown where these residences would be located; however, the steep hillside topography and presence of geological hazards and biological resources would likely dictate construction of the residences in areas closer to existing infrastructure, including road access.
5 ALTERNATIVES TO THE PROJECT

Effects of Alternative A

Aesthetics and Visual Resources

As disclosed in the (IS/MND) published in 2006 for the Chiala two-lot subdivision, the two single-family residences that could be constructed under this subdivision were visible from the Santa Clara Valley floor. The MND disclosed that the construction of these residences could result in a potentially significant impact and listed mitigation measures (controls on house color and requirement of landscaping) that would reduce these impacts to a less-than-significant level.

It is unknown where future residences on the eight existing legal lots on the remainder or the Coyote Highlands property would be sited. Due to steep topography, these future residences would likely be sited on the western portion of the property, closer to the valley floor. The property is located within the –d1 Design Review district; therefore, all new homes would be subject to design review approval. Aesthetic impacts resulting from the No Project Alternative would likely be less than those of the proposed project, due to the development of fewer residences, avoidance of construction of a new access road (as proposed under the subdivision), and the likely siting of future residences closer to the valley floor.

Biological Resources

Under the approved Chiala subdivision for the lands of Fountain Oaks LLC, the proposed residences are located on the western third of the property, sited on areas mapped as non-native annual grassland. Access to both of the residences would require improvement of an access road with a crossing over Corralitos Creek. The MND for the Chiala subdivision disclosed potential environmental impacts (direct take and habitat loss) to the California red legged frog and California tiger salamander.

It is unknown where future residential development would be located for the remaining eight legal lots on the Coyote Highlands property. Residences would likely be sited to avoid steep topography and known hazards and resources (geologic hazards and riparian areas). Future residential development under the Chiala two-lot subdivision and existing legal lots through the No Project Alternative would have similar biological impacts to the proposed project (endangered species impacts and Corralitos creek impacts). These impacts would be substantially lessened due to the reduced intensity of residential development. The development of individual residences would require mitigation measures to both avoid direct impacts to listed plant and wildlife species and compensation for the loss of habitat, in compliance with CEQA and Federal and State Endangered Species Act requirements. As this development activity would be uncoordinated, any mitigation for habitat loss would likely not be consolidated (as would occur with the proposed subdivision), providing less benefit for special status species. Alternatively, individual residences could obtain endangered species permits through the Santa Clara Valley Habitat Conservation Plan, if the Plan is approved.
Hydrology and Water Quality
As disclosed in the IS/MND for the approved Chiala two-lot subdivision, road access for the two residences would entail the removal of an existing culvert and the construction of a new culvert near the bottom of the site where the access road crosses Corralitos Creek. Mitigation measures similar to those for the proposed project would be applied to reduce potentially significant effects associated with this improvement. Improvement of the future residences under the Chiala two-lot subdivision and on the existing eight legal lots on the remainder of the site would result in new impervious surfaces and increased surface water runoff. The overall level of improvements would be less than the proposed project and potential impacts associated with Hydrology and Water Quality would be reduced under Alternative A.

Transportation and Traffic
Construction of two new residences under the approved Chiala subdivision and residences on the eight existing legal lots on the remainder of the site would not generate substantial new traffic. As disclosed in the IS/MND for the Chiala two-lot subdivision, access improvements would be required at the terminus of Maple Avenue adjacent to the Paso Robles Avenue. Based on existing road frontage for the remaining legal lots, seven of the other lots would likely require access improvements to Carey Lane and the existing ranch road. The eight Coyote Highlands lots would likely be served by a driveway from Oak Canyon Drive. Without the construction of a new access road between the terminus of Maple Avenue and Oak Canyon Drive (as would occur under the proposed project), new secondary and emergency vehicle access would not be provided to adjacent residences in the Jackson Oaks neighborhood in Morgan Hill.

Future Subdivision Potential
The County’s current land use designations (Rural Residential and Hillsides) for the Coyote Highlands site allow for the creation of up to 25 residential lots. Thus, it is reasonably foreseeable that if Alternative A – No Project Alternative is selected, a subsequent application could be submitted for the subdivision and development of the project area sometime in the future. A future subdivision application would likely have potentially significant environmental impacts similar in nature to the proposed project, such as impacts on Aesthetics, Biological Resources, and Geologic Resources. The magnitude of these impacts (either greater or less than the proposed project) would depend on the proposed design and improvements associated with the subdivision.

