Rancho Cañada Village Project

Second Revised Draft Environmental Impact Report

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Acronyms and Abbreviations

µ/m^3	micrograms per cubic meter
µP	micro-Pascals
µS/cm	microSiemens/cm
AB	Assembly Bill
ADT	Average daily traffic
AGR	Agricultural Supply
AMBAG	Association of Monterey Bay Area Governments
APN	Assessor Parcel Number
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
Area Plan	Greater Monterey Peninsula Area Plan
Area Plan	Greater Monterey Peninsula Area Plan
ASTM	American Society for Testing and Materials
BA	Biological assessment
BMP	best management practices
Board	County Board of Supervisors
CAA	federal Clean Air Act
CAAA	Clean Air Act Amendments of 1990
CAAQS	state ambient air quality standards
Cal-OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAWD	Carmel Area Wastewater District
CCAA	California Clean Air Act
CCR	California Code of Regulations
CCR	California Code of Regulations
CCRWQCB	Central Coast Regional Water Quality Control Board
CEC	California Energy Commission
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act

CF	Code of Federal Regulations
CFPD	Cypress Fire Protection District
cfs	Cubic feet per second
CH4	methane
CIP	Capital Improvement Projects
CLOMR	Conditional Letter of Map Revision
CMI	County Median Income
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
COLD	Cold Fresh Water Habitat
COMM	Commercial and Sport Fishing
CORTESE	Cortese Hazardous Waste and Subastance Site List
County	Monterey County
CRHR	California Register of Historical Resources
CRLF	California Red-Legged Frog
CSD	Community Services District
CT	Census Tract
CUSD	Carmel Unified School District
CVMP	Carmel Valley Master Plan
CVSIM	Carmel Valley Simulation Model
CVTIP	Carmel Valley Traffic Improvement Plan
CWA	Clean Water Act
CWA	Clean Water Act
CY	cubic yards
DA 26	Drainage Area 26
DA 27	Drainage Area 27
dB	decibels
dBA	A-weighted decibels
DEIR	Draft Environmental Impact Report

DFG	California Department of Fish and Game
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
Earthquake Fault Zones	corridors along active faults
EPA	U.S. Environmental Protection Agency
ESA	environmental site assessment
ESA	Federal Endangered Species Act
F	Fahrenheit
FEMA	Federal Emergency Management Agency
FINDS	Facility Index System
fps	Feet per second
FR	Federal Register
General Plan	Monterey County General Plan
GHGs	Greenhouse gases
GMPAP	Greater Monterey Peninsula Area Plan
GP 2007	General Plan Update
Gt	metric tons
GWR	Ground Water Recharge
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HIST UST	Hazardous Substance Storage Container Database
HOA	Homeowners Association
HWCA	Hazardous Waste Control Act
Hwy 101	U.S. Highway 101
Hz	Hertz
IPCC	Intergovernmental Panel on Climate Change
ITE	Institute of Transportation Engineers
ITP	Incidental take permit
kHz	kilohertz
LAFCO	Local Agency Formation Commission
Ldn	Day-Night Level

Leq	Equivalent Sound Level
Leq[h]	1-hour A-weighted equivalent sound level
Lmax	Maximum Sound Level
LOS	level of Service
LUST	Leaking Underground Storage Tank Information System
Lx	Percentile-Exceeded Sound Level
Master Plan	Carmel Valley Master Plan
MBTA	Migratory Bird Treaty Act
MBUAPCD	Monterey Bay Unified Air Pollution Control District
MCWRA	Monterey County Water Resources Agency
mg/L	Milligrams per liter
MIGR	Migration of Aquatic Organisms
MMT-CO2 eq	Million Metric tons of carbon dioxide-equivalent
MPWMD	Monterey Peninsula Water Management District
MRWPCA	Monterey Regional Water Pollution Control Agency
MS4s	municipal separate storm sewer systems
MST	Monterey-Salinas Transit
MUN	Municipal and Domestic Supply
MUTCD	Manual on Uniform Traffic Control Devices
Mw	moment magnitude
N_2O	nitrous oxide
NAAQS	national ambient air quality standards
NCCAB	North Central Coast Air Basin
NFIP	National Flood Insurance Program
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NO_X	oxides of nitrogen
NTU	Nephlometric turbidity units
NWP	Nationwide permit
OES	California Office of Emergency Services
PCWQCA	Porter-Cologne Water Quality Control Act of 1969

PM10	particulate matter smaller than 10 microns or less in diameter
PM2.5	particulate matter 2.5 microns or less in diameter
ppm	parts per million
PRC	Public Resources Code
PRG	Preliminary Remedial Goals
Proposed Project	Rancho Cañada Village Specific Plan
RCRA	Resource Conservation and Recovery Act
RCRA Info database	Resource Conservation and Recovery Act
RCSP	Rancho Cañada Specific Plan
RCV	Rancho Cañada Village
RCVSP or Specific Plan	Rancho Cañada Village Specific Plan
REC-1	Water Contact Recreation
REC-2	Non-Contact Water Recreation
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SARA	Superfund Amendment and Reauthorization Act
SEIR	Subsequent Environmental Impact Report
SIP	State Implementation Plan
SO_2	sulfur dioxide
SPL	sound pressure level
SPWN	Spawning, Reproduction, and/or Early Development
SR	State Route
SWMP	Storm water management program
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminant
TAMC	Transportation Agency for Monterey County
TCM	traffic control measure
TMDL	Total maximum daily load
UBC	Uniform Building Code

UFC	Uniform Fire Code
USACE	U.S. Army Corps of Engineers
USC	U.S. Government Code
USFWS	U.S. Fish & Wildlife Service
USGS	U.S. Geological Survey
USTs	underground storage tanks
VOC	volatile organic compounds
WARM	Warm Fresh Water Habitat
WILD	Wildlife Habitat
WMZ	Watershed Management Zone
WSEL	Water surface elevation

Executive Summary

Introduction

This summary presents the major findings of this Second Revised ~~Recirculated~~ Draft Environmental Impact Report (DEIR) including the following:

- A brief overview of the Rancho Cañada Village Project (Proposed Project) ~~and 130-Unit Stemple Property Avoidance Alternative (130-Unit Alternative);~~
- Discussion of areas of known controversy;
- A description of the alternatives considered and their impacts; and
- A summary of impacts and mitigation measures.

Project Overview

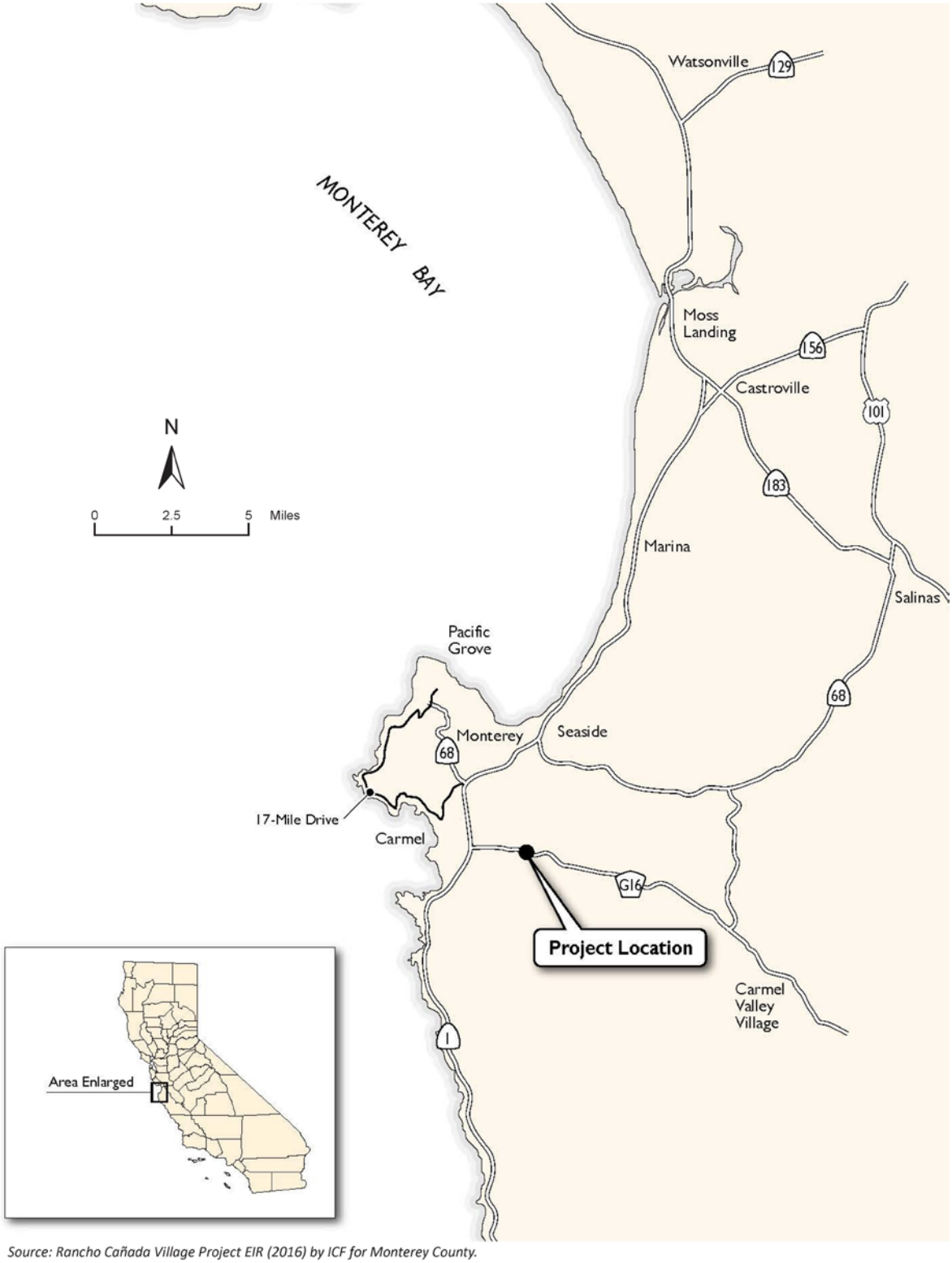
Project Location

The Rancho Cañada Village Project (Proposed Project) ~~and the 130-Unit Alternative~~ would be located at the mouth of Carmel Valley along Carmel Valley Road, east of the intersection of Carmel Valley Road and State Route 1 (SR 1) (**Figure ES-1**) in unincorporated Carmel Valley, Monterey County, California. Carmel Valley is a major northwest–southeast trending valley bounded by ridges of the Santa Lucia Mountains in the California Coast Ranges, located east of Carmel-by-the-Sea, and south of the city of Monterey, and north and west of the Carmel Valley Village.

Project Background

The Proposed Project was originally proposed as an alternative presented in an Environmental Impact Report (EIR) prepared in 2016 for a 281-unit residential project. That project was first pursued by the Project Applicant in 2004. The Project history is as follows: ~~, and the Project application was deemed complete prior to circulation of the January 2008 Draft Environmental Impact Report (EIR). At the time the application was deemed complete, the County General Plan in effect was the 1982 Monterey County General Plan, as amended, and the 1986 Carmel Valley Master Plan (CVMP), as amended. While the Draft EIR was on hold, the County subsequently adopted a new General Plan in 2010 and a new CVMP in 2013. Although the Project's application was deemed complete before the new General Plan and new CVMP were adopted, the County has determined that the project is subject to the current 2010 General Plan and 2013 CVMP land use plans and not the previous plans.~~

Figure ES-1 Project Vicinity



Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

~~This Recirculated Draft EIR includes discussion of the prior land use plans and policies for informational use only but they are not used for impact analysis. This Recirculated Draft EIR uses the current land use plans and evaluates the consistency of the Proposed Project and the 130-Unit Alternative with the 2010 General Plan and 2013 CVMP.~~

- 2004: Project applicant first proposed a residential development project at the project site;
- August 30, 2006: Notice of Preparation published;
- 2008: Draft EIR prepared for a 281-unit residential development project;
- June 2016: Recirculated Draft EIR prepared for the 281-unit project; it includes a side-by-side analysis of a 130-unit alternative and addresses compliance with the County's updated General Plan and Carmel Valley Master Plan, which were updated while the project was on hold;
- November 2016: Final EIR prepared for the 281-unit project;
- December 2016: County Board of Supervisors certifies the Final EIR and approves the 130-unit alternative;
- July 2018: Monterey County Superior Court rules that the EIR project description and hence alternatives analysis was legally inadequate; and
- June 2020: This Second Revised Draft EIR modifies the 2016 EIR's project description and analysis to address the 130-unit alternative as the Proposed Project and to include new alternatives.

This Second Revised Draft EIR retains the majority of the analysis prepared for the 2016 Recirculated EIR, including revisions that were incorporated into the 2016 Final EIR after a public comment period. As noted above, the County Board of Supervisors certified the EIR and approved the 130-unit Project. Therefore, this Second Revised Draft EIR includes changes only to remove discussion of the 281-unit Project, present the 130-unit Project as the Proposed Project, include new alternatives aimed at reducing the effects of the 130-unit Project, and update the original analysis as needed. Some additional information has been provided where it is beneficial to help readers understand changes that have occurred since 2016. For more background on the scope of the Second Revised Draft EIR and litigation background, refer to Chapter 1, *Introduction.*

Project ~~Goals~~ Purpose and Objectives

The underlying purpose of the Project is to provide for the adaptive reuse and redevelopment of the former Rancho Canada Golf Course site. This purpose gives rise to the following Project objectives:

- Implement smart growth principles through infill development close to shopping facilities, schools, parks, churches, and major transit corridors.
- Integrate open spaces within infill development with surrounding native habitats.
- Assist the County in addressing the statewide housing and affordability crisis.
- Provide employment opportunities for the local workforce.

- Create opportunities allowing for County implementation of regional drainage control solutions.
- Facilitate the construction of a needed traffic light on Carmel Valley Road under an accelerated time frame.

~~As stated in the application materials, the Proposed Project has the following goals:~~

~~Economic Goals~~

- ~~Create Affordable (Inclusionary) and Workforce Housing that remains affordable for as long as possible.~~
- ~~Create a mixed-income community with a range of housing opportunities across the economic spectrum.~~
- ~~Ensure that new development pays for 100% of infrastructure and services needed to support the new neighborhood.~~
- ~~Establish mechanisms for maintaining and operating private infrastructure.~~

~~Environmental Goals~~

- ~~Create a compact, efficient community that will minimize impacts on the environment.~~
- ~~Integrate the surrounding native habitats into the open spaces within the community.~~
- ~~Create buffers around the community that help transition from a native habitat/ecosystem to an urban habitat/ecosystem.~~
- ~~Encourage multi-modal transportation opportunities, especially bicycle, pedestrian, and transit by creating small blocks, interconnected streets, sidewalks, and bicycle paths and through the use of traffic-calming measures appropriate for a residential neighborhood.~~

~~Social Goals~~

- ~~Create a diverse, mixed-income community with a full spectrum of life cycle housing opportunities.~~

~~Proposed Project~~ Project Summary

~~The Project proposes a 281-unit residential neighborhood and 39 acres of permanent open space and common areas within the 81-plus acre project site. The Proposed Project application consists of a Combined Development Permit[1] for the creation of a new, 281-unit, mixed-use residential neighborhood on approximately 38 acres[2]. The elements of the design proposal include a mix of smart growth and traditional neighborhood principles that involve the incorporation of established shopping facilities, schools, open space, and churches. Additionally, the development proposal attempts to meet the need for affordable housing in Carmel Valley. Nearly fifty percent of the homes (140 units) are proposed to be deed-restricted as affordable and workforce units. The Proposed~~

[1] ~~The Proposed Project was originally proposed to be implemented though a Specific Plan; it is now proposed to be implemented as a Combined Development Permit instead. This does not change the physical aspects of the Proposed Project.~~

[2] ~~The 38 acre area excludes park areas, common areas, the habitat reserve, and golf course.~~

~~Project would also include an extension of Rio Road through a network of local neighborhood streets to allow safe ingress and egress for residents and the public through Rio Road west. Open space under the Proposed Project would consist of two neighborhood parks, a portion of the existing golf course[3], common areas, and a habitat preserve located along the north side of Carmel River. Project development would include:~~

- ~~281 residential units on 40 acres of land, of which 182 would be single-family homes, 64 townhomes, and 35 condominiums/flats. Half (50%) of the residences (140 units) would be deed-restricted Affordable and Workforce units, and the other units would be market rate.~~
- ~~0.41 acre of park (on Parcel B, proposed within the mixed-use neighborhood); common areas totaling 0.47 acre; and a 2.09-acre park (on Parcel F, adjacent to the habitat preserve)and~~
- ~~39 acres of permanent open space to include a habitat preserve, active recreation areas, and trails.~~

~~Road, Infrastructure, and Trail Improvements~~

~~Road, infrastructure and trail improvements would include:~~

- ~~Improvements to the Carmel Valley Road intersection with the Rancho Cañada Golf Course entrance;~~
- ~~Creation of a private, internal street network between Carmel Valley Road and Rio Road;~~
- ~~Rio Road Extension into the Proposed Project neighborhood;~~
- ~~Sanitary sewer, potable water, joint utilities, and stormwater drainage extensions in and around project development sites;~~
- ~~Creation of a pedestrian system plan to accommodate the needs of pedestrians and bicyclists. This network would connect residences with neighborhood parks and extend to the nearby networks and trails planned and existing within the greater project area; and~~
- ~~Creation of a trail system within the proposed habitat preserve that would connect into the Carmel Valley Trail System's planned regional trail.~~

~~Preservation and Conservation~~

~~The proposed project includes the creation of a permanent 31.3-acre habitat preserve between the Carmel River and the proposed residential development. The preserve would contain low-impact improvements including trail systems, seating areas, and native landscaping.~~

~~130-Unit Alternative~~

The Proposed Project would develop an approximately 76-acre area within the former West Course at Rancho Cañada Golf Club. The project site would be comprised of a mix of residential and recreational uses, including a 130-unit residential neighborhood and 40 acres of permanent open space and common areas within the 76-plus acres.

~~[3] Approximately 4.43 acres of the golf course, south of the Carmel River, would be open space under the Proposed Project. This portion of the golf course would be reconfigured to accommodate the 18-hole course. However, the reconfiguration is not part of the Proposed Project.~~

The Proposed Project requires several approvals from the County. First, it requires amendments to the County's General Plan and the Carmel Valley Master Plan (CVMP) related to land use designations and housing affordability. Second, the Proposed Project requires rezoning of the subject property from Public/Quasi Public to residential Medium-Density Residential and Low-Density Residential Zoning Districts. Third, the Proposed Project requires a combined development permit consisting of a vesting tentative standard subdivision to create 130 residential units, consisting of single-family dwellings, half-plexes and condominiums and including parks, trails and open space/habitat preserve areas.

The Proposed Project requires the following amendment to CVMP Policy CV-1.27 "Special Treatment Area: Rancho Cañada Village" to reduce the percentage of affordable housing required from 50% to 20%, notwithstanding any other policies in the 2010 General Plan, with changes to the Policy text shown in strikethrough/underline:

> Special Treatment Area: Rancho Cañada Village – Up to 40 acres within properties located generally between Val Verde Drive and the Rancho Cañada Golf Course, from the Carmel River to Carmel Valley Road, excluding portions of properties in floodplain shall be designated as a Special Treatment Area. Notwithstanding any other General Plan policies, residential development may be allowed with a density of up to 10 units/acre in this area and shall provide a minimum of 20%~~50%~~ Affordable~~/Workforce~~ Housing. Prior to beginning new residential development (excluding the first unit on an existing lot of record), projects must address environmental resource constraints (e.g.; water, traffic, flooding).

The Project ~~130-Unit Alternative~~ is proposed as a Planned Unit Development (PUD) on approximately 76 ~~82~~ acres. The Project ~~This alternative~~ would create an~~d~~ affordable housing and mixed-income community through the allocation of affordable moderate income housing units. The Project ~~Similar to the Proposed Project, the 130-Unit Alternative~~ proposes a compact, pedestrian-friendly development, a variety of housing types, and recreational uses within the residential community. ~~This alternative proposes similar uses as the Proposed Project, but with a lower number of overall units and lower density.~~

~~The 130-Unit Alternative would meet all of the Proposed Project objectives.~~

Development

The Project ~~130-Unit Alternative development~~ would include:

- 130 residential units on approximately 38 ~~42~~ acres of land, of which 118 would be single-family homes and 12 condominiums. Twenty–five units would be moderate-income inclusionary units, and the other units would be market rate.
- 1.6 ~~1.7~~ acres of community park and approximately 11 ~~12~~ acres of common areas within the 38-acre ~~42 acre~~ area; and
- 38 ~~39~~ acres of habitat preserve area.

Road, Infrastructure, and Trail Improvements

Road, infrastructure and trail improvements would include:

- Creation of a private, internal street network between Carmel Valley Road and Rio Road;

- Rio Road Extension into the project site; ~~the 130-Unit Alternative site;~~
- Sanitary sewer, potable water, joint utilities, and stormwater drainage extensions in and around project development sites;
- Creation of a pedestrian system plan to accommodate the needs of pedestrians and bicyclists. This network would connect residences with neighborhood parks and extend to the nearby networks and trails planned and existing within the greater project area; and
- Creation of a trail system within the proposed habitat preserve that would connect into the Carmel Valley Trail System's planned regional trail.

Preservation and Conservation

The Project ~~130-Unit Alternative~~ includes the creation of a permanent 38-~~39~~ acre habitat preserve. The habitat preserve area would include native riparian woodland, riparian scrub, grassland, and wetland vegetation, which would create wetland habitat and enhance habitat for biological resources.

~~Maintenance and Operations~~

~~Telecommunication and internet, gas and electrical, and wastewater utilities services for the 130-Unit Alternative would be similar to the Proposed Project.~~

Areas of Known Controversy and Concern

This section discusses the key issues of public and agency concern relative to the Proposed Project and the conclusions of this Second Revised Draft ~~Recirculated D~~EIR regarding those issues. This is not a comprehensive discussion of the Project's impacts ~~of the Proposed Project and 130-Unit Alternative~~, of which the reader is directed to discussion below in **Table ES-1** at the end of this Chapter, and Chapter 3 and 4 of this Second Revised Draft ~~Recirculated D~~EIR.

- **Land Use**
  - The 2013 Carmel Valley Master Plan (CVMP) and 2010 General Plan land use designation for the site is Public/Quasi-Public (P/QP), which does not allow for a residential subdivision. However the site is located within the 2013 CVMP Special Treatment Area per CVMP Policy CV-1.27 and~~, as noted above, 2013~~ CVMP Policy CV-1.27 allows ~~for~~ residential uses within ~~in~~ this ~~e~~ Special Treatment Area. An amendment to Policy CV-1.27 is proposed to change the percentage of affordability from 50% to 20%. An ordinance to update the zoning of the property from Public/Quasi Public to residential Medium-Density Residential and Low-Density Residential Zoning Districts is proposed consistent with the residential use allowed per CV-1.27. Although an amendment to the 2013 CVMP and 2010 General Plan land use diagram and rezoning to a residential zoning district under Title 21 would be required, this action is not considered ~~a~~ fundamentally inconsistent ~~cy~~ with the existing land use plans due to the provision in the 2013 CVMP of Policy CV-1.27.
  - The 2013 CVMP (Policy CV-1.6) establishes a maximum number of 190 new residential units within the Carmel Valley planning area. The Project would be consistent with CVMP Policy CV-1.6 because 130 units could be accommodated within the unit cap.

- The 2013 CVMP Policy CV-1.27 requires a minimum 50% affordable/workforce housing units for the Rancho Canada Village Special Treatment Area. This ratio was based on a higher density project (281 units) that would allow for greater affordability. In addition, Policy LU-2.13 requires 25% affordable/workforce units broken down as follows: 6% very low, 6% low, 8% moderate, and 5% workforce. Policy LU-1.19 incentivizes projects outside high priority areas to provide a minimum of 25% affordable plus 10% workforce units (35% total). However, with the proposed amendment to CV-1.27, these other policies' affordability levels do not apply to the Project. The project proposes 20% moderate income units (no low, very low or workforce). The proposed amendment reduces the requirement to 20% affordable housing units notwithstanding any other policies such as Policies LU-1.19 and LU-2.13.

- The residential unit cap (Policy CV-1.6) was adopted in part to reduce environmental impacts such as those related to water supply and traffic, as well as open space preservation. While the Proposed Project would not result in significant impacts to water supply or open space preservation (the project would actually increase open space open to the public), the project would result in certain significant and unavoidable traffic impacts inside and outside Carmel Valley. The 130-unit Project would contribute to cumulatively significant traffic impacts on Carmel Valley Road and SR 1 (see Traffic discussion below).

- ~~However, the 2013 CVMP establishes a maximum number of 190 new residential units resultant from residential subdivision. The Proposed Project would be in conflict with Policy CV-1.6 that establishes the residential unit cap. In order to facilitate the project and to still provide the 24 units reserved in Policy CV-1.6 for the Delfino property and six units for the previously approved units as of mid-November 2016, the residential unit cap from residential subdivision would need to be raised to 311 units (281 units for the Proposed Project and 24 units for the Delfino property and six units for the previously approved units). The residential unit cap was adopted in part to reduce environmental impacts such as those related to water supply and traffic, as well as open space preservation. While the Proposed Project would not result in significant impacts to water supply or open space preservation (the project would actually increase open space open to the public), the project would result in certain significant and unavoidable traffic impacts inside and outside Carmel Valley. Thus, the project's inconsistency with CVMP Policy CV-1.6 would result in significant secondary environmental impacts and this is considered a significant land use impact. Although the CVMP could be amended to rectify the policy inconsistency, as discussed in Chapter 3.7, Transportation and Traffic, there is no feasible mitigation to eliminate all of the significant traffic impacts and this impact is therefore significant and unavoidable with mitigation.~~

- The project is otherwise consistent with the policies of the CVMP and the General Plan. While the densities proposed are higher than is often seen in Carmel Valley, the densities are not unprecedented for this type of development and the compact development allows for retention of other areas of open space and habitat. The project residential development can be implemented without creating land use incompatibilities with adjacent land uses and without significant aesthetic impacts.

- ~~The 130-unit Alternative would be consistent with CVMP Policy CV-1.6 because 130 units could be accommodated within the 190-unit cap, but this alternative would be inconsistent with 2013 CVMP Policy CV-1.27 in regards to the minimum 50% affordable/workforce housing requirement for the Special Treatment Area.~~

- **Traffic** – The Project ~~project~~ would increase local traffic (on Rio Road and Carmel Valley Road in particular) and contribute to regional traffic (particularly on SR 1). These increases would cause some intersections and roadway segments to significantly decrease their level of service either directly or in combination with cumulative development. Project direct traffic impacts can be mitigated to a less than significant level through the mitigation identified in this document with the exception of project impacts on portions of SR 1. Project contributions to significant cumulative traffic impacts to SR 1 and to Carmel Valley Road Segments 1 through 7 cannot be mitigated to a less than significant level. At these locations, the cumulative impacts are considered significant and unavoidable due to the unavailability of feasible mitigation to sufficiently improve traffic flow without resulting in significant secondary impacts and fundamental inconsistency with the overall intent of the CVMP relative to the rural character of Carmel Valley and community preferences in regards to not widening SR 1. ~~The 130-unit Alternative would have substantially lower direct traffic generation, but would still contribute to cumulatively significant traffic impacts on Carmel Valley and SR 1.~~
- **Visual Aesthetics** – The residential development would change the aesthetic features relative to the existing golf course. Given the setback distances from Carmel Valley Road, mitigating landscape measures, and the developed character of adjacent uses, visual impacts can be mitigated to a less than significant level. ~~The 130-unit Alternative would have a similar visual character as the proposed project, but with far less units.~~
- **Hydrology/Flooding** – The project would be built partially within the 100-year floodplain of the Carmel River (but not in the floodway). The project could alter the level and character of flood events upstream and downstream. However, based on the flood studies completed, with mitigation, the project would not a significant impact on flooding. Project drainage designs are capable of handling local drainage and runoff and in promoting recharge. ~~The 130-unit Alternative would have similar impacts related to hydrology.~~
- **Water Supply** – The new residences would have a demand for potable water. However, the project would shift use of water from golf course irrigation to residential use, which will result in a reduced withdrawal of water from the Carmel River aquifer. This reduced withdrawal from the aquifer will also benefit biological resources in the area. The Project Applicant's water rights have been confirmed by the appropriate authorities and the prior water use documented by data presented in this document. The Project ~~130-unit Alternative would result in slightly higher water use than the Proposed Project because in addition to onsite residential uses, it~~ includes a water transfer of 60 acre-feet (AF) that would be used for other municipal uses. The Project ~~However, the 130-unit alternative~~ would also include a 50 AF dedication for instream uses which ~~and~~ would also lower water usage and result in benefits to the Carmel River aquifer and associated biological resources.
- **Biological Resources** – The project would remove native and non-native vegetation that may support several special-status species but would also restore native vegetation and wildlife habitat along the Carmel River in areas that are presently golf course. Overall, with the proposed habitat restoration and mitigation, the project would result in less than significant impacts to biological resources. ~~The 130-unit Alternative would have a lesser impact on biological resources than the proposed project due to less construction, less permanent developed area, and less residents.~~
- **Geology and Soils** – The project would require extensive ground disturbance, including 168,000 cubic yards of fill from the current golf course to create a passive river basin park area

and the building pad for the development area. ~~(approx. 220,000 cubic yards [CY]) of excavation and transport by truck.~~ Excavation may result in unstable soils, erosion, and sedimentation; however, this is a temporary significant impact. The project soils at the residential site may be subject to liquefaction but these can be addressed through proper site engineering and best management practices during construction activities. ~~The 130-unit Alternative would require a similar amount of on-site excavation, but less fill activity since the developed footprint would be smaller.~~

- **Construction Disruption** – Construction may temporarily affect air quality, and noise. These impacts could be significant for the Proposed Project ~~or the 130-unit Alternative~~, but can be addressed through mitigation provided in this document.
- **Water Quality** – While the project would increase residential runoff, it would also reduce the existing amount of pesticides, herbicides, and fertilizer used for golf course landscaping. Project construction may result in runoff and sedimentation. However, these effects would be mitigable to a less than significant level through best management practices. ~~The 130-unit Alternative would have a smaller developed footprint and thus less stormwater runoff.~~
- **Growth Inducement**:
  - ~~The Proposed Project would result in 281 new residential units and require amendment of the CVMP to allow up to 311 units (to include Delfino), which would exceed the remaining allowable residential units under the CVMP cap by 121 units and would thus result in directly induced population growth greater than anticipated in the currently adopted General Plan and CVMP. The Proposed Project's would also indirectly increase economic activity in and beyond Carmel Valley which could stimulate growth of services for employees and others.~~
  - The Project ~~130-Unit Alternative~~ would create 130 new residential units, leaving a balance of 30 units in the CVMP residential subdivision unit quota and thus would not directly induce population growth greater than that anticipated in the currently adopted General Plan and CVMP. The Project ~~130-Unit Alternative~~ would facilitate growth of residential units in Carmel Valley, which would increase economic activity in and beyond Carmel Valley. Increased economic activity could stimulate growth of services for employees and demand for residential growth.
  - The Project ~~130-Unit Alternative~~ would also include transfer of up to 60 AF of the Project Applicant's water entitlement to other users in the Cal-Am service area. This would remove a constraint to growth of existing approved projects, existing legal lots, and/or future planned project consistent with current land use plans. Depending on the character of development, the water transfer could result in perhaps 120 to 240 new single-family residential units (assuming average water demand per unit of 0.25 to 0.5 AF) or more units (if apartments or condominiums). The water transfer could also remove a constraint to growth for commercial, institutional, or other uses in the Cal-Am service area. However, the proposed water transfer would not induce residential, commercial, or other development that is not otherwise allowable in local land use plans.

Other Alternatives Considered

~~The 130-Unit Alternative is described in Chapter 2, *Project Description*, and analyzed in Chapter 3, *Environmental Analysis*, at a level of detail equal to that for the Proposed Project and was discussed above in the summary of areas of controversy.~~

A range of ~~other~~ alternative options was identified with the potential to avoid or substantially reduce the significant impacts of the project. While the number of conceivable alternatives that might be considered for a project of this nature is vast, the range of alternatives considered was determined to represent a reasonable range for the purposes of the analysis, considering the nature of development proposed and the significant impacts identified for the Proposed Project.

Alternatives were screened for feasibility, their ability to meet the project purpose and some or all of the project objectives, and their potential to avoid or substantially reduce significant impacts of the project.

The following alternatives were initially considered but dismissed from more detailed impact analysis as discussed below:

- **Compliance with Existing Zoning Alternative** – This alternative would not meet most of the project objectives because it would not provide housing.
- **Care Facilities Prohibition Alternative –** This alternative does not avoid or substantially lessen any of the identified significant or cumulative impacts of the Proposed Project.
- **Floodway Development Alternative** – This alternative is not considered feasible as it violates County flood control policies.
- **Lower Carmel Valley Flood Control Alternatives** – While additional flood control improvements might be feasible that could also benefit other adjacent properties, such improvements are not necessary to address the impacts of this project, and thus, would be in excess of mitigation proportionality and nexus allowed by CEQA.
- **Floodwall/Levee Alternative** – Because the only impact reduced by this alternative (construction emissions) can be readily mitigated through proposed mitigation in the Draft EIR, this alternative was not considered further.
- **Reclaimed Water Reuse Alternative** – This alternative would not avoid or substantially lessen a significant adverse impact of the Proposed Project.
- **Traffic/Transit Improvements Alternative** – While feasible, these suggestions were not carried forward for further analysis as they do not avoid or substantially reduce significant impacts of the Proposed Project.
- ~~**Visitor-Serving Development** – This alternative would not meet most of the project objectives because it would not provide housing, and thus it was dismissed from further consideration.~~

Further, an increased ratio of affordable housing units is discussed in Chapter 5, *Alternatives.* As noted therein, even though an increased ratio of affordable housing units would achieve all the project objectives, it would not measurably reduce environmental impacts since the development footprint and intensity would be the same. Furthermore, the Applicant could elect to build more affordable units, if determined financially feasible, without such a scenario being considered in this

Chapter. For these reasons, none of the Alternatives considered in this Second Revised Draft EIR identify a higher ratio of affordable units.

The remaining alternatives were analyzed further in the document. A summary of analysis is provided below. Unless otherwise noted, aspects of the alternatives outside the locations specifically discussed are the same as in the Proposed Project.

Alternative 1 – No Project Alternative

Alternative Characteristics

At the time the NOP was prepared for the Project (2006), the project site was a public golf course. Subsequently, under the existing (2020) conditions, uses at the site include cattle grazing on the now former golf course. If neither the Proposed Project nor any of the other EIR alternatives are approved, the reasonably foreseeable expected use of the site's five legal parcels, based on current plans and ordinances, and consistent with available infrastructure and community services, would be the construction of five (5) estate homes in which home occupations such would be permitted. ~~Under the No Project Alternative, no improvements are anticipated. The site would remain a public golf course on the western portion of the Rancho Cañada Golf Club.~~

Feasibility and Ability to Meet Project Objectives

This alternative is considered feasible to avoid or substantially lessen significant effects of the Proposed Project at the site, but would not meet the project purpose or objectives ~~or goals~~. It would also not implement CVMP Policy CV-1.27, which was intended was to allow for affordable housing units to be developed within this Special Treatment Area as designated in the CVMP Land Use Map.

Impact Analysis

No changes to the existing environment at the project site would result under this alternative.

Under the No Project Alternative, 130 ~~281~~ residential units would not be located on the project site ~~west course of the Rancho Cañada Golf Club~~. Instead, up to 125 ~~190~~ units would be developed elsewhere in the CVMP area in accordance with the residential buildout quota. There would be a tradeoff of impacts in the CVMP relative to the Proposed Project. On the one hand, smaller more dispersed developments would likely require more land (and potentially more undeveloped land) to be converted to residential use on a per unit basis and more dispersed development further from services will result in greater travel distances per household. However, this alternative would result in ~~91~~ fewer units overall in the CVMP and thus some of the impacts in the CVMP of a more dispersed pattern of development (relative to the Proposed Project) would be offset by the lower overall number of units.

Alternative 2 – Hotel ~~East Golf Course~~ Alternative

Alternative Characteristics

~~This alternative would locate the 40-acre residential area along the East Golf Course east of the Rancho Cañada clubhouse oriented closer to Carmel Valley Road. The habitat/open space area would be located along the Carmel River in the adjacent area to the south. Presuming the need for a similar amount of area, locating the development entirely outside the 100-year floodplain was not considered feasible, as the area outside the floodplain was too narrow to accommodate the 40-acre~~

~~development. Access would be via a combined access road to the clubhouse from Rio Road or directly from Carmel Valley Road via a new intersection. No connection to Rio Road to the west would be included in the Proposed Project.~~

~~This alternative was developed to examine the potential to avoid impacts related to proximity to the middle school, the church, and the residential developments west along Rio Road.~~

Alternative 2 would consist of the development of 175 hotel or timeshare units and 20 employee housing units, six-hole reconfiguration of the west golf course, clubhouse and restaurant, tennis clubhouse and four tennis courts, health club spa, meeting rooms, and administrative offices. Access would be provided, either directly or indirectly, via Carmel Valley Road for visitors and employees. Open space would be similar as compared to the Project. A sample site plan of this alternative is provided in **Figure 5-1.**

This alternative would also include raising a portion of the emergency access road west of the site, to a level that has been designed to directly address the large potential flood flow path down Rio Road from the Carmel River. This would avoid a substantial portion of the improvements cited in the County Service Area 50 Final Lower Carmel River Stormwater Management and Flood Control Report (Balance Hydrologics, Inc. 2014b).

This alternative was developed to examine the potential to avoid or lessen traffic related impacts of the Proposed Project, specifically during peak hours.

Feasibility and Ability to Meet Project Objectives

The creation of a hotel is feasible, in that the developer owns the entire project site, and land is sufficient to construct such a hotel and ancillary facilities. In addition, the 2013 CVMP Policy CV-1.15 allows for developing 175 visitor accommodation units west of Via Mallorca and north of the Carmel River. Furthermore, access would still be provided, either directly or indirectly, via Carmel Valley Road. The hotel site would be located in proximity to existing infrastructure that would serve the project area. The water source for the Proposed Project would be useable for this alternative as well.

The cost of major infrastructure (site elevation, road connections, park improvements) for Alternative 2 is likely similar to the Proposed Project, but the cost of certain infrastructure within (streets, utilities, etc.) would be less.

Alternative 2 would not assist the County in addressing the statewide housing and affordability crisis. However, the Hotel Alternative would meet the other Project goals and objectives.

~~This alternative is considered feasible to avoid or substantially lessen significant effects of the Proposed Project at the site. Due to it's proximity to the original project site, this alternative would meet most of the project objectives or goals with the exception of fulfilling the environmental goal for multi-modal transportation.~~

Impact Analysis

Development of a hotel at the project site ~~The relocation of the project site further to the west and closer to Carmel Valley Road~~ would likely result in greater adverse impacts to Geology and Soils, Hydrology and Water Quality, Aesthetics, Hazards and Hazardous Materials, Transportation and Traffic, Air Quality, Noise, Public Services, Recreation and Utilities (water supply), as well as

Greenhouse Gas Emissions and Climate Change as compared ~~on the following resource areas compared to the Proposed Project:~~

- ~~Aesthetics and Visual Resources~~
- ~~Noise~~

~~Compared~~ to the Proposed Project, this alternative would result in similar or lesser effects regarding other impact areas ~~lessen air quality impacts during the construction period on the schoolyard~~.

~~Under this alternative, 281 residential units would still be located on the Rancho Cañada Golf Club which would be inconsistent with 2013 CVMP housing quota. As such, cumulative impacts are nearly the same as the Proposed Project with one exception. This alternative would likely have less construction-period particulate emissions exposure to the middle school locations given that the construction location and access are not as close to the school as the Proposed Project.~~

Alternative 3 – 90-Unit Low Density ~~Medium Density~~ Alternative

Alternative Characteristics

Alternative 3 would include 73 market rate residential units and 17 affordable units on the same residential site for a total of 90-units. The gross density would be considered low density in Carmel Valley, although specific densities within the Village could be medium density in certain locations. Open space would be the same as the Proposed Project. A sample site plan of this alternative is provided in **Figure 5-2.**

This alternative would also include raising a portion of the emergency access road west of the project site, to a level that has been designed to directly address the large potential flood flow path down Rio Road from the Carmel River. This would avoid a substantial portion of the improvements cited in the County Service Area 50 Final Lower Carmel River Stormwater Management and Flood Control Report (Balance Hydrologics, Inc. 2014b).

This alternative was developed to examine the potential to avoid or lessen traffic related impacts, including impacts relating to air quality and greenhouse gas emissions.

Alternative 3 would meet all of the Project's objectives, but not to the same extent as the Proposed Project. This alternative would result in a reduction in local employment opportunities and reduction in affordable housing units and supply of housing overall as compared to the Project. However, Alternative 3 would provide the same habitat and open space conservation, regional drainage control solutions, and facilitate construction of a traffic light on Carmel Valley Road, similar to the Proposed Project.

Thus, Alternative 3 would meet all of the goals and objectives, but not to the same level as the Proposed Project.

~~This alternative would include 186 residential units on the 40-acre residential site (gross density of4.5 units/acre). This gross density would be considered medium density (1–5 units/acre) in the CVMP although specific densities within the Village could be high-density in certain locations. The open space area and preserve would be the same as for the Proposed Project.~~

~~To ensure that this alternative was economically feasible, this alternative was designed to include as many market-rate units as the Proposed Project (141 units), would only require the mandated~~

~~percentage of affordable units (20 percent or 37 units in this alternative), with only a minimal amount of workforce housing (4 percent or 7 units). The general amount of infrastructure needed to support this alternative was presumed to be the similar to that for the Proposed Project, although specific housing unit utilities and streets would be less.~~

Feasibility and Ability to Meet Project Objectives

Alternative 3 is technically feasible, as the project site is available, utility connections and road connections are available, and water supply exists, as for the Proposed Project.

This alternative includes a greater number of market-rate units with only 18 affordable units as compared to the Proposed Project. The cost of major infrastructure (site elevation, road connections, park improvements) is likely similar to that of the Proposed Project, but the cost of certain infrastructure within (streets, utilities, etc.) would be less. Given that the market-rate units are the primary economic driver, and the subsidized affordable units are reduced substantially with a corresponding decline in certain infrastructure costs, this alternative is considered potentially feasible at this time.

Alternative 3 would meet all the Project's objectives, but not as well as the Proposed Project as this alternative would reduce the local employment opportunities and affordable housing units and supply of new housing overall. However, this alternative would provide the same habitat and open space conservation, regional drainage control solutions, and facilitate construction of a traffic light on Carmel Valley Road, similar to the Proposed Project.

Thus, Alternative 3 would meet the project purpose and all the objectives, but to a lesser degree than the Proposed Project.

~~This alternative is considered feasible to avoid or substantially lessen significant effects of the Proposed Project at the site, however, no economic study has been conducted to verify the economic feasibility of this alternative. If this alternative were advanced, it is suggested that an economic feasibility study be conducted.~~

~~This alternative would satisfy the project's economic and social goals for creating a community that supports a full spectrum of housing opportunities, but not as well as the Proposed Project. Thus, the Medium Density Alternative would meet most, but not all of the project goals and objectives.~~

Impact Analysis

The reduced density of units under this alternative would result in similar or lessened impacts on all of the resource areas, however it would not likely change the significance of impacts identified for the Proposed Project.

~~Based on the 2013 CVMP, new residential subdivisions are limited to 190 additional housing units, of which 24 units are reserved for the Delfino property, leaving 166 units. An amendment of the CVMP would be required to increase the residential subdivision limit to 210 units (to allow for 186 units in Alternative 3 plus 24 units for Delfino). This increase in the buildout level in the CVMP area would result in similar secondary impacts described for the Proposed Project, but at a lesser level.~~

Alternative 4 – 40-Unit Low Density Alternative

Alternative Characteristics

Alternative 4 would include 32 market rate residential units and eight affordable units (gross density of 1 unit/acre) for a total of 40 residential units. This gross density would be considered low density (1unit/acre) in Carmel Valley, although specific densities within the Village could be medium density in certain locations. The open space area would be the same as the Proposed Project. A sample site plan of this alternative is provided in **Figure 5-3.**

This alternative would also include raising a portion of the emergency access road west of the Project site, to a level that has been designed to directly address the large potential flood flow path down Rio Road from the Carmel River. This would avoid a substantial portion of the improvements cited in the County Service Area 50 Final Lower Carmel River Stormwater Management and Flood Control Report (Balance Hydrologics, Inc. 2014b).