5.3.2 Alternative B – Condensed Cluster Alternative
Description of Alternative B
The Condensed Cluster Alternative would involve grouping 23 of the 25 proposed residential lots closer together on lots of approximately 2 acres in size. A lot size of 2 acres was selected to allow sufficient room for the construction of both a house and an onsite wastewater system. The purpose of the alternative would be to cluster the residences in locations on the property to further minimize or avoid potentially significant environmental impacts, as identified in this EIR. Thus, the objective would be to re-site the proposed residences in areas onsite that avoid, to
the greatest extent feasible, areas with greater environmental sensitivity, including areas visible from the Santa Clara valley viewshed, areas containing higher biological habitat values, geologic hazards, and steeper topography (slopes over 30 percent). Relocating the residential lots from these areas would ideally further reduce environmental impacts in these categories and potentially avoid several of the required mitigation measures by reducing or avoiding one or more significant impacts. Figure 5.3-1 shows a conceptual layout for Alternative B.

Under Alternative B, 23 of the 25 residential lots would be located in the northeastern corner of the project site and adjacent to the existing Jackson Oaks and Holiday Lakes Estates neighborhoods. The remaining two lots would be located in generally the same location as currently proposed, as this southernmost property is under a different zoning designation and would thus not allow allocation of lots together with the other 23 lots. Roadway and utility improvements would be similar to those for the proposed project, with a road alignment that is generally the same. Alternative B would also include the same design guidelines and height limits as the proposed project, and would involve the same square footage for development of residences and accessory structures. Alternative B would not include the separation of each residential lot into Homesite, Transition, and Natural Lands Zones, as the entirety of each lot would be considered a Homesite Zone and available for development.

The Condensed Cluster Alternative would meet the basic project objective of creating 25 rural residential lots. The size of the lots would be considerably smaller than those proposed under the proposed project and would eliminate the ability to create the Transition Zones and Natural Land Zones that are included in the proposed project; however, the average square footage of the Homesite Zones for the proposed project is approximately 1.16 acres, so the 2-acre lots under Alternative B would be larger than the proposed project lots. The allowable square footage of residential and accessory structure development under Alternative B would be unchanged from that of the proposed project. The footprint of this residential development would be larger than total acreage of the project site (28.96-acre building envelope for the proposed project compared to 50-acre building envelope for Alternative B). The residential lots under Alternative B would allow for similar landscape screening as the proposed project, but without the additional area of the Transition Zones. The lots in Alternative B would not have additional acreage available for private recreational and agricultural activities (such as orchards and irrigated row crops) beyond those that could be located on the 2-acre lots. The open space lots would be developed with a system of private recreational trails similar to the proposed project, and existing grazing activities would continue on the open space lots.

Clustering the residential development in the eastern and northern corner of the site would more substantially avoid interface between the home sites and the identified physical site constraints of slope, visibility, riparian habitat, geologic hazards, and biological resources onsite. As the homes would be clustered much closer together (within 100 to 200 feet of each other), the cluster development would appear more like an expansion of the Jackson Oaks community. By reducing the overall size of the lots and clustering them within the northeastern corner of the site near existing neighborhoods, more lands would be preserved in common open
space. The open space area under Alternative B would be more contiguous in area and only divided by the site access roadway.

Clustering of the residential lots in the northeastern location would condense the overall footprint of residential development on the property (eliminating many of the longer driveways and smaller access roads); however, more site preparation and grading would likely be required to create residential pads in one consolidated area. Although the clustering of residential lots would generally avoid the steeper areas of the property, not all of this area is topographically flat; for example, lots 10-13 and lots 20-22 under Alternative B contain steeper slopes and substantial grading would likely be required to create several of these residential pads and driveways.

**Effects of Alternative B**

Alternative B – Condensed Cluster Alternative would have the same number of residential lots as the proposed project. Environmental impacts that are dependent upon residential density, such as Traffic, Noise, and Greenhouse Gas emissions associated with new vehicle trips, would not substantially change. This alternative would likely result in the same, or similar, impacts to the proposed project for:

- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Land Use, Planning, and Recreation
- Mineral Resources
- Population and Housing
- Public Services
- Transportation and Traffic
- Energy Conservation

The following sections identify the impacts of Alternative B that would be different from those of the proposed project.