This alternative was developed to examine the potential to avoid or lessen traffic related impacts, including impacts relating to air quality and greenhouse gas emissions.

~~This alternative would include 40 residential units on the same 40-acre residential site (gross density of 1 unit/acre). The open space area would be the same as the Proposed Project. This alternative would include 33 market rate units, 7 affordable units and no workforce units (as they are not mandatory). The percentage of affordable units in the development would be 20 percent in compliance with Monterey County minimal requirements. This gross density would be considered low density (1 unit/acre) in Carmel Valley although specific densities within the Village could be medium density in certain locations.~~

Feasibility and Ability to Meet Project Objectives

Alternative 4 is technically feasible as the project site is available, utility connections and road connections are available, and water supply exists as for the Proposed Project.

The cost of major infrastructure (site elevation, road connections, park improvements) are likely similar to that for the Proposed Project, but the cost of certain infrastructure within the residential development (streets, utilities, etc.) would be substantially less.

For the purposes of this Second Revised Draft EIR, this alternative is considered potentially feasible.

~~This alternative is considered potentially feasible to avoid or substantially lessen significant effects of the Proposed Project at the site, however, no economic study has been conducted to verify the economic feasibility of this alternative. If this alternative were advanced, it is suggested that an economic feasibility study be conducted.~~

~~While this alternative would satisfy all of the Project's environmental goals, it would not satisfy all of the Project's Economic Goals, or any of the Project's Social Goals.~~

~~Thus, while this alternative is feasible, it does not meet most of the project objectives.~~

Impact Analysis

Similar to Alternative 3, reduced density of units under this alternative would result in similar or lessened impacts on all of the resource areas; however, it would not likely change the significance of impacts identified for the Proposed Project.

Under this alternative, the proposed level of affordability is similar to the Project; however, since there are fewer overall units, there are also fewer affordable units, since this alternative would still meet the 20% affordable units.

~~This Low Density Alternative would result in similar direct and indirect impacts described above for the Medium Density Alternative. Impacts would be lessened, but significance would likely remain unchanged with the further reduction of residential units on the parcel.~~

~~Under this alternative, 40 residential units would be located on the Rancho Cañada Golf Club. Based based on the 2013 CVMP, new residential subdivisions are limited to 190 additional housing units, of which 24 units are reserved for the Delfino property, leaving 166 units. With 40 units in the alternative, there would be 126 units remaining for the CVMP area. Similar to the No-Project Alternative, the remaining 126 units would be spread throughout Carmel Valley on residentially designated sites and result in similar impacts as for the No Project Alternative but on a slightly smaller scale.~~

Alternative 5 – Energy Efficient Clustered Residential Alternative ~~Rio Road Extension Emergency Access Only~~

Alternative Characteristics

Alternative 5 includes 130 residential units, with clustering of 25-condominium units to allow for use of solar infrastructure. The configuration of these condominium units would include a "solar village" comprising of 18-condominiums on the front parcel and seven condominium units (two tri-plexes and a half plex) on the west side of the project site. Similar to the Proposed Project, the 130-units under this alternative would also be of moderate and market rate housing. The amount of open space would be the same as the Proposed Project. A sample site plan of this alternative is provided in **Figure 5-4.**

This alternative would also include raising a portion of the emergency access road west of the site, to a level that has been designed to directly address the large potential flood flow path down Rio Road from the Carmel River. This would avoid a substantial portion of the improvements cited in the County Service Area 50 Final Lower Carmel River Stormwater Management and Flood Control Report (Balance Hydrologics, Inc. 2014b).

This alternative reflects a reasonable evolution of the 130-unit Proposed Project (formulated in 2016) in that it implements requirements in the 2019 Building Energy Efficiency Standards of the California Building Code (Title 24, Part 6, of the California Code of Regulations) including installation of solar photovoltaic systems for all new single-family homes and multi-family homes up to three stories in height. The clustered design of this alternative would allow for more efficiency in developing the solar infrastructure, as fewer solar panel systems could be installed to power all condominium units.

Alternative 5 was developed to examine the potential to lessen GHG related impacts.

~~This alternative would propose 281 residential units, like the Proposed Project, but would have site access via Rio Road to the east to Carmel Valley Road. This alternative would provide for pedestrian, bicycle, and emergency access along the Rio Road tieback levee between Rancho Cañada Village and the current terminus of Rio Road at Val Verde Street. Public vehicle access would be restricted to emergency access only with a locked gate.~~

Feasibility and Ability to Meet Project Objectives

Alternative 5 is technically feasible as the project site is available, utility connections and road connections are available, and water supply exists as for the Proposed Project.

The cost of major infrastructure (site elevation, road connections, park improvements) would be the same as that for the Proposed Project.

Alternative 5 would meet all of the objectives of the Project, as it is infill development that integrates smart growth principles and integrates open space. This alternative would also assist the County in addressing the statewide housing crisis through the provision of 130 moderate and market rate housing units and would provide employment opportunities similar to the Project. Alternative 5 also includes construction of regional drainage control and traffic signalization like the Project.

~~This alternative is feasible alternative because access would be provided via Carmel Valley Road and a secondary emergency access route would be available. Emergency providers would be able to use access from the west or the east so that adequate service ratios can be maintained for the development.~~

~~This alternative would result in the creation of all the key features of the Proposed Project in the same location on the west course of the Rancho Cañada Golf Club. The restriction of site access to Rio Road would not impede or restrict the attainment of Project objectives or goals.~~

Impact Analysis

This alternative would involve construction of the same number of housing units. Thus, environmental effects would be similar across all impact areas. ~~With the exception of Traffic, this alternative would result in similar impacts described for the Proposed Project. Impacts traffic would be significant, but mitigable to levels below significance. This alternative would have similar cumulative impacts as described for the Proposed Project.~~

Alternative 6 – 160-Unit Medium Density Residential ~~Stemple Property Avoidance~~ Alternative

Alternative Characteristics

Like Alternative 5, this alternative would include 130-unit residential subdivision consisting of 105 market rate homes, with clustering of 25 condominium units to allow for the use of solar infrastructure. The 130-units under this alternative would have the same mix of moderate and market rate housing as the Proposed Project. However, under Alternative 6, it is assumed that the owners of as many as 30 homes would ultimately obtain permission from the County to build accessory dwelling units (ADUs), consistent with recent changes to California law. Therefore, this alternative assumes the construction of 160 residential units, 30 of which would be ADUs. For the purpose of this analysis, it is assumed that ADUs would be stand-alone units (not an attached or

junior ADU) and would be rented to a third party. While ADUs are typically considered affordable by design, given the Project location, it is assumed that the 30 ADUs would not qualify as affordable.

The amount of open space would be the same as the Proposed Project. A sample site plan of this alternative is provided in **Figure 5-5.**

This alternative would also include raising a portion of the emergency access road west of the site, to a level that has been designed to directly address the large potential flood flow path down Rio Road from the Carmel River. This would avoid a substantial portion of the improvements cited in the County Service Area 50 Final Lower Carmel River Stormwater Management and Flood Control Report (Balance Hydrologics, Inc. 2014b). This alternative was developed to examine the impact of recent changes to California law related to accessory dwelling units.

~~A portion of the project site is on a property not owned by the Project Applicant, referred to as the "Stemple Property". The Proposed Project includes the northernmost roadway in the development on this property. This alternative, as shown in **Figure 5-1**, would redesign the project so that it would not include any permanent development on the Stemple Property. This would reduce the area of the development by several acres, would require realignment of the east-west road on the northern side of the development, and would increase the density of the development slightly.~~

~~The Lombardo Land Group has an access easement, as shown on **Figure 5-1** on part of the Stemple Property, but this alternative would not use the Stemple Property for new roadways or residences.~~

Feasibility and Ability to Meet Project Objectives

Alternative 6 is technically feasible as the project site is available, utility connections and road connections are available, and water supply exists as for the Proposed Project. The cost of major infrastructure (site elevation, road connections, park improvements) would be the same as that for the Proposed Project.

Alternative 6 would meet all the objectives of the Proposed Project, as it is infill development that integrates smart growth principles and integrates open space. Alternative 6 also includes construction of regional drainage control and traffic signalization similar to the Project. This alternative would also provide employment opportunities for the local workforce. Further, it would meet the objective in assisting the County in addressing the statewide housing through the provision of 160 moderate and market rate housing units to a greater extent than the Proposed Project.

~~In concept this alternative is feasible as it is similar to the Proposed Project, but in a slightly smaller area.~~

~~Ability to Meet Project Objectives~~

~~This alternative would meet the objectives of the project.~~

Impact Analysis

Impacts for this alternative would be similar to those of the Proposed Project. Due to a higher number of overall residential units constructed, the Project would likely result in slightly greater adverse impacts on most resource areas compared to the Proposed Project. However, the significance of impacts would likely be the same as those of the Proposed Project.

~~This alternative would have virtually the same impacts as the Proposed Project as it is expected to have the same number of units and other infrastructure, with only a slight reduction in project area. The residential area would be slightly more dense than the Proposed Project.~~

Environmentally Superior Alternative

Alternative 1 (five estate homes) would reduce all environmental impacts, compared to the Proposed Project and Alternatives 2 through 6. Thus, for direct and indirect impacts, Alternative 1 would be the environmentally superior alternative. CEQA requires that if the No-Project Alternative is identified as the environmentally superior alternative, then the environmentally superior of the action alternatives must be identified. Of the action alternatives, the 40-Unit Low Density Alternative (Alternative 4) would be the environmentally superior alternative because it has lower impacts for all issue areas, except for land use, where impacts would be similar to the Proposed Project.

Therefore, in accordance with CEQA Guidelines Section 15126.6(e), Alternative 4 is identified as the "environmentally superior alternative." Alternative 4 would also meet all project objectives, but not to the same extent as the Proposed Project since fewer units increases costs of market-rate units. There would be less opportunity allowing for County implementation of regional drainage control solutions and construction of a needed traffic light on Carmel Valley Road.

~~The following alternatives are dismissed from consideration as the Environmentally Superior Alternative.~~

- ~~Alternative 2 (East Golf Course Alternative) does not avoid or substantially reduce any of the significant impacts of the Proposed Project.~~
- ~~Alternative 4 (Low-Density Alternative) does not meet most of the project goals and objectives. It is not included in the identification of the environmentally superior alternative, which per CEQA, must meet most of the project goals and objectives.~~
- ~~Alternative 5 (Proposed Project with Rio Road Extension Emergency Access Only) would not avoid or substantially avoid significant direct or indirect impacts of the Proposed Project as it would have virtually the same traffic impacts, presuming that signalization of the Rio Road/Carmel Valley Road intersection is included in the alternative.~~
- ~~Alternative 6 (Stemple Property Avoidance Alternative) has virtually the same impacts as the Proposed Project has and thus is considered the same for this identification of the environmentally superior alternative.~~

~~Environmentally Superior Alternative for Direct and Indirect Impacts~~

~~Alternative 1 (No-Project Alternative) would have less direct and indirect effects compared with the Proposed Project and with the feasible alternatives analyzed in this Recirculated Draft EIR because it would avoid the physical environmental effects of development on the site. It would also avoid inconsistency with the 2013 CVMP land use designations and zone, and it would avoid the indirect effects related to traffic generation.~~

~~The 130-Unit Alternative would result in less residential development at the Rancho Cañada site than the Proposed Project. As described in the traffic analysis, the 130-Unit Alternative would have lower traffic impacts compared to the Proposed Project because it would generate less daily and~~

peak-hour traffic. As described in the water supply analysis, when including the 60 AF water transfer, this alternative would result in water use greater than the Proposed Project would, but would also result in a reduction in baseline water use, which would be a water supply and biological resource benefit.

Alternative 3 (Medium-Density Alternative) would have fewer direct and indirect effects compared to the Proposed Project because it would have fewer aesthetic impacts, less water demand on-site, and would result in less traffic generation. Alternative 3 would have greater aesthetic impacts and traffic generation but lower water use than the 130-Unit Alternative.

Thus, for direct and indirect impacts, Alternative 1 (the No-Project Alternative) would be the environmentally superior alternative. CEQA requires that if the No-Project Alternative is identified as the environmentally superior alternative, then the environmentally superior of the action alternatives must be identified. Of the action alternatives, the 130-Unit Alternative would be the environmentally superior alternative because it has lower traffic generation than the Proposed Project and Alternative 3 and less aesthetic impacts. While the 130-Unit Alternative would have higher water use (due to the water transfer), this alternative would result in a reduction of water use compared to baseline use and would also dedicate 50 AF for instream beneficial use, and thus water supply effects are not considered to make this alternative environmentally inferior to the Proposed Project or Alternative 3.

Environmentally Superior Alternative for Cumulative Impacts

The No-Project Alternative would have the same CVMP buildout as the 130-unit Alternative (190 units), but in a more dispersed pattern of residential development that would require more land, more vehicular travel, and likely more extensive infrastructure (in particular concerning water supply) than would the Proposed Project, the 130-unit Alternative, and Alternative 3.

The 130-Unit Alternative would result in less residential development at the Rancho Cañada site compared to the Proposed Project and Alternative 3. The remaining allowable 60 units allowed in the CVMP area would occur in other parts of the CVMP provided water supplies could be secured. This alternative, because it would not require an amendment of the CVMP related to allowable residential subdivisions, would result in less overall buildout in Monterey County as a whole compared to the Proposed Project and Alternative 3 and the same amount of buildout as the No-Project Alternative.

Alternative 3 (Medium-Density Alternative) would accommodate more development on-site than the 130-Unit Alternative but less than the Proposed Project. This alternative would require an amendment of the CVMP concerning allowable residential subdivisions (the current CVMP residential subdivision cap would need to be expanded to 210 units to accommodate 24 units for Delfino, plus 186 units for Alternative 3). Thus this alternative would result in less overall buildout in Monterey County compared to the Proposed Project, but more than the 130-Unit Alternative.

The 130-unit Alternative is considered to be the environmentally superior alternative related to cumulative impacts because it would result in less cumulative development in the CVMP (and the County as a whole) than the Proposed Project and Alternative 3 and thus result in less cumulative traffic. The 130-Unit Alternative would result in the same level of residential growth in the CVMP as the No-Project Alternative but a more concentrated growth pattern than the No-Project Alternative which would result in a smaller overall development footprint and less cumulative traffic generation.

~~Environmentally Superior Alternative Overall~~

~~Because the 130-unit Alternative is the environmentally superior alternative for direct, indirect, and cumulative impacts, it is considered the environmentally superior alternative overall.[4]~~

Summary of Impacts and Mitigation Measures and Levels of Significance

The impacts of the Proposed Project~~ and 130-Unit Alternative~~, proposed mitigation measures, and significance conclusions are discussed in detail in Chapter 3 and Chapter 4 of this Second Revised Draft ~~Recirculated D~~EIR. **Table ES-1** summarizes the impacts, mitigation measures, and levels of significance identified in this document.

~~[4] As discussed concerning growth inducement in Chapter 4, depending on the character of development, the 60 AF water transfer included in the 130-unit Alternative could result in perhaps 120 to 240 new single-family residential units (assuming average water demand per unit of 0.25 to 0.5 AF) or more units (if apartments or condominiums). The water transfer could also remove a constraint to growth for commercial, institutional, or other uses in the Cal-Am service area. However, as concluded in Chapter 4, the proposed water transfer would not induce residential, commercial, or other development that is not otherwise allowable in local land use plans. Since the water transfer would only result in development inside and outside the CVMP that is consistent with local land use plans, the additional amount of growth is not considered further in the assessment of the environmentally superior alternative.~~

Table ES-1. Summary of Impacts

Impact	~~Proposed Project Level of Significance~~	130-Unit Alternative Level of Significance	Mitigation Measure	Level of Significance after Mitigation
3.1 Geology and Soils				
A. Seismic Hazards				
GEO-1: Substantial Adverse Effects Resulting From Fault Rupture	~~NI~~	NI	None Required	–
GEO-2: Substantial Adverse Effects Resulting from Earthquake-Induced Ground Shaking	~~LTS~~	LTS	None Required	–
GEO-3: Substantial Adverse Effects Resulting from Seismic-Related Ground Settlement	~~Potentially Significant~~	Potentially Significant	GEO-1: Design All Proposed Structures in Accordance with the Requirements of the California Building Code, Current Edition, and Recommendations Contained in the Site-Specific Geologic and Geotechnical Reports	LTS
GEO-4: Substantial Adverse Effects Resulting From Earthquake-Induced Liquefaction	~~LTS~~	LTS	None Required	–
B. Landslides and Slope Stability				
GEO-5: Substantial Adverse Effects Resulting from Landsliding	~~Potentially Significant~~	Potentially Significant	GEO-2: ~~Conduct Additional Site-Specific Investigation Relative to Lot 130 and~~ Implement Recommended Grading and Slope Design Criteria of the Site-Specific Geotechnical Reports	LTS
C. Erosion				
GEO-6: Accelerated Soil Erosion and Sedimentation	~~Potentially Significant~~	Potentially Significant	GEO-3: Prepare and Implement an Erosion and Sediment Control Plan	LTS
D. Soil Constraints				
GEO-7: Substantial Adverse Effects Resulting from Expansive Soils	~~Potentially Significant~~	Potentially Significant	GEO-1 [see above] GEO-4: Remove Localized Zones of Overly Loose Materials ~~GEO-5: Prepare a Geotechnical Report for Lot 130 Concerning Expansive Soils (130-Unit Alternative only)~~	LTS
GEO-8: Substantial Adverse Effects Resulting from Loss of Topsoil	~~LTS~~	LTS	None Required	–
GEO-9: Effects of Septic Systems on Soils	~~NI~~	NI	None Required	–
Cumulative Impacts				
GEO-C1: Cumulative Impacts of Development on Geologically Hazardous Areas	~~LTC~~	LTC	None Required	–

Impact	~~Proposed Project Level of Significance~~	130-Unit Alternative Level of Significance	Mitigation Measure	Level of Significance after Mitigation
GEO-C2: Cumulative Accelerated Runoff, Erosion, and Sedimentation	~~Potentially Significant~~	Potentially Significant	GEO-1 through GEO-~~4~~5 [see above]	LTC
3.2 Hydrology				
A. Alteration of Drainage Patterns				
HYD-1: Alteration of Surface Drainage Patterns That Results in Increased Erosion or Siltation	~~Potentially Significant~~	Potentially Significant	~~Proposed Project and 130-unit Alternative~~ HYD-1: Prepare and Implement a Stormwater Control Plan HYD-2: Prepare and Implement Operation and Maintenance Plan for Stormwater Control Measures HYD-3: Enter into Maintenance Agreement for Stormwater Control Measures ~~Proposed Project Only~~ ~~BIO-4: Provide Funding Assurances and Reporting Concerning Restoration Progress and Success~~ ~~BIO-7: Monitor Bank Erosion in Project Reach and Restore Riparian Vegetation and River Bank As Necessary~~	LTS
B. Stormwater Runoff and Drainage Infrastructure				
HYD-2: Result in Increased Stormwater Runoff Due to an Increase in Impervious Surfaces and Topographic Alterations Resulting in Drainage or Flooding Impacts	~~Potentially significant~~	Potentially Significant	HYD-1 and HYD-2~~, HYD-3~~ [see above]	LTS
C. Water Quality				
HYD-3: Degrade Surface Water Quality during Construction and from Operation	~~Potentially Significant~~	Potentially Significant	HYD-1~~,~~ and HYD-2~~, HYD-3~~ [see above] HYD-4: Implement a Spill Prevention and Control Program HYD-5: Implement Measures to Maintain Surface Water or Groundwater Quality GEO-3 [see above]~~: Prepare and Implement an Erosion and Sediment Control Plan~~	LTS
D. Groundwater Supply				
HYD-4: Substantially Deplete Groundwater Supplies or Interfere with Groundwater Recharge	~~LTS~~	LTS	None Required	–

Impact	~~Proposed Project Level of Significance~~	130-Unit Alternative Level of Significance	Mitigation Measure	Level of Significance after Mitigation
E. Risk of Flooding				
HYD-5: Place Housing or Structures Within a 100-Year Flood Hazard Area and Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Flooding	~~Potentially Significant~~	Potentially Significant	HYD-6: Protect Eastern Slope of Excavated Basin ~~HYD-7: Avoid Encroachment into the 100-year Floodplain for Lot 130 Uses (130-Unit Alternative Only)~~	LTS
F. Risk of Inundation by Seiche, Tsunami, or Mudflow or Due to Sea Level Rise				
HYD-6: Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Inundation Due to Seiche, Tsunami, or Mudflow Hazards or Flooding Associated with Sea Level Rise	~~LTS~~	LTS	None Required	–
Cumulative Impacts				
HYD-C1: Cumulative Impacts to Hydrology and Water Quality	~~Potentially significant~~	Potentially Significant	HYD-1 though HYD-~~6~~7, and GEO-~~3~~5, ~~BIO-4, Proposed Project Only:~~ ~~BIO-7 [see above]~~	LTC
3.3 Biological Resources				
A. Impacts to Vegetation				
BIO-1: Loss of Coyote Brush Scrub Habitat	~~LTS~~	LTS	None Required	–
BIO-2: Loss of Monterey Pine Stands	~~LTS~~	LTS	None Required	--
BIO-3: Loss or Disturbance of Special-Status Plant Occurrences	~~LTS~~	LTS ~~Potentially Significant~~	None required ~~BIO-1: Conduct a Floristic Survey of Coast Live Oak Woodland Habitat in Lot 130 during the Blooming Period for Potential Special-Status Plant Species (130-Unit Alternative only)~~ ~~BIO-2: Measures to Avoid or Minimize Impacts on Special-Status Plant Species Populations Relative to Lot 130~~ ~~BIO-3: Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel (130-Unit Alternative only)~~	-- ~~LTS~~

Impact	~~Proposed Project Level of Significance~~	130-Unit Alternative Level of Significance	Mitigation Measure	Level of Significance after Mitigation
BIO-4: Loss of Riparian Forest and Woodland Habitat	~~Potentially Significant~~	Potentially Significant	~~Proposed Project and 130-unit Alternative~~ ~~BIO-3 [see above]~~ BIO-1~~4~~: Provide Funding Assurances and Reporting Concerning Restoration Progress and Success BIO-2~~5~~: Restore Riparian Forest/Woodland Concurrent with Impact to Compensate for the Permanent Loss of Riparian Forest Habitat BIO-3~~6~~: Minimize Disturbance of Riparian Forest and Woodland BIO-4: Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel ~~Proposed Project Only~~ ~~BIO-7: Monitor Bank Erosion in Project Reach and Restore Riparian Vegetation and River Bank, as Necessary~~	LTS
BIO-5: Loss of Coast Live Oak Woodland	~~No impact~~	NI ~~Potentially Significant~~	None Required ~~BIO-8: Create Coast Live Oak Woodland Habitat to Mitigate Permanent Loss of Coast Live Oak Woodland Habitat (130-Unit Alternative only)~~	-- ~~LTS~~
BIO-6: Loss of Wetlands and Other Waters of the United States and State of California	~~Potentially Significant~~	Potentially Significant	BIO-1~~3~~, BIO-2~~4~~, BIO-4 ~~5~~ [see above] HYD-1 through HYD-5~~4~~ [see above] ~~BIO-9a: Create Ponds to Mitigate Permanent Loss of Pond Habitat (Proposed Project only)~~ BIO-5~~9b~~: Restore or Create Wetland and Pond Habitat to Mitigate Permanent Loss of Waters of the United States and State ~~(130-Unit Alternative only)~~	LTS
BIO-7: Loss of Protected Trees	~~Potentially Significant~~	Potentially Significant	BIO-6~~10~~: Compensate for Removal of Protected Trees	LTS

Impact	~~Proposed Project Level of Significance~~	130-Unit Alternative Level of Significance	Mitigation Measure	Level of Significance after Mitigation
B. Impacts to Wildlife				
BIO-8: Loss or Disturbance of California Red-Legged Frog Aquatic Habitat and Potential Loss of California Red-Legged Frog Adults, Larvae, or Eggs	~~Potentially Significant~~	Potentially Significant	BIO-2~~3, BIO-5~~ through BIO-~~4~~6 [see above] BIO-7~~11~~: Conduct Formal Site Assessment and Consult with U.S. Fish and Wildlife Service to Determine if Protocol-Level Surveys are Necessary OR Assume CRLF Presence BIO-8~~12~~: Restrict Filling of Ponds/Wetlands and Initial Ground-Disturbing Activities in CRLF Habitat to the Dry Season (May 1 to October 15) BIO-9~~13~~: Conduct a Preconstruction Survey for CRLF BIO-10~~14~~: Monitor Initial Ground-Disturbing Construction Activities within CRLF Habitat BIO-11~~15~~: Compensate for the Removal and Disturbance of CRLF Breeding Habitat ~~Proposed Project Only:~~ ~~BIO-7 [see above]~~	LTS
BIO-9: Loss or Disturbance of Southwestern Pond Turtle Aquatic Habitat and Potential Loss or Disturbance of Southwestern Pond Turtles	~~Potentially Significant~~	Potentially Significant	BIO-12~~16~~: Conduct a Preconstruction Survey for Southwestern Pond Turtles and Monitor Construction Activities within Suitable Aquatic Habitat	LTS
BIO-10: Potential Loss or Disturbance of Breeding or Wintering Western Burrowing Owls and Their Burrows	~~LTS~~	LTS	None Required	--
BIO-11: Potential Loss or Disturbance of Tricolored Blackbirds and Their Breeding Habitat	~~Potentially Significant~~	Potentially Significant	BIO-13~~17~~: Conduct Surveys for Nesting Tricolored Blackbirds BIO-14~~18~~: ~~Redesign Restoration Plan (Proposed Project) to Replace Lost Tricolored Blackbird Nesting Colony Habitat or~~ Incorporate Tricolored Blackbird Nesting Habitat into the Newly Developed Project ~~130-Unit Alternative~~ Restoration Plan ~~(If Developed)~~	LTS
BIO-12: Potential Loss or Disturbance of Monterey Dusky-Footed Woodrat or Their Nests	~~Potentially Significant~~	Potentially Significant	BIO-15~~19~~: Conduct Surveys for Woodrat Middens and Relocate Woodrats and Middens Prior to Construction Activity	LTS

Impact	~~Proposed Project Level of Significance~~	130-Unit Alternative Level of Significance	Mitigation Measure	Level of Significance after Mitigation
BIO-13: Potential Loss or Disturbance of Tree and Shrub Nesting Migratory Birds and Raptors	~~Potentially Significant~~	Potentially Significant	BIO-2~~5~~ [see above] BIO-16~~20~~: Remove Vegetation during the Nonbreeding Season and Avoid Disturbance of Nesting Migratory Birds and Raptors	LTS
BIO-14: Potential Loss or Disturbance of Pallid Bat, Hoary Bat, and Non-Special-Status Bats Species	~~Potentially Significant~~	Potentially Significant	BIO-17~~21~~: Conduct a Survey for Suitable Roosting Habitat and Evidence of Roosting Bats and Avoid Disturbing Them	LTS
BIO-15: Temporary and Permanent Impacts to Steelhead Trout and other Carmel River Fish	~~Potentially Significant~~	Potentially Significant	HYD-1 through HYD-6 [see above] BIO-18~~22~~: Rescue Steelhead, if Stranded in Site Basin during High-Flow Events ~~Proposed Project Only:~~ ~~BIO-7 [see above]~~	LTS
C. Impact on Wildlife Movement, Wildlife Corridors, and Nursery Sites				
BIO-16: Potential Adverse Impact on Wildlife Movement, Wildlife Corridors, and Nursery Sites	~~Potentially Significant~~	Potentially Significant	BIO-1 ~~4~~through BIO-5~~6~~ [see above] ~~Proposed Project Only:~~ ~~BIO-7, BIO-9a [see above]~~ ~~130-Unit Alternative Only:~~ ~~BIO-9b[see above]~~	LTS
D. Impact Related to Adopted Conservation Plans and Local Policies/Ordinances for the Protection of Biological Resources				
BIO-17: Potential Conflict with Local Policies/ Ordinances	~~Potentially Significant~~	Potentially Significant	BIO-6 ~~10~~ [see above] ~~Proposed Project Only~~ ~~BIO-7 [see above]~~	LTS
E. Impact on Wildlife from Increased Presence of Dogs and Cats				
BIO-18: Potential Adverse Impact on Wildlife due to Increased Presence of Dogs and Cats Associated with Residential Development	~~Potentially Significant~~	Potentially Significant	BIO-19~~23~~: Install Signs Along and Within the Habitat Preserve about Restraining Dogs and Encouraging Cats to be Kept Inside	LTS
Cumulative Impacts				
BIO-C1: Cumulative Loss of Biological Resources Including Habitats and Special Status Species	~~Potentially Significant~~	Potentially Significant	BIO-1 through BIO-19 [see above]~~6, BIO-8 through BIO-22 [see above], BIO-23~~ ~~Proposed Project Only:~~ ~~BIO-7 [see above]~~	LTC
3.4 Aesthetics				
A. Visual Character and Quality				
AES-1: Changes in Visual Character due to the proposed Residential Use and Habitat Preserve	~~LTS~~	LTS	None Required.	–

Impact	~~Proposed Project Level of Significance~~	130-Unit Alternative Level of Significance	Mitigation Measure	Level of Significance after Mitigation
AES-2: Changes in Visual Quality due to Changes in Views from Adjacent Land Uses due to the Proposed Residential Use	~~Potentially Significant~~	Potentially Significant	AES-1: Implement Measures to Reduce Light and Glare, and Visual Intrusion to Surrounding Land Uses and Other Public Viewpoints	LTS
B. Scenic Vistas and Corridors				
AES-3: Changes in Views from Existing Scenic Vistas and Corridors	~~LTS~~	LTS	None Required.	–
C. Light and Glare				
AES-4: Create a New Source of Light and Glare	~~Potentially Significant~~	Potentially Significant	AES-1 [see above]	LTS
Cumulative Impacts				
AES-C1: Cumulative Degradation of the Existing Visual Character of the Region	~~Potentially Significant~~	Potentially Significant	AES-1 [see above]	LTC~~S~~
3.5 Land Use				
A. Land Use Compatibility				
LU-1: Land Use Compatibility	~~Potentially Significant~~	Potentially Significant	AES-1 [see above]~~: Implement Measures to Reduce Light and Glare, and Visual Intrusion to Surrounding Land Uses and Other Public Viewpoints~~	LTS
B. Plan/Policy Consistency				
LU-2: Conflicts with Land Use Plans, Policies, or Regulations	~~Significant (re: CVMP Policy CV-1.6)~~	Significant (re: CVMP Policy CV-1.27)	TR-1 [see below] ~~Traffic Mitigation Measures in Chapter 3.7 and Chapter 4.~~	SU
LU-3: Conflicts with Habitat Conservation Plans	~~NI~~	NI	None Required	–
C. Division of an Established Community				
LU-4: Physically Divide a Community	~~LTS~~	LTS	None Required	–
Cumulative Impacts				
LU-C1: Cumulative Local Land Use Impacts	~~Considerable~~	Potentially Significant ~~LTC~~	None Available ~~Proposed Project Only: Traffic Mitigation Measures in Chapter 3.7 and Chapter 4.~~	CU ~~(Proposed Project Only)~~

Impact	~~Proposed Project Level of Significance~~	130-Unit Alternative Level of Significance	Mitigation Measure	Level of Significance after Mitigation
3.6 Hazards and Hazardous Materials				
A. Public Exposure				
HAZ-1: Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment	~~Potentially Significant~~	Potentially Significant	HAZ-1: Follow Cypress Fire Protection District and Other Guidelines for Storage and Handling of Hazardous Materials HAZ-2: Immediately Contain Spills, Excavate Spill-Contaminated Soil, and Disposal at an Approved Facility HAZ-3: Develop and Implement Plans to Reduce Exposure of People and the Environment to Hazardous Conditions During Construction Activities ~~HAZ-4: Test for the Presence of Asbestos or Lead-Based Paint and Remove in Accordance with Occupational Safety and Health Administration (OSHA) and the Monterey Bay Unified Air Pollution Control District (MBUAPCD)Procedures (130-Unit Alternative only)~~ PSU-2: Coordinate with Appropriate Utility Service Providers and Related Agencies to Reduce Service Interruptions	LTS
HAZ-2: Routine Transport, Use, or Disposal of Hazardous Materials	~~Potentially Significant~~	Potentially Significant	HAZ-4~~5~~: Participate in the Local Household Hazardous Waste Collection Program	LTS
HAZ-3: Hazardous Emissions or Hazardous Materials, Substances, or Waste Handling Within One-Quarter Mile of a School	~~Potentially Significant~~	Potentially Significant	~~For the Proposed Project:~~ HAZ-1 through HAZ-4 ~~3 and HAZ-5~~ [see above] ~~For the 130-Unit Alternative:~~ ~~HAZ-1 through HAZ-5 [see above]~~	LTS
HAZ-4: Location of the Project on a Known Hazardous Material Site	~~LTS~~	LTS	None Required	–
B. Airport Vicinity				
HAZ-5: Potential Exposure of Hazardous Materials in the Vicinity of an Airport or Airstrip	~~LTS~~	LTS	None Required	–
Cumulative Impacts				
HAZ-C1: Cumulative Significant Hazards to the Public or Environment	~~Potentially Significant~~	Potentially Significant	HAZ-1 through HAZ-4 ~~5~~ [see above]	LTC

Impact	~~Proposed Project Level of Significance~~	130-Unit Alternative Level of Significance	Mitigation Measure	Level of Significance after Mitigation
3.7 Transportation and Circulation				
A. Signalized Intersections				
TR-1: LOS Decrease at Signalized Intersections	~~LTS~~	LTS	None Required	–
B. Unsignalized Intersections				
TR-2: LOS Decrease at Unsignalized Intersections	~~Potentially Significant~~	Potentially Significant	TR-1: Contribute Fair-Share to Interchange Improvements of Laureles Grande and Carmel Valley Road through the CVTIP Traffic Impact Fee ~~to fund the CVTIP~~	SU
C. Roadway Segments				
TR-3: Peak Hour LOS Decrease for Two-Lane and Multi-Lane and/or exceed ADT Threshold for Portions of Carmel Valley Road, Rio Road and Carmel Rancho Boulevard	~~LTS~~	LTS	None Required	–
TR-4: Peak Hour Segment LOS Decrease for Portions of State Route 1	~~Potentially Significant~~	Potentially Significant	None Available ~~TR-2 Contribute Fair Share Regional Impact Fee~~	SU
D. Access, Circulation and Safety				
TR-5: Adequate Sight Distance	~~LTS~~	LTS	None Required	–
TR-6: Adequate Project Access	~~LTS~~	LTS	None Required	–
E. Transit and Bicycle Travel				
TR-7: Changes to Transit and Bicycle Travel Access	~~LTS~~	LTS	None Required	–
F. Construction Traffic				
TR-8: Construction Traffic Decreases LOS	~~Potentially Significant~~	Potentially Significant	TR-2~~3~~: Develop and Implement a Construction Traffic Control Plan	SU
Cumulative Impacts				
TR-C1: LOS Decrease at Signalized Intersections	~~Potentially Significant~~	Potentially Significant	TR-1~~2~~ [see above]	CU
TR-C2: LOS Decrease at Unsignalized Intersections	~~Potentially Significant~~	Potentially Significant	TR-1 [see above]	CU
TR-C3: Peak Hour LOS Decrease for Segments of SR1 and Carmel Valley Road	~~Potentially Significant~~	Potentially Significant	None Available ~~TR-2 [see above]~~	CU
TR-C4: Exceed Average Daily Traffic Thresholds on Segments of Carmel Valley Road	~~Potentially Significant~~	Potentially Significant	TR-1 ~~TR-2~~ [see above]	CU

Impact	~~Proposed Project Level of Significance~~	130-Unit Alternative Level of Significance	Mitigation Measure	Level of Significance after Mitigation
TR-C5: Adequate Sight Distance	~~LTC~~	LTC	None Required	–
TR-C6: Changes to Transit and Bicycle Travel Access	~~LTC~~	LTC	None Required	–
TR-C7: Construction Traffic	~~Potentially Significant~~	Potentially Significant	TR~~A~~-2~~3~~ [see above]	CU
3.8 Air Quality				
A. Air Quality Plan Consistency				
AIR-1: Conflict with the 2012 Air Quality Management Plan	~~LTS~~	LTS	None Required	–
B. Long-Term Emissions				
AIR-2: Result in a Long-Term Increase in ROG, NO_X, CO, and PM10 Emissions from Vehicular Traffic and Area Sources	~~Potentially Significant~~	Potentially Significant	AIR-1: Prohibit Wood-Burning Fireplaces	LTS
C. Construction Emissions				
AIR-3: Result in a Short-Term Increase in PM10 Emissions due to Grading and Construction	~~LTS~~	LTS	None Required	–
D. Sensitive Receptors				
AIR-4: Result in the Emission of Toxic Air Contaminants from Diesel Truck and Equipment Use during Construction	~~LTS~~	LTS	None Required	–
AIR-5: Expose Sensitive Receptors to Substantial CO Concentrations from Project-Related Traffic	~~LTS~~	LTS	None Required	
E. Odors				
AIR-6: Expose New Sensitive Receptors to Objectionable Odors	~~LTS~~	LTS	None Required	–
Cumulative Impacts				
AIR-C1: Cumulative Effect on Air Quality	~~LTC~~	LTC	None Required	–
AIR-C2: Cumulative Elevated Health Risk from Exposure to Construction-Related Emissions	~~LTC~~	LTC	None Required	–

Impact	~~Proposed Project Level of Significance~~	130-Unit Alternative Level of Significance	Mitigation Measure	Level of Significance after Mitigation
3.9 Noise				
A. Long-Term Increases in Noise				
NOI-1: Exposure of Onsite Noise-Sensitive Land Use to Noise	~~Potentially Significant~~	Potentially Significant	NOI-1: Implement Noise-Reducing Treatments at Residences Located Near the Batting Practice Area ~~and Lot 130~~	LTS
NOI-2: Exposure of Offsite Noise-Sensitive Land Uses to Increased Noise	~~LTS~~	LTS	None Required	–
B. Short-Term Increases in Noise				
NOI-3: Exposure of Noise-Sensitive Land Uses to Construction Noise	~~Potentially Significant~~	Potentially Significant	NOI-2: Employ Noise-Reducing Construction Practices	LTS
C. Vibration				
NOI-4: Exposure of Sensitive Land Uses to Vibration from Construction Activity	~~LTS~~	LTS	None Required	–
Cumulative Impacts				
NOI-C1: Exposure of Noise-Sensitive Land Uses to Cumulative Traffic Noise that Exceed County Noise Compatibility Standards	~~LTC~~	LTC	None Required	–
3.10 Public Services, Utilities, and Recreation				
A. Fire and Police Services				
PSU-1: Increased Demand for Fire and First-Responder Emergency Medical Services	~~LTS~~	LTS	None Required	--
PSU-2: Increased Demand for Police Services	~~LTS~~	LTS	None Required	--
B. Emergency Access				
PSU-3: Interference with Emergency Access Routes or Adopted Emergency Access Plans	~~LTS~~	LTS	None Required	–
C. Wildland Fire Hazard				
PSU-4: Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Wildland Fires	~~LTS~~	LTS	None Required	–

Impact	~~Proposed Project Level of Significance~~	130-Unit Alternative Level of Significance	Mitigation Measure	Level of Significance after Mitigation
D. Water Demand				
PSU-5: Increased Water Supply Demand	~~Potentially Significant~~	Potentially Significant	PSU-1: Dedicate Water Rights for the Project; Design for, Meter, and Monitor Water to meet Water Budgets; Implement Remedial Action if Water Budgets Exceeded	LTS
E. Infrastructure Capacities				
PSU-6: Increased Demand for Water and Sewer Infrastructure	~~Potentially Significant~~	Potentially Significant	PSU-2~~-1~~: Test Well Supply, Identify Water Treatment and Distribution Facilities, and Avoid Impacts on Biological Resources	LTS
F. Wastewater Treatment Capacity				
PSU-7: Increased Wastewater Treatment Capacities	~~LTS~~	LTS	None Required	–
G. Utility Disruption				
PSU-8: Construction-Related Service Disruptions	~~Potentially Significant~~	Potentially Significant	PSU-3: Coordinate with Appropriate Utility Service Providers and Related Agencies to Reduce Service Interruptions	LTS
H. School Enrollments				
PSU-9: Increased Student Enrollments	~~LTS~~	LTS	None Required	–
I. Recreational Demand				
PSU-10: Increased Use of Existing Neighborhood and Regional Parks	~~LTS~~	LTS	None Required	–
J. Open Space				
PSU-11: Quality and Quantity of Open Space Used for Recreation	~~LTS~~	LTS	None Required	–
K. Landfill Capacity				
PSU-12: Increased Demand for Solid Waste, Green Waste, and Recycling Disposal Needs	~~LTS~~	LTS	None Required	–
Cumulative Impacts				
PSU-C1: Cumulative Increase in Demand for Public Services and Utility Infrastructure and Capacities	~~Potentially Significant~~	Potentially Significant	PSU-2 and~~-1,~~ PSU-3~~2~~ [see above]	LTC
3.11 Cultural Resources				
A. Historical Resources				
CR-1: Demolition, Destruction, Relocation, or Alteration of Historical Resources	~~NI~~	NI	None Required	–

Impact	~~Proposed Project Level of Significance~~	130-Unit Alternative Level of Significance	Mitigation Measure	Level of Significance after Mitigation
B., C., and D. Archaeological Resources, Human Remains, and Paleontological Resources				
CR-2: Ground Disturbing Activities, Such As Grading, Trenching, or Excavation	~~Potentially Significant~~	Potentially Significant	CR-1: Archaeological Resources- Stop Work if Buried Cultural Deposits are Encountered During Construction Activities CR-2: Archaeological Monitoring During Ground Disturbing Activities Within the Project Area During Construction CR-3: Archaeological Resources- Stop Work if Human Remains are Encountered During Construction Activities CR-4: Paleontological Resources- Stop Work if Vertebrate Remains are Encountered During Construction	LTS
CR-3: Erosion or Usage of the Project Area That Could Expose Buried Archaeological Resources Due to Long-Term Use of the Area	~~Potentially Significant~~	Potentially Significant	CR-5: Consult With a Qualified Archaeologist to Identify Resources and Assess Impacts	LTS
Cumulative Impacts				
CR-C1: Cumulative Impacts on Unknown and Undiscovered Cultural Resources	~~Potentially Significant~~	Potentially Significant	CR-1 through CR-5 [see above]	LTC
3.12 Population and Housing				
POP-1: Induce Substantial Population Growth In Excess of Adopted Land Use Plans And That Would Result in Significant Secondary Physical Effects on the Environment	~~Significant (for induced traffic)~~	LTS	~~None feasible to avoid all traffic impacts (Proposed Project)~~ None required ~~(130-Unit Alternative)~~	~~--~~ ~~SU (for traffic for Proposed Project)~~
B. Cause Displacement of People or Housing				
POP-2: Displacement of Existing Housing or Population	~~LTS~~	LTS	None Required	–
Cumulative Impacts				
POP-C1: Cumulative Impacts Related to Population and Housing	~~Significant (for induced traffic)~~	LTC	~~None feasible to avoid all traffic impacts (Proposed Project)~~ None required ~~(130-Unit Alternative)~~	~~--~~ ~~CU (for traffic for Proposed Project)~~

Impact	~~Proposed Project Level of Significance~~	130-Unit Alternative Level of Significance	Mitigation Measure	Level of Significance after Mitigation
3.13 Greenhouse Gas Emissions and Climate Change				
A. Contribute to Climate Change Impacts				
GHG-1: Result in Project-Related Greenhouse Gas Emissions, during Construction and Operation, that Could Contribute to Climate Change Impacts and be Inconsistent with the Goals of Assembly Bill 32	~~Potentially Significant~~	Potentially Significant	GHG-1: Implement Best Management Practices for Greenhouse Gas Emissions during Construction GHG-2: Reduce Annual Greenhouse Gas Emissions to below the Efficiency Threshold Using a Combination of Design Features, Replanting, and/or Offset Purchases	LTS, LTC
B. Effects of Climate Change				
GHG-2: Result in Significant Exposure of Persons or Property to Reasonably Foreseeable Impacts of Climate Change	~~Not applicable~~	Not Applicable	None Required	–

LTS = Less than Significant, LTC = Less than Cumulatively Considerable, SU = Significant and Unavoidable, CU = Cumulative and Unavoidable NI = No Impact

Chapter 1
Introduction

Overview of Scope

The County of Monterey (County) has prepared this Second Revised Draft Environmental Impact Report (Second Revised Draft EIR) in response to a July 2018 judgment and writ of mandate issued by the Monterey Superior Court in litigation entitled, *Carmel Valley Association, Inc., v. County of Monterey* (Case No. 17CV000131). That litigation was initiated in January 2017 when the Carmel Valley Association (CVA) filed a lawsuit requesting the court to invalidate the County Board of Supervisors' December 2016 certification of an EIR and approval of entitlements for a 130-unit residential proposal known as the Rancho Cañada Village Subdivision project.