**Aesthetics and Visual Resources**

Future residences would be located on a portion of the site that largely avoids the high visibility areas, would be clustered closer together more similar to the spacing of homes in the neighboring Jackson Oaks community, and would more appear like an extension of the Jackson Oaks neighborhood. The square footage of residential and accessory structure development would be similar to that of the proposed project, but would be condensed into a smaller portion of the project area. Thus, while the build out of homes under this Alternative would not completely avoid aesthetic impacts, the impact could be reduced, as all development would be consolidated in one area with the remainder of the property preserved in open space. More homes would be clustered together in the northeastern portion of the property and would be located closer to the future Bay Area Ridge Trail alignment. Views from the future trail could be more substantially altered, in comparison with the proposed project.
5 ALTERNATIVES TO THE PROJECT

Air Quality
The northeastern portion of the property contains a concentration of serpentine soils. Concentrated development in that portion of the project site, as shown under Alternative B, would likely involve increased disturbance of these serpentine soils, which could expose the naturally occurring asbestos that occurs within these soils. Additional mitigation measures would likely be applied to address this air quality hazard and reduce hazards to construction workers and future residents.

Biological Resources
Future residential development under Alternative B would be located farther away from the main riparian corridors (Fisher Creek and Corralitos Creek), which would incrementally reduce impacts on biological resources. The residential lots would also be located farther away from the golden eagle nest on the site, further reducing any possible impacts on nesting behavior of golden eagles. The elimination of the Transition Zones would also reduce the acreage available for private recreational and agricultural improvements, and would maintain more of the subdivision area in common open space and natural habitat and grazing land. While the clustering of residential homes together would create a greater barrier to wildlife movement in the area where the homes are clustered, this alternative would preserve open space area as a more intact, contiguous area and reduce the amount of “edge” between the individual rural residences and areas used for wildlife movement. The effects to wildlife habitat would be less than the proposed project but would likely still require implementation of mitigation measures similar to those for the proposed project.

Cultural Resources
The smaller footprint of the residential lots would likely result in fewer potential conflicts with historic resources. The location of the condensed cluster development in the northern corner of the project area would also place the development farther away from the majority of the historic resources on the site.

Geology and Soils
The residential lots would be located on a portion of the project site that is less constrained by slope and landslide hazard issues, and the clustering of the lots would incrementally reduce the amount of ground disturbance required for driveways. The elimination of the Transition Zones would also reduce the acreage available for private recreational and agricultural improvements, which in turn would reduce the square footage of ground disturbance.

Hydrology and Water Quality
The residential lots would be located farther away from wetland areas and riparian corridors and would involve a smaller overall footprint of ground disturbing activities, which would incrementally reduce project impacts to drainage and water quality.

Noise
The residential lots would be located closer to the Jackson Oaks and Holiday Lakes Estates neighborhoods. Noise generated by residential construction activities would therefore be concentrated closer to these existing nearby residences, which would result in a greater noise
impact than that of the proposed project. Mitigation measures similar to those for the proposed project would likely be applied to reduce potentially significant effects to a less-than-significant level.

Utilities and Service Systems
The reduced overall size of the residential lots could greatly reduce or eliminate the area available for septic leach fields. Some of the area located within the northeastern portion of the property has poorer soils, less suitable for installation of an onsite septic system and leachfield. Pursuit of this alternative would necessitate additional percolation studies.

5.3.3 Alternative C - Reduced Scale Alternative
Description of Alternative C
Alternative C would involve a reduced scale of the proposed cluster subdivision, with the development of fewer residential lots. The objective of this Alternative would be to remove those residential lots that are located in areas with greater environmental sensitivity, such as areas with high visibility from the Santa Clara Valley floor (viewshed), areas on or adjacent to sensitive biological habitat, or areas containing geologic hazards. Lots that require greater infrastructure for development would also be removed, such as the construction of a longer single lot driveway from the main subdivision access road.