The previously certified EIR at issue in the CVA lawsuit evaluated the development of 281 residential units as the Proposed Project. The certified EIR also evaluated a 130-unit alternative at the same level of detail as the Proposed Project. The County certified the EIR and approved the 130-unit alternative in December 2016. In the lawsuit filed by CVA, the superior court held that, although the 130-unit proposal was presented as an alternative in the EIR, this proposal was the true "project" under consideration and hence the EIR's project description was legally inadequate. The court further reasoned that, because the range of alternatives within the EIR treated the 281-unit proposal as the "project," the alternatives were inadequate, as they sought to reduce impacts of a 281-unit proposal rather than those of the 130-unit proposal. The Monterey County Superior Court found no problems with the impact analyses and mitigation measures in the EIR.

This Second Revised Draft EIR represents a very limited revision to the Revised Draft EIR to render the latter document compliant with the superior court's ruling. What had been called the 130-unit Alternative is now treated as the "Proposed Project." It has only been modified to reflect the current reality of the sale of Lot 130, which was part of the original subdivision. The County has also formulated a new range of alternatives to the 130-unit proposal. With very limited exceptions, the impact analyses and mitigation measures are no different from what they were previously. The new alternatives are described below.

Alternative 1 – No Project

Under the No-Project Alternative, existing (2020) conditions consist of cattle grazing on a former golf course on property with five legal parcels. If neither the Proposed Project nor any of the other EIR alternatives are approved, the reasonably foreseeable expected use of the five legal parcels, based on current plans and ordinances, and consistent with available infrastructure and community services, would be the construction of five estate homes in which home occupations such would be permitted.

Alternative 2 – Hotel Alternative

This Hotel Alternative consists of the development of 175 hotel or timeshare units and 20 employee housing units, 6-hole reconfiguration of the west golf course, clubhouse and restaurant, tennis

clubhouse and four tennis courts, health club, spa, meeting rooms, and administrative offices. Access would be provided, either directly or indirectly, via Carmel Valley Road for visitors and employees of this alternative. This alternative was developed to examine the potential to avoid or lessen traffic related impacts of the Revised Project, specifically during peak hours. This alternative would also include the raising of a portion of the emergency access road west of the project site, to a level that has been designed to directly address the large potential flood flow path down Rio Road from the Carmel River and obviate the need for a substantial portion of the work cited in the County Service Area 50 Final Lower Carmel River Stormwater Management and Flood Control Report (County of Monterey, October 2014).

Alternative 3 – 90-Unit Low Density Residential

This alternative would include 73 market rate residential units and 17 affordable units on the same residential site. This alternative was developed to examine the potential to avoid or lessen traffic-related impacts, including air pollution and greenhouse gas (GHG) emissions. The open space area would be the same as the 130-Unit Revised Project. This gross density would be considered low density in Carmel Valley, although specific densities within the Village could be medium density in certain locations. This alternative would also include the raising of a portion of the emergency access road west of the project site, to a level that has been designed to directly address the large potential flood flow path down Rio Road from the river and obviate the need for a substantial portion of the work cited in the County Service Area 50 Final Lower Carmel River Stormwater Management and Flood Control Report (October 2014).

Alternative 4 – 40-Unit Low Density Residential

This alternative would include 32 market rate residential units and eight affordable units on the same residential site. Like Alternative 3, this alternative was developed to examine the potential to avoid or lessen traffic-related impacts, including air quality and GHG emissions. The open space area would be the same as the 130-Unit Revised Project. This gross density would be considered low density in Carmel Valley, although specific densities within the Village could be medium density in certain locations. This alternative would also include the raising of a portion of the emergency access road west of the project site, to a level that has been designed to directly address the large potential flood flow path down Rio Road from the river and obviate the need for a substantial portion of the work cited in the County Service Area 50 Final Lower Carmel River Stormwater Management and Flood Control Report (October 2014).

Alternative 5 – Energy Efficient Clustered Residential

This alternative includes 130 residential units, with clustering of 25-condominium units to allow for use of solar infrastructure to reduce GHG related impacts. This alternative was developed to examine the potential to reduce GHG related impacts. The configuration of these condominium units include a “solar village” comprising 18-condos on the front parcel, and 7 condo units (two tri-plexes and a half plex) on the west side of the project site. This alternative would also include the raising of a portion of the emergency access road west of the project site, to a level that has been designed to directly address the large potential flood flow path down Rio Road from the river and obviate the need for a substantial portion of the work cited in the County Service Area 50 Final Lower Carmel River Stormwater Management and Flood Control Report (October 2014). This alternative reflects a reasonable evolution of the 130-unit Proposed Project (formulated in 2016) intended to address the

State of California's increased focus on energy conservation, and solar power in particular, over the last few years.

Alternative 6 – 160-Unit Medium Density Residential

Like the Energy Efficient Clustered Residential Alternative (Alternative 5), this alternative would include a 130-unit residential subdivision consisting of 105 market rate homes, with clustering of 25-condominium units to allow for use of solar infrastructure to reduce GHG related impacts. The alternative assumes, however, that the owners of as many as 30 single family lots would ultimately obtain permission from the County to build accessory dwelling units, consistent with recent changes to California law. The open space area would be the same as for the Energy Efficient Clustered Residential Alternative. This alternative would also include the raising of a portion of the emergency access road west of the project site, to a level that has been designed to directly address the large potential flood flow path down Rio Road from the river and obviate the need for a substantial portion of the work cited in the County Service Area 50 Final Lower Carmel River Stormwater Management and Flood Control Report (October 2014).

Litigation Background

The project application was filed in 2004, and the County issued the original Draft EIR on the project in 2008. In June 2016, the County issued a Revised Draft EIR, which included a new 130-unit alternative addressed at the same level of detail as the proposed 281-unit project. In December 2016, the County certified the EIR and approved a General Plan amendment, zoning ordinance, and Combined Development Permit for the 130-unit Rancho Cañada Village Subdivision project. CVA sued on the approval in January 2017.

Between the time of the 2008 DEIR and the 2016 Revised DEIR, the County had adopted its 2010 General Plan, which included updating the Carmel Valley Master Plan (CVMP). Four lawsuits, including one brought by CVA, challenged the adoption of the 2010 General Plan. In September 2012, the County settled with CVA, and as a result of the settlement, in 2013 the County amended the CVMP to reduce the "cap" for future residential units in the CVMP area from 266 to 190 units.

The Parties' Arguments

CVA alleged in the superior court that the Final EIR violated CEQA in two ways: first, that the Project Description was inaccurate; and second, that the inaccurate Project Description invalidated the alternatives analysis. CVA did not challenge any aspect of the environmental impact analysis or any mitigation measures. Rather, CVA argued that the Project Description chapter (Chapter 2) in the Revised Draft EIR violated CEQA because it described both the proposed 281-unit Project and the 130-unit Alternative in comparable levels of detail.

CVA argued that, while the Revised Draft EIR stated otherwise, the real project being considered was the 130-unit Alternative. According to CVA, the Project was "infeasible under the 2010 General Plan" because of the reduced cap on residential units under the 2013 CVMP resulting from the settlement agreement between CVA and the County over CVA's legal challenge to the 2010 General Plan.

The Trial Court's Decision

In finding the EIR to be legally inadequate, the superior court held that, although the 130-unit proposal was presented as an alternative in the EIR, this proposal was the true "project" under consideration. The court explained that, once the County had updated the General Plan and the CVMP, and had entered into a settlement agreement with CVA over its challenge to the 2010 General Plan, the County could no longer approve the 281-unit proposal without exceeding the cap set resulting from the settlement. The court held that, as a practical matter, only 166 units could be approved. Under such circumstances, the 130-unit proposal was the true project. As a result, the court found that the EIR's Project Description legally inadequate.

The court further reasoned that, because the range of alternatives within the EIR treated the 281-unit proposal as the "project," the alternatives were inadequate, as they sought to reduce impacts of a 281-unit proposal rather than those of the 130-unit proposal.

The superior court found no other problems with the 2016 Final EIR. None of the impact analysis was found deficient. No mitigation measures were found to be insufficient or problematic. CVA had never alleged any such inadequacies.

The superior court also ruled partially for and partially against the County on CVA's non-CEQA claims alleging that County had failed to implement two General Plan policies. The court agreed with CVA that the County had violated Government Code section 65860, subdivision (c), by failing to update the County's affordable housing ordinance within a "reasonable time" after amending the General Plan in 2010. The court acknowledged that the General Plan policy at issue (Policy LU-2.13) did not apply to the project itself because the amendment to CV-1.27 concurrently adopted by the County required a minimum of 20% affordable housing "notwithstanding any other General Plan policies."

The court disagreed with CVA that the County had violated 2010 General Plan Policy LU-1.19, which requires the County to establish a Development Evaluation System (DES) by which to assess the potential merits of new development projects proposed outside of certain priority development areas. CVA contended that this lack of action violated the policy in question. The superior court rejected this claim.

The Parties' Appeals and Cross-Appeal

Following the entry of judgment, both RCV and the County filed appeals of the superior court decision in the Court of Appeal, and CVA cross-appealed. RCV appealed the portions of the judgment holding that the County had violated CEQA and that a particular County finding was unsupported, but did not appeal the portion of the judgment holding that the County had violated Government Code section Government Code section 65860, subdivision (c). In reverse, the County did not appeal from the portions of the judgment holding that the County had violated CEQA or pertaining to the finding, but did appeal the portion of the judgment holding that the County violated Government Code section Government Code section 65860, subdivision (c).

CVA's cross-appeal sought to overturn the superior court's rejection of its claim based on General Plan Policy LU-1.19.

The Legal Effects of the Project Applicant's Pending CEQA Appeal

At the time of release of this Second Revised Draft EIR to the public, these appeals and cross-appeals are still pending in the Court of Appeal. Even so, the County may release this Second Revised Draft EIR because the County did not appeal from the superior court's CEQA rulings. The County has chosen instead to comply with those rulings. Although RCV has a legal right to continue to ask the Court of Appeal to overturn the superior court's CEQA rulings, the County made its own choice to comply with them. The County's appeal is limited the narrow independent issue of whether the County violated Government Code section 65860, subdivision (c), by having failed to update its affordable housing ordinance as of the end of 2016.

The law permits the County to proceed with the Second Revised Draft EIR while RCV appeals from the CEQA rulings requiring this revised document. The law also permits RCV to participate actively in the County's legal remand from the superior court proceeding while RCV's CEQA appeal remains pending. In published precedents, the appellate courts, out of a concern for fairness to project applicants, have allowed CEQA respondents and real parties in interest to take such divergent paths. Because persons seeking development entitlements make substantial investments in order to obtain them, such persons may pursue their appellate remedies when lower courts find such entitlements to be invalid, even where the agency that granted the entitlement opts not to appeal. Applicants also have a right to appeal on the merits of action in order to try to avoid having to pay attorneys' fees to petitioners who prevailed in the trial court. (See Save Our Residential Environment v. City of West Hollywood (1992) 9 Cal.App.4th 1745, 1750-1751; and Protect Niles v. City of Fremont (2018) 25 Cal.App.4th 1129, 1140.)

On the other hand, the County has the legal right to choose to comply with the superior court's CEQA rulings, with full understanding that, if RCV's appeal succeeds, the Court of Appeal might reinstate RCV's 2016 development entitlements. Should the Court of Appeal rule in RCV's favor before the completion of this revised environmental review and new action by the Board of Supervisors, the County could abandon this process in mid-stream. It is also possible that the County could choose to complete the process as a vehicle for modifying the 2016 entitlements. Regardless, at the time this Second Revised Draft EIR is being released in June 2020, it appears unlikely that the Court of Appeal would rule before the Second Final EIR is certified.

Rules Intended to Resolve CEQA Litigation Expeditiously

In order for readers to be able to understand the litigation background behind this Second Revised Draft EIR, some general background information about CEQA litigation will be helpful. Although CEQA is interpreted broadly to protect the environment, its litigation provisions are interpreted in light of legislative policies favoring the prompt resolution of CEQA litigation. (Board of Supervisors v. Superior Court (1994) 23 Cal.App.4th 830, 836.) Furthermore, where a project requiring an EIR is approved and no CEQA litigation is filed, the law gives rise to a presumption that the EIR is legally adequate. As the California Supreme Court has explained, Public Resources Code section 21167.2 (from CEQA) "mandates that the EIR be conclusively presumed valid unless a lawsuit has been timely brought to contest the validity of the EIR. This presumption acts to preclude reopening of the CEQA process even if the initial EIR is discovered to have been fundamentally inaccurate and

misleading in the description of a significant effect or the severity of its consequences. After certification, the interests of finality are favored over the policy of encouraging public comment." (*Laurel Heights Improvement Assn. v. Regents of University of California* (1993) 6 Cal.4th 1112, 1130.)

Furthermore, where a petitioner persuades a court that CEQA violations have occurred, judicial remedies must be fashioned so as to include only the mandates needed to comply with CEQA. Indeed, "if the court finds that it will not prejudice full compliance with CEQA to leave some project approvals in place, it must leave them unaffected." (*Center for Biological Diversity v. California Department of Fish and Wildlife* (2017) 17 Cal.App.5th 1245, 1255; see also Pub. Resources Code, § 21168.9.) Here, as noted earlier, the Monterey County Superior Court found that the EIR's Project Description and alternatives analysis were defective, but found no problems with the impact analyses and mitigation measures in the EIR. Nor did CVA ask the court to find any such additional violations.

CVA was the only member of the public that filed litigation against Monterey County to challenge the adequacy of the 2016 Final EIR. If CVA had not filed suit, the EIR would have been presumed legally adequate by operation of law. The fact that this EIR is being revised is solely a result of the litigation filed by CVA. The scope of the new information is a direct result of the substance of the superior court decision brought about by CVA's lawsuit.

The Doctrine of Res Judicata

Res Judicata Generally

Like other litigation, CEQA litigation is governed by legal doctrine known by the Latin term "res judicata" (also known as "claim preclusion"). This doctrine comes into play where an EIR has been revised in response to a court judgment and writ. The res judicata doctrine is intended to require plaintiffs in civil litigation to fully assert any legal claims they may have against a defendant in connection with the facts that gave rise to the litigation. The purpose of the doctrine is to avoid wasteful and unnecessary subsequent litigation over claims that could and should have been asserted the first time around. "The rule is based upon the sound public policy of limiting litigation by preventing a party who has had one fair trial on an issue from again drawing it into controversy." (*Bernhard v. Bank of America Nat. Trust & Savings Association* (1942) 19 Cal.2d 807, 811.) "Any issue necessarily decided in such litigation is conclusively determined as to the parties *or their privies* if it is involved in a subsequent lawsuit on a different cause of action." (*Id.* at p. 810 [italics added].)

The term "privies" as used in the quotation above refers to parties in "privity" with parties in litigation. In litigation involving the public interest, courts have held that nonprofit organizations that sue on the behalf of the public at large or for very generalized purposes may be in privity with the entire public at large. Thus, it happens that, where such an organization has filed litigation over a matter of public controversy, and that litigation is resolved, no other members of the public may subsequently, in later litigation, raise claims that were, or could have been, raised by the organization that filed the earlier litigation. (See, e.g., *Citizens for Open Access to Sand and Tide, Inc. v. Seadrift Association* (1998) 60 Cal.App.4th 1053, 1064-1075.)

Res Judicata in CEQA Litigation

There is a large body of CEQA case law dealing with the complex and technical doctrine of res judicata. For especially interested members of the public, the County notes that the leading cases, in

addition to those already cited or quoted, include the following: *Ione Valley Land, Air, & Water Defense Alliance, LLC v. County of Amador* (2019) 33 Cal.App.5th 165, 170-172; *Citizens for Open Government v. City of Lodi* (2012) 205 Cal.App.4th 296, 324-327; *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 481; and *Federation of Hillside and Canyon Associations v. City of Los Angeles* (2004) 126 Cal.App.4th 1180, 1204.)

These cases have dealt with a number of different factual scenarios in CEQA litigation, and have reached the following conclusions. Where a CEQA plaintiff or petitioner fails to assert a particular potential legal ground for attacking an EIR, such a potential ground is waived, not only by the petitioner but by any other party in "privity" to the petitioner (i.e., often the public at large). Where a petitioner unsuccessfully makes a legal argument in the superior court but fails to appeal on that argument, that argument is also waived. Where a court, after full argument and a full hearing on the merits, finds limited flaws in an EIR and directs the respondent agency to take certain actions to remedy those flaws, the petitioner's ability, and that of its privies, to challenge the new or revised environmental document on remand is limited. The petitioner and its privies may not raise claims that could have been raised in the earlier round of litigation.

One court summarized many of these principles as follows:

> [A]ny challenge to an EIR or other agency action arising from *facts in existence before the entry of judgment* must be asserted in the proceeding before the entry of judgment. The failure to assert such a challenge before the entry of judgment or the failure to successfully appeal the judgment on an issue arising from facts in existence before the entry of judgment *precludes a party from asserting the challenge* in connection with postjudgment proceedings concerning compliance with the writ.

(*Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 481 (*Ballona Wetlands*), italics added.)

Extent of New Information in Second Revised Draft EIR

In light of this complicated legal background, the vast majority of the information in this Second Revised Draft EIR was included in the first Revised Draft EIR. The only new information contained in this revised document is the information necessary to comply with the CEQA rulings in the superior court's judgment and, in some instances, to replace information that was patently out of date. Thus, the 130-unit proposal, which was formerly styled an alternative, is now described as the Proposed Project. All discussion of the former 281-unit proposal has been eliminated. A new alternatives analysis has replaced the original alternatives analysis. To assist readers in differentiating between old and new material, the County has used ~~strikethrough~~ formatting to depict text that has been eliminated and underlined formatting to depict new text. The exception is Chapter 5, *Alternatives,* which is entirely new and is therefore not depicted in underline format for improved readability. Figures throughout the document have also been updated to remove the prior 281-unit proposal.

Because the changes to the earlier document are limited, the County encourages commenters to focus their comments on the new information. Although this Second Revised Draft EIR is not being "recirculated" in the normal sense of the word, the public review period for the document is analogous to a review period for a Draft EIR that is recirculated with only limited changes. CEQA Guidelines section 15088.5, subdivision (f)(2), addresses such a situation:

> When the EIR is revised only in part and the lead agency is recirculating only the revised chapters or portions of the EIR, the lead agency may request that reviewers limit their comments to the revised chapters or portions of the recirculated EIR. The lead agency need only respond to (i) comments received during the initial circulation period that relate to chapters or portions of the document that were not revised and recirculated, and (ii) comments received during the recirculation period that relate to the chapters or portions of the earlier EIR that were revised and recirculated. The lead agency's request that reviewers limit the scope of their comments shall be included either within the text of the revised EIR or by an attachment to the revised EIR.

Consistent with this approach, the County encourages commenters to focus on the new information found herein.

Purpose of the EIR

Monterey County (County) has revised the 2016 ~~2008 Draft~~ Environmental Impact Report ~~(2008 Draft EIR) for recirculation~~ to provide the public, responsible agencies, and trustee agencies with new information about the potential environmental effects of the proposed 130-unit Rancho Cañada Village Project (Project or Proposed Project) ~~as well as a project-level analysis of a 130-Unit Stemple Property Avoidance Alternative (the 130-Unit Alternative)~~.

~~Following circulation of the 2008 Draft EIR, the California Environmental Quality Act (CEQA) process for the Project was delayed, primarily because of the down economy and housing market in 2008 and the Project applicant's decision to develop a new project alternative for consideration at an equal level as the Proposed Project. The 2008 Draft EIR only presented project-level analysis for the Proposed Project; this recirculated Draft EIR analyzes the 130-Unit Alternative at the same project-level as the Proposed Project. After certification of the Final EIR, the County could approve either the Proposed Project or the 130-Unit Alternative.~~

~~As described in the State CEQA Guidelines, Section 15088.5, a lead agency is required to recirculate a Draft EIR when significant new information is added after public notice is given of the availability of the Draft EIR. New information added to the 2008 Draft EIR includes the analysis of a feasible project alternative at a project-level of detail, updates in the environmental setting taking into account current conditions (e.g., updated traffic analysis), and changes in the analysis of certain environmental impacts (e.g., construction-related air quality impacts). This recirculated Draft EIR has also been updated in consideration of comments on the 2008 Draft EIR and is, therefore, in compliance with CEQA (1970, as amended) and the State CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.).~~

As described in the State CEQA Guidelines, Section 15121(a), an EIR is a public information document that assesses potential environmental effects of a proposed project, as well as identifies mitigation measures and alternatives to the project that could reduce or avoid adverse environmental impacts (14 CCR 15121[a]). CEQA requires that state and local government agencies consider the environmental consequences of projects over which they have discretionary authority. The proposed Rancho Cañada Village development constitutes a project under CEQA. The EIR is an informational document used in the planning and decision-making process. It is not the purpose of an EIR to recommend either approval or denial of a project.

The procedures required by CEQA "…are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which would avoid or substantially lessen such significant effects." (13 California Public Resources Code [PRC] 21002). As a general rule, CEQA policy states: "Public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects." However, "…in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof" (13 PRC 21002). Stated differently, under CEQA, a lead agency must make certain determinations before it can approve or carry out a project if the EIR reveals that the project would result in one or more significant environmental impacts.