As shown in Figure 5.3-2, the Reduced Scale Alternative would include the removal of six lots, including lots 2, 7, 9, 17, 19, and 22. The majority of these lots are located in areas of higher visibility from the Santa Clara Valley floor. Two of the lots to be removed, Lot 2 and Lot 19, are sited in closer proximity to sensitive biological areas, such as the identified golden eagle nest (Lot 2) and the Foothill Creek riparian corridor (Lot 19). One lot to be removed under this alternative (Lot 9) contains an identified earthquake fault and serpentine soils. The removal of Lot 2 would also avoid the need to install the long driveway from the main access road to this property.

Effects of Alternative C
The Reduced Scale Alternative would result in a 19-lot subdivision, six less lots than the proposed 25-lot subdivision. With a reduced number of residential lots, potential environmental impacts related to residential density, such as Traffic, Noise, and Greenhouse Gas emissions associated with new vehicle trips, would be reduced. In other environmental categories, this alternative would likely result in impacts the same or similar to the proposed project for:

- Land Use, Planning, and Recreation
- Mineral Resources
- Population and Housing
- Public Services
- Energy Conservation

The following discussion identifies the impacts of Alternative C that would be different from those of the proposed project.
5 ALTERNATIVES TO THE PROJECT

Figure 5.3-2: Conceptual Layout for Alternative C - Reduced Project Alternative
Aesthetics and Visual Resources
The Reduced Scale Alternative would eliminate the residential lots with the highest visibility from the Santa Clara Valley floor. This alternative would reduce aesthetic impacts associated with the future homes. Any aesthetic impacts associated with the construction of single driveways (such as the driveway to Lot 2) would also be reduced or avoided. As the main access road alignment would remain the same as the proposed project, this alternative would not result in a reduction in any aesthetic impacts associated with the road improvements (retaining walls, cuts and fills). Overall, aesthetic impacts associated with views of the site from the Santa Clara valley floor would be reduced with this alternative.

Biological Resources
The Reduced Scale Alternative would remove lots 2, 7, 9, 17, 19, and 22. Overall, the removal of these residential lots and associated improvements (driveways, accessory structures) would result in a smaller development footprint, less development, and a reduction in the amount of habitat lost from development of the subdivision. Two of the residential lots removed (Lot 2 and Lot 19) are located in proximity to areas with greater biological sensitivity. Lot 2 is located within 1,500 feet of the identified golden eagle next and Lot 19 is located near the Foothill Creek riparian corridor. Removal of these lots through the Reduced Scale Alternative would further reduce any environmental impacts associated with the construction of homes. Thus, while this alternative would still likely require implementation of many of the same mitigation measures for biological impacts as the proposed project, the overall effects to wildlife habitat would be less than those of the proposed project.

Geology and Soils and Hazards and Hazardous Materials
Proposed Lot 9 is located in an area that has an earthquake fault and serpentine soils. The removal of this lot would avoid interface between this residence and the earthquake fault and soils that contain serpentine. Serpentine soils contain naturally occurring asbestos. The removal of this lot would avoid the potential for construction workers and future residents to be exposed to this hazard on this property. Overall, potential environmental impacts associated with geology and hazards would be reduced with the Reduced Scale Alternative.

5.3.4 Environmentally Superior Alternative
Table 5.3-1 below provides a comparison of project to the three alternatives with respect to the potential to avoid or substantially reduce environmental impacts. The CEQA Guidelines state that an EIR shall identify an environmentally superior alternative. As shown in the table, the No Project Alternative would provide the greatest reduction in environmental effects, and thus would be the Environmentally Superior Alternative. Section 15126.6(e) (2) of the CEQA Guidelines stipulates, “If the environmentally superior alternative is the No Project alternative, the EIR shall also identify an environmentally superior alternative among the alternatives.”

As shown in the table below, both the Condensed Cluster Alternative and the Reduced Scale Alternative would provide for a reduction in environmental impacts in several categories, such as Biological Resources and Aesthetics (views from the Santa Clara Valley floor). The Condensed Cluster Alternative may have new environmental impacts related to Hazards.
(exposure of residences to asbestos in serpentine soils) and Aesthetics (views from the Bay Area Ridge Trail). As the Reduced Scale Alternative does not entail relocation and clustering of residential lots but only removes select residential lots, this alternative would reduce environmental impacts without causing new impacts. Thus, the Reduced Scale Alternative would be the Environmentally Superior Alternative.
## 5 Alternatives to the Project

Table 5.3-1: Comparison of Environmental Consequences between the Proposed Action and Alternatives

<table>
<thead>
<tr>
<th>Environmental Category</th>
<th>Level of Impact of the Proposed Project</th>
<th>Impacts of Alternatives Compared to the Proposed Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alternative A</td>
<td>Alternative B</td>
</tr>
<tr>
<td></td>
<td>No Project</td>
<td>Condensed Cluster Alternative</td>
</tr>
<tr>
<td>Aesthetics and Visual Resources</td>
<td>Less than significant with incorporation of mitigation measures. No Preference.</td>
<td>Reduces visual impacts by avoiding construction of new access road and 25 residences, and instead constructing up to 10 new residences and shorter access roads. Most Preferred.</td>
</tr>
<tr>
<td>Agricultural and Forestry Resources</td>
<td>Less than significant. No Preference.</td>
<td>Avoids construction of new access road and 25 residences, and instead involves construction of up to 10 new residences and shorter access roads; allows continued grazing of a larger portion of the property. Most Preferred.</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Less than significant. No Preference.</td>
<td>Reduces air quality impacts by avoiding construction of new access road and 25 residences, and instead constructing up to 10 new residences and shorter access roads. Most Preferred.</td>
</tr>
<tr>
<td>Biological Resources</td>
<td>Less than significant with incorporation of mitigation measures. No Preference.</td>
<td>Reduces biological resource impacts by avoiding construction of new access road and 25 residences, and instead constructing up to 10 new residences and shorter access roads. Most Preferred.</td>
</tr>
</tbody>
</table>
### Table 5.3-1 (Continued): Comparison of Environmental Consequences between the Proposed Action and Alternatives

<table>
<thead>
<tr>
<th>Environmental Category</th>
<th>Level of Impact of the Proposed Project</th>
<th>Impacts of Alternatives Compared to the Proposed Project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cultural Resources</strong></td>
<td>Less than significant with incorporation of mitigation measures. No Preference.</td>
<td>Alternative A No Project Reduces cultural resource impacts by avoiding construction of new access road and 25 residences, and instead constructing up to 10 new residences and shorter access roads. Preferred. Alternative B Condensed Cluster Alternative Reduced cultural resource impacts by concentrating all residential development on smaller lots in one area of the site, avoiding all of the potentially historic resources identified on the site. Preferred. Alternative C Reduced Scale Alternative Preferred.</td>
</tr>
<tr>
<td><strong>Geology and Soils</strong></td>
<td>Less than significant with incorporation of mitigation measures. No Preference.</td>
<td>Alternative A No Project Reduces geology, soils, and seismicity impacts by avoiding construction of new access road and 25 residences, instead constructing up to 10 new residences and shorter access roads that are further away from geologic hazards. Most Preferred. Alternative B Condensed Cluster Alternative Reduced geology, soils, and seismicity impacts by concentrating all residential development on smaller lots, reducing the amount of earthmoving activities required for construction, and further avoiding areas of greater slope, slope instability, and erosion potential. Preferred. Alternative C Reduced Scale Alternative Preferred.</td>
</tr>
<tr>
<td><strong>Hazards and Hazardous Materials</strong></td>
<td>Less than significant with incorporation of mitigation measures. No Preference.</td>
<td>Alternative A No Project Fewer impacts than the proposed project. Preferred. Alternative B Condensed Cluster Alternative Impacts similar to the proposed project. Could result in new impacts associated with serpentine and naturally occurring asbestos Not preferred. Alternative C Reduced Scale Alternative Impacts similar to the proposed project. No Preference.</td>
</tr>
</tbody>
</table>
Table 5.3-1 (Continued): Comparison of Environmental Consequences between the Proposed Action and Alternatives