The lead agency must certify the final EIR. According to the State CEQA Guidelines, "certification" consists of three separate steps. The agency's decision-making body must first conclude that the document "…has been completed in compliance with CEQA;" second, that the body has reviewed and considered the information within the EIR prior to approving the project; and third, that "…the final EIR reflects the lead agency's independent judgment and analysis" (14 CCR 15090[a]; 13 PRC 21082.1[c]).

Before approving a project for which a certified final EIR has identified significant environmental effects, the lead agency must make one or more of the following specific written findings for each of the identified significant impacts (14 CCR 15091[a]).

1. Changes or alternations have been required in, or incorporated into, the project, which avoid or substantially lessen the significant environmental effect as identified in the EIR.
2. Such changes or alternations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
3. Specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or project alternatives identified in the final EIR.

If significant environmental effects remain following the adoption of all feasible mitigation measures or alternatives, the lead agency must adopt a "statement of overriding considerations" before it can proceed with the project. The statement of overriding consideration must be supported by substantial evidence in the record (14 CCR 15092-3).

These overriding considerations include the economic, legal, social, technological, or other benefits of the proposed project. The lead agency must balance these potential benefits against the project's unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the lead agency may consider the adverse environmental impacts to be acceptable (14 CCR 15093[a]). These benefits should be set forth in the statement of overriding considerations, and may be based on the final EIR and/or other information in the record of proceedings (14 CCR 15093[b]).

Scope and Organization of the EIR

This Second Revised ~~Recirculated~~ Draft EIR explains the Proposed Project ~~and the 130-Unit Alternative~~, describes the environmental setting, analyzes impacts of the Project ~~and the 130-Unit Alternative~~, identifies measures to mitigate impacts found to be significant, evaluates cumulative impacts, and analyzes other project alternatives.

In accordance with State CEQA Guidelines (14 CCR 15082[a], 15103, 15375), the County circulated a notice of preparation (NOP) of an EIR for the Proposed Project on August 30, 2006 (see **Appendix A**). The NOP, in which the County was identified as lead agency for the Proposed Project, was circulated to the public; to local, state, and federal agencies; and to other interested parties. The purpose of the NOP was to inform responsible agencies and the public that the Proposed Project could have significant effects on the environment and to solicit their comments. Concerns raised in response to the NOP were considered during preparation of the 2008 Draft EIR. ~~This Recirculated Draft EIR considers the 130-Unit Alternative at the same level of analysis as the Proposed Project, both of which are described in Chapter 2, *Project Description*.~~

As explained earlier, this Second Revised Draft EIR is being prepared pursuant to a court order, and is not governed by all of the rules governing the preparation of an EIR in the first instance. In finding deficiencies with the County's EIR for the Rancho Cañada Village project, the superior court did not order the County to prepare a new NOP and indeed required only limited revisions to the original EIR. This focused remedy was consistent with the remedy provision of CEQA, Public Resources Code section 21168.9, which directs courts to order "only those mandates which are necessary to achieve compliance" with CEQA. The issuance of this Second Revised Draft EIR is somewhat analogous to recirculation of a Draft EIR after it has been circulated once already. In such a situation, no new NOP is required. (See Cal. Code Regs., tit. 14, Section 15088.5, subd. (d) [requiring new notice of availability of draft EIR but not a new notice of preparation; Pub. Resources Code, Section 21092.1 [same].)

CEQA (Section 15083) identifies early public consultation (e.g. scoping) as an option to hear concerns to address in the EIR. As this Second Revised Draft EIR is to address matters necessary to comply with the CEQA rulings in the superior court's judgment, the County determined that a Scoping meeting was not necessary.

This Second Revised Draft ~~recirculated Draft~~ EIR evaluates the potential impacts of the Proposed Project in relation to the following resource areas.

- Geology and soils.
- Hydrology and water quality.
- Biological resources.
- Aesthetics.
- Land use.
- Hazards and hazardous substances.
- Transportation and circulation.
- Air quality.
- Noise.

- Public services, utilities, and recreation.
- Cultural resources.
- Population and housing.
- Greenhouse gas emissions.

This Second Revised Draft ~~recirculated Draft~~ EIR also analyzes the following aspects of the Project.

- Significant unavoidable impacts.
- Significant irreversible changes in the environment.
- Growth-inducement.
- Cumulative impacts.
- Alternatives to the Proposed Project.

Impact Terminology

This Second Revised Draft ~~Recirculated Draft~~ EIR uses the following terminology to describe environmental effects of the Proposed Project.

- **Significance Criteria:** A set of criteria used by the lead agency to determine at what level or *threshold* an impact would be considered significant. Significance criteria used in this Second Revised Draft EIR include some that are set forth in the State CEQA Guidelines (or can be discerned from the State CEQA Guidelines); criteria based on factual or scientific information; criteria based on regulatory standards of local, state, and federal agencies; and criteria based on goals and policies identified in the *2010 Monterey County General Plan*, the *2013 Carmel Valley Master Plan*.
- **Beneficial Impact:** A project impact is considered beneficial if it would result in the improvement of an existing physical condition in the environment (no mitigation required).
- **No Impact:** A no impact response is provided if, based on the current environmental setting, the stated impact does not apply in the context of the Proposed Project.
- **Less-Than-Significant Impact:** A project impact is considered less than significant when it does not reach the standard of significance and would therefore cause no substantial change in the environmental (no mitigation required).
- **Potentially Significant Impact:** A potentially significant impact is an environmental effect that may cause a substantial adverse change in the environment; however, additional information is needed regarding the extent of the impact to make the determination of significance. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.
- **Significant Impact:** A project impact is considered significant if it results in a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project effects in the context of specified significance criteria. Mitigation measures and/or project alternatives are identified to reduce these effects to the environment.

- **Significant Unavoidable Impact:** A project impact is considered significant and unavoidable if it would result in a substantial adverse change in the environment that cannot be avoided or mitigated to a less-than-significant level if the project is implemented.
- **Cumulative Significant Impact:** A cumulative impact can result when a change in the environment results from the incremental impact of a project when added to other related past, present, or reasonably foreseeable future projects. Significant cumulative impacts may result from individually minor but collectively significant projects.

This Second Revised Draft ~~The~~ EIR also identifies particular mitigation measures that are intended to lessen project impacts. The State CEQA Guidelines (14 CCR 15370) define mitigation as:

a. avoiding the impact altogether by not taking a certain action or parts of an action;
b. minimizing impacts by limiting the degree or magnitude of the action and its implementation;
c. rectifying the impact by repairing, rehabilitating, or restoring the impacted environment;
d. reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
e. compensating for the impact by replacing or providing substitute resources or environments.

Approval Process for the Proposed Project

This document will be ~~re~~circulated to local, state, and federal agencies and to interested organizations and individuals who may wish to review and comment on the report. Its publication marks the beginning of a 45-day public review period. Written comments or questions concerning this Second Revised ~~Recirculated~~ Draft EIR should be directed to the name and address listed below.

Submittal of written comments via email (Microsoft Word format) would be greatly appreciated.

Carl P. Holm, AICP, RMA Director ~~Luke Connolly~~
~~Management Specialist~~
Monterey County Resource Management Agency
Planning Department
1441 Schilling Place ~~168 West Alisal Street, 2nd Floor~~ Salinas, CA 93901~~-2487~~
(831) 755-5025 ~~5173~~
~~(831) 757-9516 (fax)~~
email: HolmCP@co.monterey.ca.us ~~connollylt@co.monterey.ca.us~~

Due to the COVID-19 related Shelter In Place Order in place at the time this Second Revised Draft EIR was prepared, all ~~All~~ documents mentioned herein can be reviewed on-line at the following address:

https://www.co.monterey.ca.us/government/departments-i-z/resource-management-agency-rma-/planning/current-major-projects/rancho-canada-village-specific-plan

Due to the Shelter In Place Orders of the Monterey County Health Officer and to maintain physical distancing in accordance with such orders, as long as such orders are in effect, public access to the hard copy of the Second Revised Draft EIR will be by appointment ~~or related to this project can be~~

~~reviewed any Monterey County business day between the hours of 8:00 A.M. and 4:00 P.M. Monday through Friday~~ at the Monterey County Resource Management Agency ~~Salinas Permit Center,~~ located at the following address:

1441 Schilling Place ~~168 West Alisal Street at Capitol, 2nd Floor~~
Salinas, CA 93901~~-2487~~

If you would like to inspect documents physically, please contact Carl Holm at (831) 755-5103 or HolmCP@co.monterey.ca.us to arrange an appointment.

If the Shelter in Place Orders are terminated during the public comment period, then all documents will then be available to the public at the above address any Monterey County business day between the hours of 8:00 A.M. and 4:00 P.M. Monday through Friday.

Written comments received in response to the Second Revised ~~Recirculated~~ Draft EIR will be addressed in a Response to Comments ~~addendum~~ document, which, together with the Second Revised ~~Recirculated~~ Draft EIR, will constitute the Second Final EIR. After review of the project and the Second Final EIR, County staff will recommend to the Planning Commission and Monterey County Board of Supervisors whether to approve or deny the Project ~~or the 130-unit alternative~~. This governing body will then review the Project, the Second Final EIR, staff recommendations, and public testimony and decide whether to certify the Second Final EIR and whether to approve or deny the Project.

If the Board of Supervisors or other agency approves the Proposed Project ~~or 130-Unit Alternative~~ in spite of significant impacts identified in the Second Final EIR that cannot be mitigated, the Board of Supervisors or other agency must state in writing the reasons for its actions. A statement of overriding considerations must be included in the record of the project approval and mentioned in the notice of determination (14 CCR 15093[c]).

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Chapter 2
Project Description

Project Overview

The Rancho Cañada Village Project (Proposed Project) would develop an approximately 76 ~~81-plus~~-acre area within the West Course at Rancho Cañada Golf Club in Carmel Valley, California, an unincorporated area of Monterey County (County). The project site would be comprised of a mix of residential and recreational uses, including an approximately 25-acre, 130 ~~281~~-unit residential neighborhood; approximately 40 ~~and 39~~ acres of permanent open space; and approximately 11 acres of common areas within the 76 ~~81-plus~~ acres. The Project ~~130-Unit Alternative~~ is proposed as a planned unit development (PUD)[1] ~~on approximately 82 acres. This alternative proposes similar uses as the Proposed Project but with a lower number of overall units and lower density~~.

Project Background

The County of Monterey (County) has prepared this Second Revised Draft Environmental Impact Report (Second Revised Draft EIR) in response to a July 2018 judgment and writ of mandate issued by the Monterey Superior Court in litigation entitled, *Carmel Valley Association, Inc., v. County of Monterey* (Case No. 17CV000131). That litigation was initiated in January 2017 when the Carmel Valley Association (CVA) filed a lawsuit requesting the court to invalidate the County Board of Supervisors' December 2016 certification of an EIR and approval of entitlements for a 130-unit residential proposal known as the Rancho Cañada Village Subdivision project.

The previously certified EIR at issue in the CVA lawsuit evaluated the development of 281 residential units as the proposed project. The certified EIR also evaluated a 130-unit alternative at the same level of detail as the proposed project. The County certified the EIR and approved the 130-unit alternative in December 2016. In the lawsuit filed by CVA, the superior court held that, although the 130-unit proposal was presented as an alternative in the EIR, this proposal was the true "project" under consideration and hence the EIR's project description was legally inadequate. The court further reasoned that, because the range of alternatives within the EIR treated the 281-unit proposal as the "project," the alternatives were inadequate, as they sought to reduce impacts of a 281-unit proposal rather than those of the 130-unit proposal. The Monterey County Superior Court found no problems with the impact analyses and mitigation measures in the EIR.

[1] ~~A PUD is a common interest development (other than a community apartment project, a condominium project, or a stock cooperative) having either or both of the following features: (1) any contiguous or noncontiguous lots, parcels, or areas in which owners of separately owned lots, parcels, or areas are owners in common possessing the appurtenant rights to the beneficial use and enjoyment of the commonly owned property, and/or (2) a power exists in the association to enforce an obligation of an owner of a separately owned lot, parcel, or area with respect to the beneficial use and enjoyment by means of an assessment which may become a lien upon the separately owned lot, parcel, or area in accordance with Government Code Section 1467.~~

This Second Revised Draft EIR represents a very limited revision to the Revised Draft EIR to render the latter document compliant with the superior court's ruling. What had been called the 130-unit Alternative is now treated as the "Proposed Project." It has only been modified to reflect the reality of the sale of one legal lot (Lot 130). The County has also formulated a new range of alternatives to the 130-unit proposal. With very limited exceptions, the impact analyses and mitigation measures are no different from what they were previously.

Refer to Chapter 1, *Introduction*, for additional background on litigation, the legal effects of the Project Applicant's pending CEQA appeal, and the extent of new information in the Second Revised Draft EIR.

~~The Proposed Project was originally proposed by the Project Applicant in 2004, and the Project application was deemed complete in August 2005, prior to circulation of the January 2008 Draft Environmental Impact Report (EIR). At the time the application was deemed complete, the County General Plan in effect was the 1982 Monterey County General Plan, as amended, and the 1986 Carmel Valley Master Plan (CVMP), as amended. The County subsequently adopted a new General Plan in 2010 and a new CVMP (the CVMP is a component of the General Plan) in 2013. Land Use Policy LU-9.3 of the 2010 General Plan states that applications for standard subdivision maps that were deemed complete on or before October 16, 2007 shall be governed by the plans, policies, ordinances and standards in effect at the time the application was deemed complete. However, even though the Project's application was deemed complete before the new General Plan/ CVMP were adopted, the County has determined that the project is subject to the current 2010 General Plan and 2013 CVMP since its approval requires an amendment to the General Plan/CVMP At the time the Proposed Project was deemed complete its General Plan land use and zoning designations were Public/Quasi-Public (P/Q-P), a land use designation that does not allow for residential use and subdivision, which is what the Project and 130-Unit Alternative propose. Even when considered under the 2010 General Plan/2013 CVMP, both the Proposed Project and 130-Unit Alternative would still require amendments due to policy conflicts with the current CVMP.~~

~~Since the project was deemed complete prior to the adoption of the 2010 General Plan and 2013 CVMP, this Recirculated Draft EIR includes discussion of the prior land use plans and policies for informational use only but they are not used for impact analysis. This Recirculated Draft EIR uses the current land use plans and evaluates the consistency of the Proposed Project and the 130-Unit Alternative with the 2010 General Plan and 2013 CVMP.~~

Project Location

The Proposed Project is ~~and the 130-Unit Alternative would be~~ located at the mouth of Carmel Valley along Carmel Valley Road, east of the intersection of Carmel Valley Road and State Route 1 (SR 1) (**Figure 2-1** and **Figure 2-2**) in unincorporated Carmel Valley, Monterey County, California. Carmel Valley is a major northwest–southeast trending valley bounded by ridges of the Santa Lucia Mountains in the California Coast Ranges, located east of Carmel-by-the-Sea, and south of the city of Monterey, and north and west of the Carmel Valley Village.

~~The project site is comprised of five parcels and portions of two additional parcels for the residential development and a portion of three other parcels for a roadway extension. The five full parcels are currently part of the Rancho Cañada Village West Golf Course: Assessor Parcel Numbers (APNs) 015-162-016-000, 015-162-017-000, 015-162-025-000, 015-162-026-000, and 015-162-039-000.~~

~~The project also includes a portion of the Hatton parcel (APN 015-162-040-000), north of and immediately adjacent to the west course of the Rancho Cañada Golf Club, which is located at 4860 Carmel Valley Drive in Carmel. The project site also includes a linear portion of the Stemple parcel (APN 015-162-016-000) that extends from Carmel Valley Road south and west to the northwest corner of the original development area. The only structures on the site are a restroom facility, which would be removed under the Proposed Project, and a cart bridge associated with the golf course that would remain in place with Project implementation. The Rio Road West extension includes portions of the three parcels (APN 015-021-006-000, 015-021-007-000, and 015-541091-000).~~

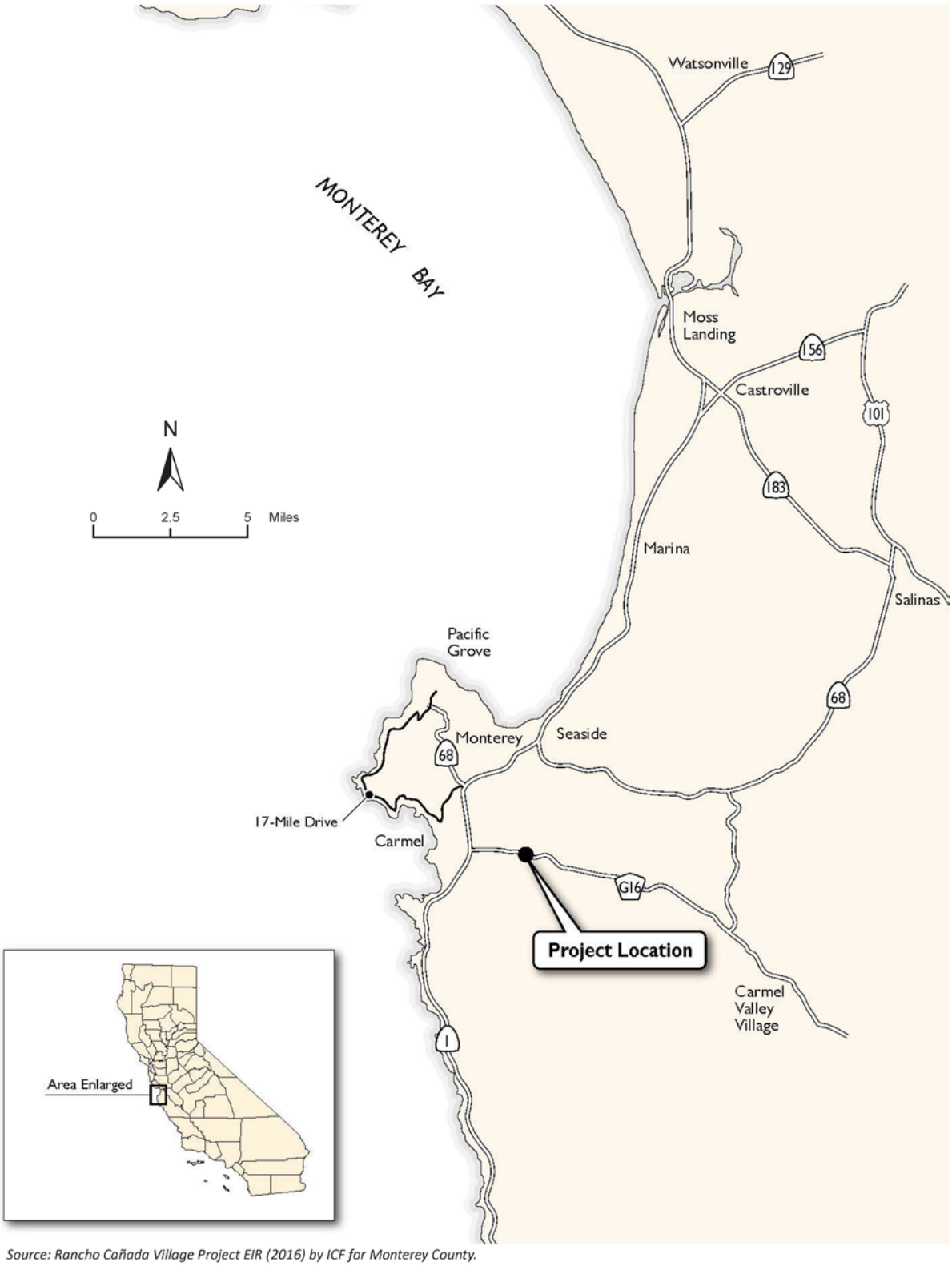
The project ~~130-Unit Alternative~~ site includes the entirety of ~~the Proposed Project's~~ five parcels that are part of the Rancho Cañada Village West Golf Course: Assessor Parcel Numbers (APNs) 015-162-016-000, 015-162-017-000, 015-162-025-000, 015-162-026-000, and 015-162-039-000. The site also includes~~,~~ a portion of the Hatton parcel (APN 015-162-040-000), and portions of ~~the~~ three parcels along the Rio Road West extension west of the proposed residential area (APN 015-021-006-000, 015-021-007-000, and 015-541-091-000). ~~In addition, the 130-Unit Alternative includes Lot 130, in the northeastern area of the golf course. Lot 130 is bordered to the north by Carmel Valley Road and to the east by residential development. Immediately south of Lot 130 is the golf course, and to the west is the Rancho Cañada Golf Club. Lot 130 is comprised of two parcels: APN 015-162-046-000 and a portion of APN 015-162-047-000. There are two maintenance buildings and a material separation structure on Lot 130.~~

Proposed Project Objectives and Goals

The underlying purpose of the Project is to provide for the adaptive reuse and redevelopment of the former Rancho Cañada Golf Course site. This purpose gives rise to the following Project objectives:

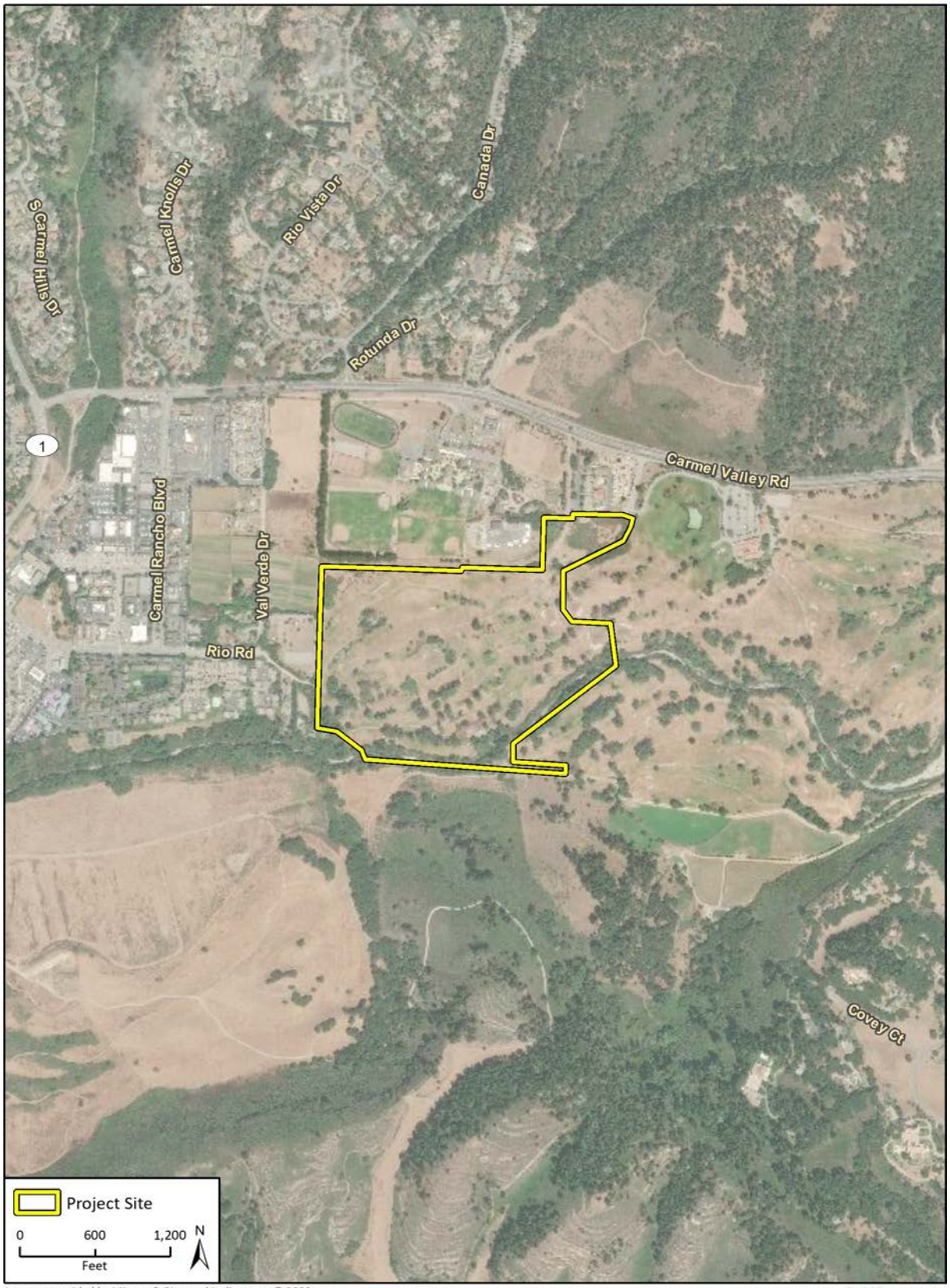
- Implement smart growth principles through infill development close to shopping facilities, schools, parks, churches, and major transit corridors.
- Integrate open spaces within infill development with surrounding native habitats.
- Assist the County in addressing the statewide housing and affordability crisis.
- Provide employment opportunities for the local workforce.
- Create opportunities allowing for County implementation of regional drainage control solutions.
- Facilitate the construction of a needed traffic light on Carmel Valley road under an accelerated time frame.