<table>
<thead>
<tr>
<th>Environmental Category</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Alternative A: No Project</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Alternative B: Condensed Cluster Alternative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Alternative C: Reduced Scale Alternative</td>
</tr>
<tr>
<td>Hydrology and Water Quality</td>
<td>Less than significant with incorporation of mitigation measures. No Preference.</td>
<td>Fewer impacts than the proposed project. Most Preferred.</td>
</tr>
<tr>
<td>Land Use, Planning, and Recreation</td>
<td>Less than significant. No Preference.</td>
<td>Impacts less than the proposed project. Preferred.</td>
</tr>
<tr>
<td>Mineral Resources</td>
<td>Less than significant. No Preference.</td>
<td>Impacts less than the proposed project. Preferred.</td>
</tr>
<tr>
<td>Noise</td>
<td>Less than significant with incorporation of mitigation measures. No Preference.</td>
<td>Impacts less than the proposed project. Preferred.</td>
</tr>
<tr>
<td>Population and Housing</td>
<td>Less than significant. No Preference.</td>
<td>Impacts less than the proposed project. Preferred.</td>
</tr>
<tr>
<td>Public Services</td>
<td>Less than significant. No Preference.</td>
<td>Impacts less than the proposed project. Preferred.</td>
</tr>
</tbody>
</table>
**Table 5.3-1 (Continued): Comparison of Environmental Consequences between the Proposed Action and Alternatives**

<table>
<thead>
<tr>
<th>Environmental Category</th>
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<th>Impacts of Alternatives Compared to the Proposed Project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transportation and Traffic</strong></td>
<td>Less than significant. <strong>No Preference.</strong></td>
<td>Impacts less than the proposed project. <strong>Preferred.</strong></td>
</tr>
<tr>
<td><strong>Utilities and Service Systems</strong></td>
<td>Less than significant. <strong>No Preference.</strong></td>
<td>Impacts less than the proposed project. <strong>Preferred.</strong></td>
</tr>
<tr>
<td><strong>Energy Conservation</strong></td>
<td>Less than significant. <strong>No Preference.</strong></td>
<td>Impacts less than the proposed project. <strong>Preferred.</strong></td>
</tr>
</tbody>
</table>

**NOTES:**
Alternative A = No Project Alternative
Alternative B = Condensed Cluster Alternative
Alternative C = Reduced Scale Alternative
6 REPORT PREPARATION

6.1 LIST OF PREPARERS

6.1.1 Lead and Participating Agencies
This section lists those individuals who either prepared or participated in the preparation of this EIR. The County of Santa Clara is serving at the CEQA lead agency for preparation of this EIR. The following individuals were involved in preparation of the document.

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Marina Rush  Planner
Rob Eastwood  Principal Planner: Environmental Planning
Priya Cherukuru  County Historian
Chris Frietas  County Hydrologist
Don Rocha  Natural Resource Management Program Supervisor
Jim Baker  County Geologist

Consultant Team
This EIR was prepared for and under the direction of the County of Santa Clara by Panorama Environmental, Inc. of San Francisco, California. The following staff contributed to this report:

Laurie Hietter  Project Director
Jeff Smith  Project Manager
Tania Treis  Senior Reviewer
Susanne Heim  Senior Environmental Scientist
Sarah Copeland  Environmental Scientist
Aaron Lui  Environmental Scientist
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Corey Fong  GIS Specialist/Cartographer
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</thead>
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</tr>
</tbody>
</table>

6.2 AGENCIES AND ORGANIZATIONS CONTACTED
The following is the list of agencies and organizations contacted during the preparation of this EIR.

6.2.1 Federal Agencies and Organizations
Native American Heritage Commission

6.2.2 Tribal Organizations
Ohlone/Costanoan
Ohlone/Costanoan Northern Valley Yokuts
Amah/Mutsun Tribal Band
Indian Canyon Mutsun Band of Costanoan
Muwekma Ohlone Indian Tribe of the SF Bay Area

6.2.3 State Agencies and Organizations
State of California Regional Water Quality Control Board
California Department of Fish & Game
6.2.4 Local Agencies and Organizations

City of Morgan Hill
Morgan Hill Unified School District
Morgan Hill Public Works
San Martin Water District
Santa Clara County Coyote Lake – Bear Ranch County Park

6.2.5 Other

Pacific Gas & Electric
GreenWaste
Kirby Canyon Landfill
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NOISE


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PUBLIC SERVICES


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**UTILITIES AND SERVICE SYSTEMS**


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