Figure 2-1 Project Vicinity



Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Figure 2-2 Project Location



Economic Goals

- Create a mixed-income community with a range of housing opportunities across the economic spectrum on an infill site near existing shopping/retail centers, schools, open space and major transportation corridors.
- Ensure that new development pays for 100% of infrastructure and services needed to support the new neighborhood.
- Establish mechanisms for maintaining and operating private infrastructure.

Environmental Goals

- Create a compact, efficient community that will minimize impacts on the environment.
- Integrate the surrounding native habitats into the open spaces within the community.
- Create buffers around the community that help transition from a native habitat/ecosystem to an urban habitat/ecosystem.
- Encourage multi-modal transportation opportunities, especially bicycle, pedestrian, and transit by creating small blocks, interconnected streets, sidewalks, and bicycle paths and by implementing traffic-calming measures appropriate for a residential neighborhood.

Social Goals

- Create a diverse, mixed-income community with a full spectrum of lifecycle housing opportunities.

Proposed Project

The Project proposes a 281-unit residential neighborhood and 39 acres of permanent open space and common areas within the 81-plus acre project site. The Proposed Project application consists of a Combined Development Permit[2] for the creation of a new, 281-unit, mixed-use residential neighborhood on approximately 38 acres.[3] The elements of the design proposal include a mix of smart growth and traditional neighborhood principles that involve the incorporation of established shopping facilities, schools, open space, and churches. Additionally, the development proposal attempts to meet the need for affordable housing in Carmel Valley. Nearly fifty percent of the homes (140 units) are proposed as Affordable or Workforce units. The Proposed Project would also include an extension of Rio Road through a network of local neighborhood streets to allow safe ingress and egress for residents and the public through Rio Road west. Open space under the Proposed Project would consist of two neighborhood parks, a portion of the existing golf course,[4] common areas, and a habitat preserve located along the north side of Carmel River. **Figure 2-3** shows the Proposed Project site layout.

[2] The Proposed Project was originally proposed to be implemented though a Specific Plan; it is now proposed to be implemented as a Combined Development Permit instead. This does not change the physical aspects of the Proposed Project.

[3] The 38 acres is the residential areas excluding park areas, common areas, the habitat reserve, and golf course.

[4] Approximately 4.43 acres of the golf course, south of the Carmel River, would be open space under the Proposed Project. This portion of the golf course would be reconfigured to accommodate the 18-hole course. However, the reconfiguration is not part of the Proposed Project.

Housing

Houses in Rancho Cañada Village would be located on the northern portion of the site, separated from the Carmel River by an open space buffer. Of the proposed 281 housing units, 140 would be Affordable or Workforce units. Although the County has not yet adopted a Workforce Housing program, these units would be made available by the Project in order to support a range of housing opportunities across the economic spectrum. Affordable and Workforce units include 56 (20% of the total of 281 units) dedicated to inclusionary housing (6% of houses for very low-income, 6% of houses for low-income, and 8% of houses for moderate-income households), and 84 units (30% of the total) dedicated to Workforce I and II housing. Workforce I units would be affordable for households earning between 120 and 140% of the county median income (CMI), while Workforce II units would be affordable to those earning between 140% and 180% off the CMI. Affordable and Workforce units would be marketed to those working within the Carmel Unified School District (CUSD) boundaries. Fifty percent of units would be market rate. **Table 2-1** contains the proposed housing mix for Rancho Cañada Village.

Table 2-1. Rancho Cañada Village Proposed Project Housing Mix

Unit Type	Number of Units	Percent of Total Units	Income Level
Condominiums	17	6%	Very Low
Condominiums	18	6%	Low
Townhouses	21	8%	Moderate
Townhouses	43	15%	Workforce I
Small Lot Single Family	41	15%	Workforce II
Subtotal	**140**	**50%**	
Small Lot Single Family	26	9%	Market Rate
Other Single Family	115	41%	Market Rate
Subtotal	**141**	**50%**	
Total	**281**	**100%**	

Note:
Percentages are approximate due to rounding.

The exterior appearance of the inclusionary units would be compatible with the market rate units. Compatibility includes the architectural style and detailing, but not necessarily the quality of materials or size of structures. The inclusionary units would be similar in number of bedrooms as the market rate units (up to four bedrooms). To the extent feasible, the inclusionary units would be scattered throughout the development that also includes market rate units. However, inclusionary units may be clustered if it is found that such an arrangement better meets the objectives of the Project. The inclusionary units would be developed either prior to or concurrent with the development of the market rate units.

Open Space, Recreation, and Common Areas

Approximately 50% (39 acres) of the project site would be preserved in permanent open space with passive and active areas for both residents and the general public. The open space would consist of

31.3 acres of habitat preserve; 0.41 acre of park (on Parcel B, proposed within the mixed-use neighborhood); common areas totaling 0.47 acre; and a 2.09-acre park (on Parcel F, adjacent to the habitat preserve). The remaining 4.43 acres on Parcel H would continue to be part of the golf course (**Figure 2-3**).

The designated 31.3-acre habitat preserve area is at the southerly portion of the site abutting the Big Sur Land Trust's Palo Corona Ranch Regional Park property managed by the Monterey Peninsula Regional Park District (**Figure 2-4**).

The habitat preserve would continue to maintain riparian and steelhead habitat along approximately 3,000 linear feet of the Carmel River bank within the project area. To protect habitat areas, a network of public trails would be constructed to channel users through the habitat preserve. One of the existing golf bridges would be dedicated for trail access across the Carmel River connecting to Rio Road west. Trail access would also be provided to the Carmel Valley Middle School and Carmel Valley Road.

Rancho Cañada Village Restoration and Mitigation Plan

Development of the proposed 31.3-acre habitat preserve would involve removing 24.6 acres of existing golf course and developed habitat and restoring this acreage to native habitats. The habitat preserve area would also include 0.8-acre of stormwater infiltration basins and preserve 5.9 acres of existing riparian woodland adjacent to the Carmel River to improve habitat quality and function (Rancho Cañada Community Partners, LLC 2006).

The 2006 *Rancho Cañada Village Restoration and Mitigation Plan* (**Appendix C**) (2006 Restoration Plan) is designed to restore the riparian habitat and corridor to an ecologically functioning condition. The 2006 Restoration Plan describes the methods to implement the restoration including soil preparation, propagation, plant installation, initial irrigation, monitoring, weed management, maintenance of erosion control, irrigation maintenance, and wetland maintenance. Ten-year success criteria and 5-year interim performance criteria are identified to determine restoration success. Contingency planning and action is required by the 2006 Restoration Plan if the success criteria are not met. **Table 2-2** summarizes the vegetation communities to be restored in the habitat preserve.

Table 2-2. Vegetation Communities to be Restored in the Habitat Preserve

Vegetation Community	Restoration Area (acres)
Native Grasslands	8.3
Riparian Scrub	6.7
Seasonal Wetland	1.2
Riparian Woodland	8.4
Total	**24.6**

The habitat preserve, drainage areas, and surrounding disturbed areas would be planted with a diverse assemblage of native species found within the Carmel River riparian corridor. The restored habitat would consist of a series of riparian meanders along the drainage gradient, fresh water detention basins, and riverbank. The basins and flow channels would be stabilized with engineered rock outfalls with emergent vegetation, willows, and other riparian plants native to the site. Slopes and banks would be stabilized with erosion control blankets, slope breakers, and straw wattles.

The restoration sites would be planted with California perennial grasses, riparian tree species, and riparian understory plants and shrubs. As a result of the planting and management of the site, overall the amount and quality of the native riparian habitat would be increased and enhanced. Oaks would be planted on dryer sites, and sycamores and willows would be planted near the channel. **Figure 2-5** shows the location of the proposed drainage areas and basins.

Neighborhood Parks and Common Areas

The open space system would also include a pair of active neighborhood parks, one at the northern edge of the habitat preserve, and one in the center of the neighborhood. The park on Parcel F would be 2.09 acres and would be characterized by lawn area for informal active recreation. The 0.41-acre neighborhood center park, on Parcel B, would be more formal in character and would include a tot lot. The open space system also includes three common areas (total of 0.47 acre) within the residential development. The landscaping in the common areas would include trees and native grasses.

Golf Course

The remaining golf holes at Rancho Cañada Village West Golf Course that are located south of Carmel River would be rerouted to create one 18-hole championship golf course and a 6-hole practice course (not part of the Proposed Project). Reconfiguration of the golf holes on Parcel H is not part of the Proposed Project. However, the golf course is within the development boundary and, therefore, it is included as the total open space in the project area. The golf course, shown as Parcel H on **Figure 2-4**, is approximately 4.43 acres.

Circulation

The circulation framework for the Proposed Project includes a small-scale internal street network that feeds into the primary street network of the area. Under the Project, Rio Road west would be developed as a public road for traffic access to the residential area with a network of connecting local neighborhood streets with the goal of allowing safe ingress and egress for the public (**Figure 2-3**). Primary access to the Rancho Cañada Village neighborhood would be via an extension of Rio Road east, the street that currently serves as the entrance to the Community Church of the Monterey Peninsula and the Rancho Cañada Golf Club, the extension of which would lead directly into the new residential neighborhood and wind through to the small-scale extension of Rio Road west on the western end of the neighborhood (**Figure 2-3** and **Figure 2-4**). The portion of Rio Road west of the proposed development is currently in private ownership and the proposed improvements to Rio Road would require permission of the property owners or the purchase of the needed right-of-way.

A small-scale grid pattern of different street types that conform to County standards would serve the community. All streets would have sidewalks on both sides, and some would have designated bikeways. All streets would have a 20-foot-wide *clear zone* designated to accommodate movement of emergency vehicles that would be located in the roadway section. Most neighborhood streets would be designed for 25 miles per hour. All streets would contain irrigated landscape shoulders (verges) with street trees. The verges would be maintained by the community services district (CSD) and/or the homeowners association (HOA) that would be formed for the development. All of the roads within the new development would be privately owned and maintained by the CSD or HOA.

~~The network of sidewalks and paths would connect the residential uses to the neighborhood parks and to amenities outside of the neighborhood such as the Crossroads Shopping Center, Carmel Valley Middle School, and the habitat preserve. The pedestrian plan would connect into the Carmel Valley trail system's planned regional trail system and would provide a link along the Carmel River, including a crossing that would provide access into the Monterey Peninsula Regional Park District's Palo Corona Ranch Regional Park.~~

~~The Proposed Project includes a Class 1 bicycle trail that would connect to the Class 2 bicycle trail along Carmel Valley Road and to the planned regional Carmel Valley trail. The bicycle trail would connect to the proposed extension of Rio Road west, providing access for neighborhood residents to the shopping and neighborhood amenities available to the west of the neighborhood.~~

~~The community would be served by Monterey-Salinas Transit. All residences would be located within walking distance of the existing Carmel Valley Road/Rancho Cañada transit stop at the entrance to Rancho Cañada West Golf Club on Carmel Valley Road. Bus line 24 stops at this transit station.~~

~~Carmel Valley Road would have a new traffic signal at the entrance to the Rancho Cañada Village neighborhood, between the signals currently existing at the entrance to the Carmel Valley Middle School to the west and the entrance to the Hacienda Carmel residential development to the east.~~

~~Utilities~~

~~The Proposed Project has existing water rights and would use on average approximately 115 acre-feet per year (AFY) of water, which is approximately 90 AFY savings from the current golf course irrigation for one golf course that would be eliminated with the project (See Chapter 3.10, *Public Services, Utilities, and Recreation*). Water would be supplied to the homes either through the California-American (Cal-Am) Water Company distribution system by assigning a portion of Rancho Cañada's water rights to Cal-Am for delivery back to the Rancho Cañada Village homes or through the creation of a newly formed, public or private CSD or water company to use the existing Rancho Cañada wells to pump, treat, and purvey the amount of water necessary for the project.~~

~~AT&T would provide telecommunication and internet services, while cable television services would be provided by Comcast Cable. It is anticipated that a fiber-optic telephone distribution system would be installed in a common joint trench adjacent to roadways along with gas, electric, and cable television facilities. In addition, expansion and/or upgrade of existing transmission facilities outside of Rancho Cañada Village may be required and would be implemented by AT&T.~~

~~The Pacific Gas and Electric Company (PG&E) would provide gas and electrical service to the project site. Construction of the Project would include installation of gas mains and/or electrical distribution systems to serve the site. All new facilities would be constructed underground. Existing PG&E gas mains would be extended and new distribution mains would be installed in the joint trench. The need for new transmission facilities would be determined by PG&E.~~

~~The Carmel Area Wastewater District (CAWD) provides wastewater collection, treatment, and disposal services to the project area. The project would connect to an existing 12-inch sewer trunk line that runs westerly, parallel, and about 60 feet north of the northern boundary line of the project site.~~

The solid waste and recycling program in Rancho Cañada Village would be managed by the Rancho Cañada Village CSD or HOA in conjunction with the County. Rancho Cañada Village is within the Monterey Regional Waste Management District and is governed by the provisions of Chapter 10.41 of the County Code of Ordinances. All residences and businesses are required to store trash in approved containers and to have it removed weekly. Solid waste pick-up services would be provided by Waste Management, Inc. and transferred to the Monterey Peninsula Landfill and Recycling Facility. The proposed utility plan is shown in **Figure 2-6.**

Drainage

The project site is located within the lower reaches of the Carmel River Basin and is subject to flooding during severe storms. Approximately 20.1 acres of the project site is within the Federal Emergency Management Agency's (FEMA's) designated 100-year floodplain of the Carmel River.

The Project would place fill in the Rancho Cañada Village project site so that no lot or street would be in FEMA's Special Flood Hazard Area. The Project would remove approximately 120,000 cubic yards of fill from the current golf course to create a passive river basin park area. This onsite excavated fill, plus an additional 100,000 cubic yards of fill from offsite, would provide approximately 220,000 cubic yards of fill material for the building pad. All structures would be placed on this building pad above the base flood elevation. A conditional letter of map revision has been approved by the U.S. Army Corps of Engineers, effectively moving the floodplain and floodway boundaries so that none of the development area would be located within the floodway or floodplain. The preliminary grading and drainage plan is shown in **Figure 2-5**.

Within the existing golf course, there are several minor drainage structures and storm drain lines that would be removed in the construction process. New storm drainage facilities, including conventional drainage facilities and stormwater infiltration areas, would be constructed to serve the Proposed Project. The conventional storm drainage facilities would intercept stormwater flows at the project site boundaries, collect the water within the development, and convey it to a controlled point of discharge. The conventional facilities would include earth swales, lined ditches, concrete curb and gutter, manholes, catch basins, and underground storm drain pipes.

The Monterey County Water Resources Agency (MCWRA) has an unwritten policy that requires that the post project, 100-year flow rate not exceed the preproject, 10-year flow rate. However, this policy is not practical because the Project is so near the downstream end of the watershed. Stormwater infiltration areas would collect and store stormwater run-off for percolation and release into new outfall pipes in severe storms and in accordance with the MCWRA and state agency policy.

Best management practices (BMPs) used for stormwater quality treatment are classified as structural and non-structural. Structural measures may include biofilters, wetlands, infiltration basins, or mechanical structures, and are designed to remove pollutants from the stormwater. Non-structural measures, such as street sweeping, public education or hazardous substance/recycling centers, are preventative measures intended to control the source of pollutants. Rancho Cañada Village would include both types of BMPs.

The primary structural BMP would be the stormwater infiltration areas. These areas should be designed to take advantage of the high percolation rates of the native soils. This would promote infiltration and allow for the removal of pollutants as stormwater percolates down through the soil. Because these areas drain the entire site, they would be effective in improving the stormwater

quality at this portion of Carmel River. The proposed storm drainage facilities are shown in **Figure 2-5**.

Non-structural BMPs to be used at Rancho Cañada Village would include an ongoing street sweeping program as part of the maintenance of the private streets, a public information package to be distributed to homeowners upon purchase of their homes, and catch basins stenciled with the words "No Dumping—Drains to River."

Consistent with the Monterey County Master Drainage: Lower Carmel Watersheds Plan (1975) and the Final Lower Carmel River Stormwater Management and Flood Control Report (2014), the County intends to construct a drainage channel from Carmel Valley Road, north of the project site, to the Carmel River that would run along the project site's western boundary. In order to accommodate the County's future drainage channel, the developer, at the time of construction of the project will install a below-grade drainage pipe on the project site that could connect to the drainage channel, when built, at a future date. As identified in the above-referenced plans, the County has determined that an open channel would be the most efficient, cost-effective type of drainage improvement; however, an open channel on the project site would be infeasible given the proposed site designs of the project. Therefore, the developer has proposed to install an 84-inch buried pipe during project construction and to be reimbursed by the County for such installation (see **Figure 2-5**).

Design Guidelines

The *Rancho Cañada Village Pattern Book: Design Guidelines for Residential Neighborhoods* (Pattern Book) (**Appendix B**), a book of architectural and site design guidelines, is included as part of the Proposed Project to regulate the design of all buildings and ensure that the Carmel Valley Road viewshed is protected. The Pattern Book illustrates and defines the basic parameters of the project and defines appropriate architectural styles and traditional zoning criteria for height, setbacks, and parking. The Pattern Book would be implemented via recorded Conditions, Covenants, and Restrictions (CC&Rs). Property owners would be required to obtain design review and approval from the Architectural Review Committee formed for the development. County Design and Site Approval would also be required in conformance with County Code. Tentative vesting maps for the Proposed Project are included as **Figure 2-3** through **Figure 2-7**.

Following certification of this Recirculated Draft EIR, discretionary approvals are required for a Combined Development Permit, Use Permit, Rezoning, General Plan Amendment, and Vesting Tentative Map. Once approved, the design and development of proposed residences would be regulated by the County Zoning Code (with property rezoned to high-density residential), except that different height and setback requirements would be implemented via notation on the recorded final map and Sectional District Map.

The developer would establish a formal design review process for the architecture to be carried out by an appropriate entity designated by the developer, such as a CSD or HOA. The County would not be involved with the formal design review process. Written design review approval from the entity designated by the developer would be required and would be submitted to the County as part of an application for Site Plan approval, Design Control approval and/or a building permit. Land Use Requirements

The Proposed Project would require the following amendments and changes to current land use plans:

- ~~Amendment of General Plan/CVMP Policy CV-1.6[5] as follows:~~

  ~~CV- 1.6 New residential subdivision in Carmel Valley shall be limited to creation of 311 new units as follows:~~

  ~~a. Of the 311 units, 281 lots shall be reserved for the Rancho Canada project which shall include at least 50% affordable/Workforce housing units.~~

  ~~b. Lots developed with affordable housing under the Inclusionary Housing Ordinance or an Affordable Housing Overlay (Policy LU-2.12) may have more than one unit per lot. Each unit counts as part of the total unit cap.~~

  ~~c. Existing lots with five (5) acres or more may have the first single family dwelling plus one accessory dwelling unit. Units added on qualifying existing lots shall not count as part of the total unit cap. New accessory dwelling units or single family dwellings beyond the first single family dwelling shall be prohibited on lots with less than five (5) acres, except that this provision shall not apply to projects that have already been approved, environmental review for such units has already been conducted, and in which traffic mitigation fees have been paid for such units prior to adoption of this Carmel Valley Master Plan.~~

  ~~d. New lots shall be limited to the first single family dwelling. Accessory dwelling units and single family dwellings beyond the first single family dwelling shall be prohibited.~~

  ~~e. Of the 311 new units, 24 are reserved for consideration of the Delfino property (30 acres consisting of APN: 187-521-014-000, 187-521-015- 000, 187-512-016-000, 187-512-017-000, 187-512-018-000, and 187-502-001-000) in Carmel Valley Village (former Carmel Valley Airport site) to enable subdivision of the property into 18 single family residential lots and one lot dedicated for six affordable/inclusionary units, provided the design of the subdivision includes at least 14 acres available for community open space use subject to also being used for subdivision related water, wastewater, and other infrastructure facilities.~~

~~Construction~~

~~Construction of the Proposed Project would occur in four phases. The first phase includes 98 residential units and is planned for completion in 2017, assuming Project approval in 2016. The second phase would include 96 residential units and the completion of two parks one on Parcel B and the other one on Parcel F. The third phase consists of 87 residential units. The fourth phase consists of the completion of the habitat preserve. Construction of each phase would depend on market conditions and, thus, it is possible for all four plan phases to be developed concurrently.~~

~~Construction of infrastructure (roads and utilities) would be phased in accordance with the needs of the Proposed Project. The final infrastructure plan would detail the improvements, and the implementation schedule.~~

~~[5] In September 24, 2012, the County and Carmel Valley Association entered into a settlement agreement for the purpose of resolving a case brought by CVA challenging the County's certification of the EIR for the 2010 General Plan (Monterey County Superior Court Case No. M109442). Under the Settlement Agreement, CVA agreed to dismiss its lawsuit if the County adopted certain amendments to the General Plan. Those amendments included reducing the residential cap from 266 to 190 in Policy CV-1.6 of the Carmel Valley Master Plan of the 2010 General Plan. On February 12, 2013, the Board of Supervisors adopted the amendment to Policy CV-1.6 to reduce the unit cap to 190, among other amendments.~~

~~Approval of the 281 unit project would require amending the Carmel Valley Master Plan to modify the unit cap. The Settlement Agreement does not restrict County's land use authority or police power, so it does not prohibit such an amendment. However, under the terms of the Settlement Agreement, amendment of the unit cap without CVA's written approval could be a "Material Default" of the agreement. In the event of a Material Default, CVA may request the court to set aside the Settlement Agreement and reinstitute its lawsuit against the General Plan EIR.~~

~~Grading of the project site would occur concurrently for all phases. It would include the movement of approximately 220,000 cubic yards of fill, of which 100,000 cubic yards would be imported from offsite.~~

~~The source of the offsite fill is unknown at this time; and as a result, the following assumptions for the offsite fill would become conditions of approval for the Proposed Project.~~

- ~~Fill will be free of petroleum or any hazardous constituents that might otherwise pose a risk to people or the environment.~~
- ~~Fill will not be obtained from any location containing natural habitat for native species or cultural resources.~~
- ~~Fill will not be obtained from any location wherein substantial pollutant emissions or noise will affect sensitive receptors.~~
- ~~Fill will not be obtained from the Odello site or any site in proximity or adjacent to the proposed housing location or near any sensitive receptor in lower Carmel Valley.~~

~~The applicant estimates that importation of fill would occur over a period of 28 days and would require 7,200 truckloads of fill material.~~

Project Characteristics ~~130-Unit Alternative~~

The Project ~~130-Unit Alternative~~ is proposed as a 130-residential-unit PUD on approximately 76 ~~82~~ acres. The Project ~~This alternative~~ would create an Affordable Housing and mixed-income community through the allocation of affordable moderate income housing units. The Project ~~Similar to the Proposed Project, the 130-Unit Alternative~~ proposes a compact, pedestrian-friendly development, a variety of housing types, and recreational uses within the residential community. The Project application includes a General Plan Amendment amending the Carmel Valley Master Plan (CVMP) Policy CV-1.27 "Special Treatment Area: Rancho Cañada Village" to reduce the percentage of affordable housing required from 50% to 20%, notwithstanding any other policies in the 2010 General Plan. In addition, a zone change would change the land use designation from Public/Quasi-Public to Medium Density Residential (1-5 units per acre). Entitlements consist of a Combined Development Permit[6] for the creation of a new, 130-unit, mixed-use residential neighborhood on approximately 25 acres.[7] The elements of the design include a mix of smart growth and traditional neighborhood principles that involve the incorporation of established shopping facilities, schools, open space, and churches. Additionally, the development proposal attempts to meet the need for affordable housing in Carmel Valley (see below under *Housing*). The Project would also include an extension of Rio Road through a network of local neighborhood streets to allow safe ingress and egress for residents and the public through Rio Road west. Open space would consist of approximately 38 acres of permanent habitat preserve open space, approximately 2 acres of community park, and approximately 11 acres of common areas within the development area.

~~6 The Proposed Project was originally proposed to be implemented though a Specific Plan; it is now proposed to be implemented as a Combined Development Permit instead. This does not change the physical aspects of the Proposed Project.~~

~~7 The 25 acres is the residential areas excluding park areas, common areas, the habitat reserve, and golf course.~~

See Figure 2-3 through 2-7 for Project drawings. ~~This alternative proposes similar uses as the Proposed Project, but with a lower number of overall units and lower density.~~

~~Project Objectives~~

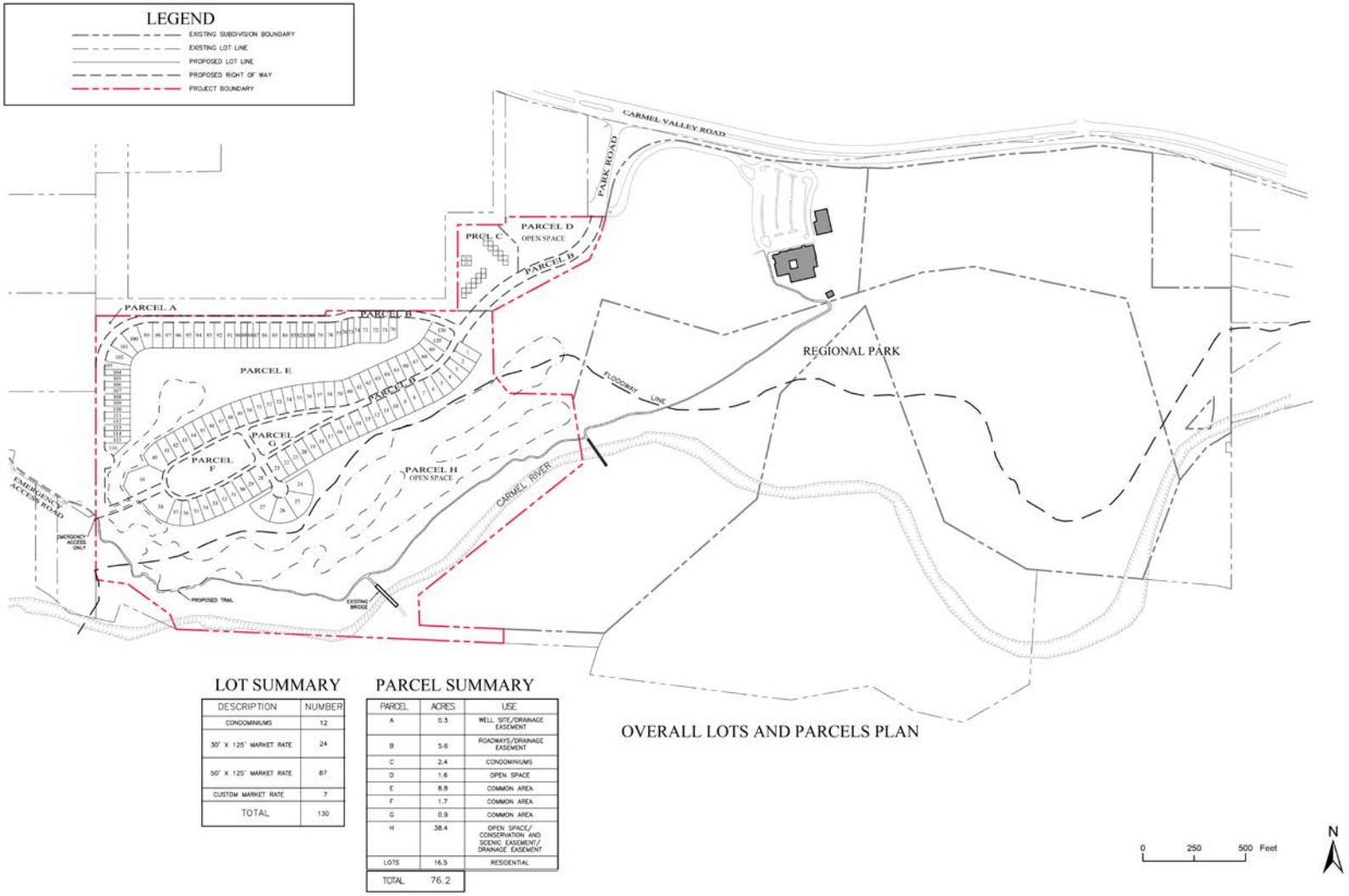
~~The 130-Unit Alternative would meet all of the Proposed Project objectives.~~

Housing

The Project ~~130-Unit Alternative~~ proposes 130-units of moderate and market rate housing on an approximate area of 25 ~~38~~ acres (excluding the open space ~~habitat preserve~~ and common ~~drainage~~ areas). ~~All but one of the units would be on the same residential development location as the Proposed Project. One of the housing units is proposed on the easternmost new lot (shown as Lot 130 on **Figure 2-8**).~~Houses in Rancho Cañada Village would be located on the northern portion of the site, separated from the Carmel River by an open space buffer. See Figure 2-3 for a Lots and Parcels Plan and Figure 2-4 for a Site Plan.

The Project ~~130-Unit Alternative~~ would ~~have a reduced density and~~ include 130 residential units at an approximate gross density of 1.7 ~~3.4~~ units/acre (**Figure 2-~~4~~8**)~~, excluding the habitat preserve and drainage areas~~. This gross density would be considered medium density (1 to 5 units/acre) in the 2013 CVMP although specific densities within the residential development could be high-density in certain locations. The Project ~~This alternative~~ includes approximately 30 X 120 foot and 50 X 120 foot lot sizes to support a mix of single family homes, duplexes (half-plexes), condominiums, and apartments~~ except that Lot 130 would be a 4.6-acre single family lot~~. The maximum height of the proposed housing units is 2 stories and 24 feet from the natural grade level; the 24-foot residential height limitation would be a development standard of the Medium-Density Residential Zoning District.

Figure 2-3 Lots and Parcels Plan

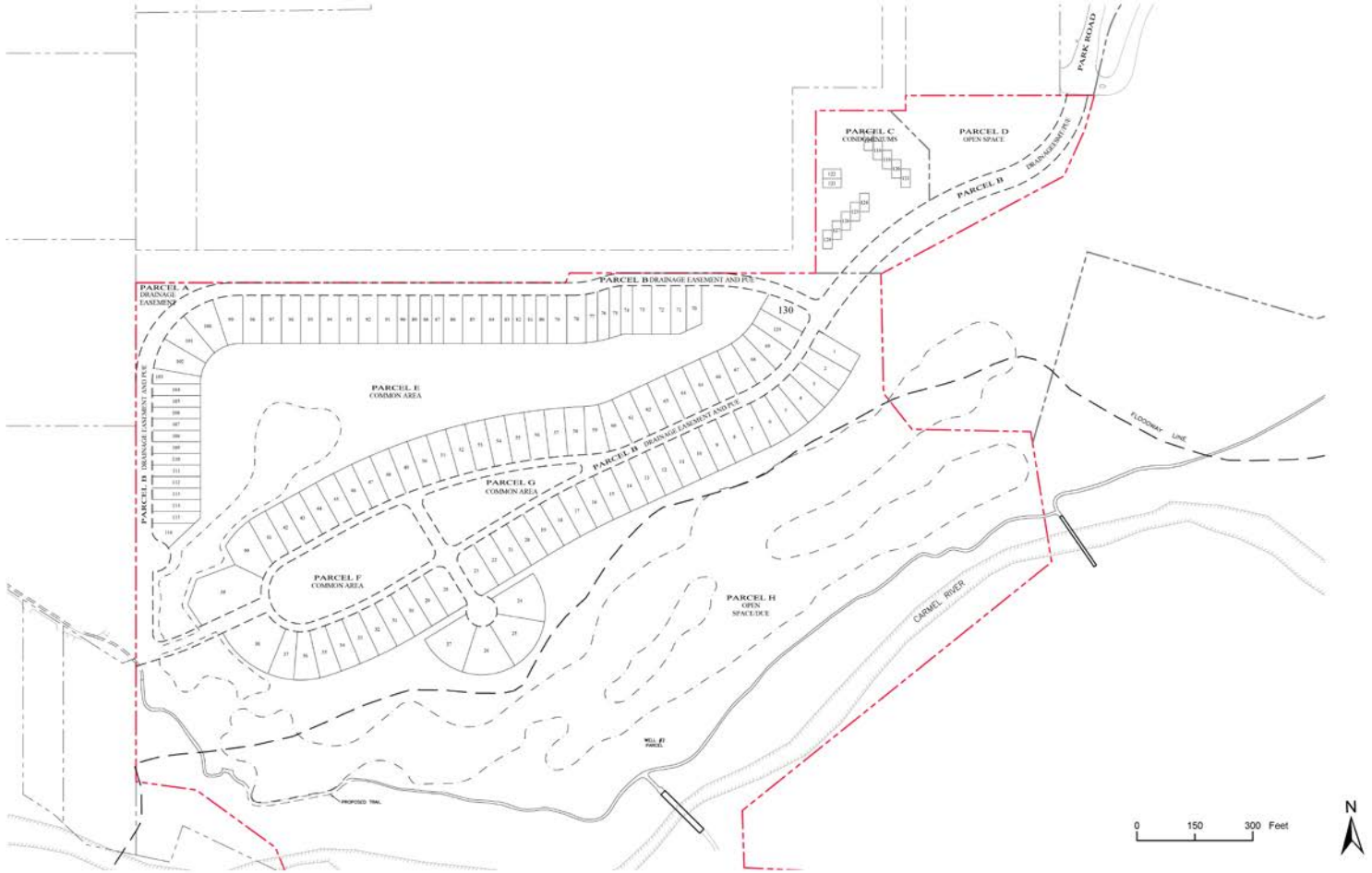


DESCRIPTION	NUMBER
CONDOMINIUMS	12
30' X 125' MARKET RATE	24
50' X 125' MARKET RATE	87
CUSTOM MARKET RATE	7
TOTAL	130

PARCEL	ACRES	USE
A	0.3	WELL SITE/DRAINAGE EASEMENT
B	5.6	ROADWAYS/DRAINAGE EASEMENT
C	2.4	CONDOMINIUMS
D	1.6	OPEN SPACE
E	8.8	COMMON AREA
F	1.7	COMMON AREA
G	0.9	COMMON AREA
H	38.4	OPEN SPACE/ CONSERVATION AND SCENIC EASEMENT/ DRAINAGE EASEMENT
LOTS	16.5	RESIDENTIAL
TOTAL	76.2	

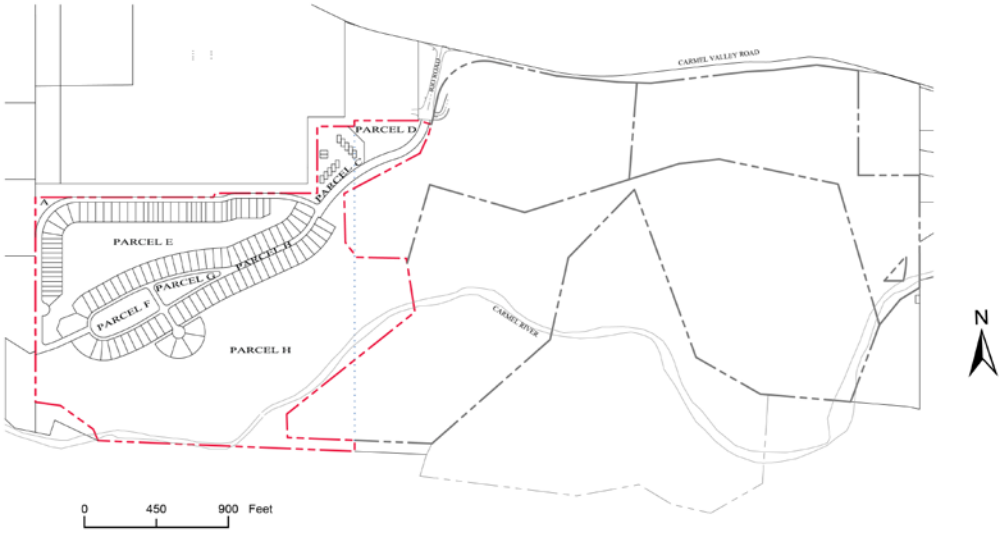
Source: L&S Engineering and Surveying, Inc., 2020.

Figure 2-4 Site Plan

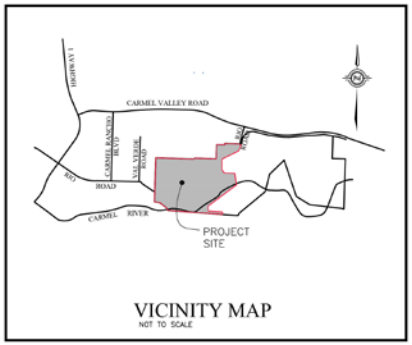


Source: L&S Engineering and Surveying, Inc., 2020.

Figure 2-5 Vesting Tentative Map Cover Sheet



PROJECT SITE



LEGEND

EXISTING	PROPOSED	
		SUBDIVISION BOUNDARY
		(E) LOT LINE TO BE ADJUSTED
		PROJECT BOUNDARY
		LOT LINE
		EASEMENT
		RIGHT OF WAY
		MAJOR CONTOUR (5' INTERVAL)
		MINOR CONTOUR (1' INTERVAL)
		STORM DRAIN LINE
		WATER LINE
		SEWER LINE
		JOINT TRENCH
		SEWER MANHOLE
		STORM DRAIN CATCH BASIN
		FIRE HYDRANT
		STORM DRAIN MANHOLE

GENERAL NOTES

1. OWNER: LOMBARDO LAND GROUP, L.P. P.O. BOX 222297 CARMEL, CA 93922
   TRUST FOR PUBLIC LANDS 101 MONTGOMERY STREET, SUITE 900 SAN FRANCISCO, CA 94105
2. SUBDIVIDER: RANCHO CANADA VENTURE LLC P.O. BOX 450 CARMEL, CA 93921
3. CIVIL ENGINEER: L&S ENGINEERING AND SURVEYING, INC. 2460 GARDEN ROAD, SUITE G MONTEREY, CA 93940 (831)655-2723
4. GEOTECHNICAL ENGINEER: ERS CORPORATION 1600 RIVERA AVE, SUITE 310 WALNUT CREEK, CA 94596 (925)938-1600
5. ASSESSOR'S PARCEL NUMBERS (APN): 015-162-009, 015-162-017, 015-162-025, 015-162-026, 015-162-033, 015-162-039, 015-162-040, 015-162-041, 015-162-042, 015-162-043, 015-162-044, 015-162-045, 015-162-046, 015-162-047
6. SITE AREA: 213.5AC±
7. CONTOUR INTERVAL: 1 FOOT
8. NOT USED
9. LAND USE: CURRENT: PUBLIC/QUASI PUBLIC; PROPOSED: PUBLIC/QUASI PUBLIC AND RESIDENTIAL SUBDIVISION (MEDIUM AND LOW DENSITY RESIDENTIAL WITH 20% MODERATE INCOME RENTAL UNITS/ST)
10. ZONING: CURRENT: PQP-D-S-RAZ AND RC-D; PROPOSED: PQP-D-S-RAZ, MDR-D-S-RAZ AND LDR-D-S-RAZ
11. UTILITIES:
    SANITARY SEWER: CARMEL AREA WASTEWATER DISTRICT
    POTABLE WATER: CAL-AM OR PRIVATE
    STORM DRAIN: COMMUNITY SERVICES DISTRICT
    GAS AND ELECTRIC: PACIFIC GAS & ELECTRIC
    TELEPHONE: AT&T
    FIRE: CYPRESS FIRE PROTECTION DISTRICT
12. THIS PROJECT ALTERNATIVE WILL ALSO BE PHASED. MULTIPLE FINAL MAP MAY BE FILED ON THE LANDS SHOWN ON THIS ALTERNATIVE VESTING TENTATIVE MAP IN ACCORDANCE WITH ARTICLE 4, SECTION 66456.1 OF THE SUBDIVISION MAP ACT.
13. THE PROPOSED GRADING AS SHOWN IS PRELIMINARY AND IS SUBJECT TO FINAL DECISION.
14. ALL GRADING WILL BE DONE IN CONFORMANCE WITH THE RECOMMENDATIONS AND CONDITIONING OF THE GEOTECHNICAL ENGINEER AS CONTAINED IN HIS REPORTS OR SUPPLEMENTAL REPORTS REGARDING THIS PROJECT.
15. STREET IMPROVEMENTS TO BE INSTALLED PER THE COUNTY OF MONTEREY STANDARDS. STREETS AND ALLEYS TO BE PRIVATELY OWNED AND MAINTAINED, UNLESS OTHERWISE DESIGNATED.
16. UTILITY LOCATIONS, STREET GRADES AND LOT DIMENSIONS ARE PRELIMINARY AND SUBJECT TO FINAL ENGINEERING DESIGN AND HOUSE PLOTTING.
17. COMMON AREA OPEN SPACE LANDSCAPING AND PARKS TO BE MAINTAINED BY HOMEOWNERS ASSOCIATION, COMMUNITY SERVICES DISTRICT OR OTHER ENTITY.
18. EROSION CONTROL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS MONTEREY COUNTY EROSION CONTROL REGULATIONS (SECTION 16.12)
19. TREE REMOVAL AND RESTORATION WILL BE CONDUCTED AS REQUIRED BY MONTEREY COUNTY CONDITIONS OF APPROVAL.

LOT SUMMARY

DESCRIPTION	NUMBER
CONDOMINIUMS	12
30' X 125' MARKET RATE	24
50' X 125' MARKET RATE	87
CUSTOM MARKET RATE	7
TOTAL	130

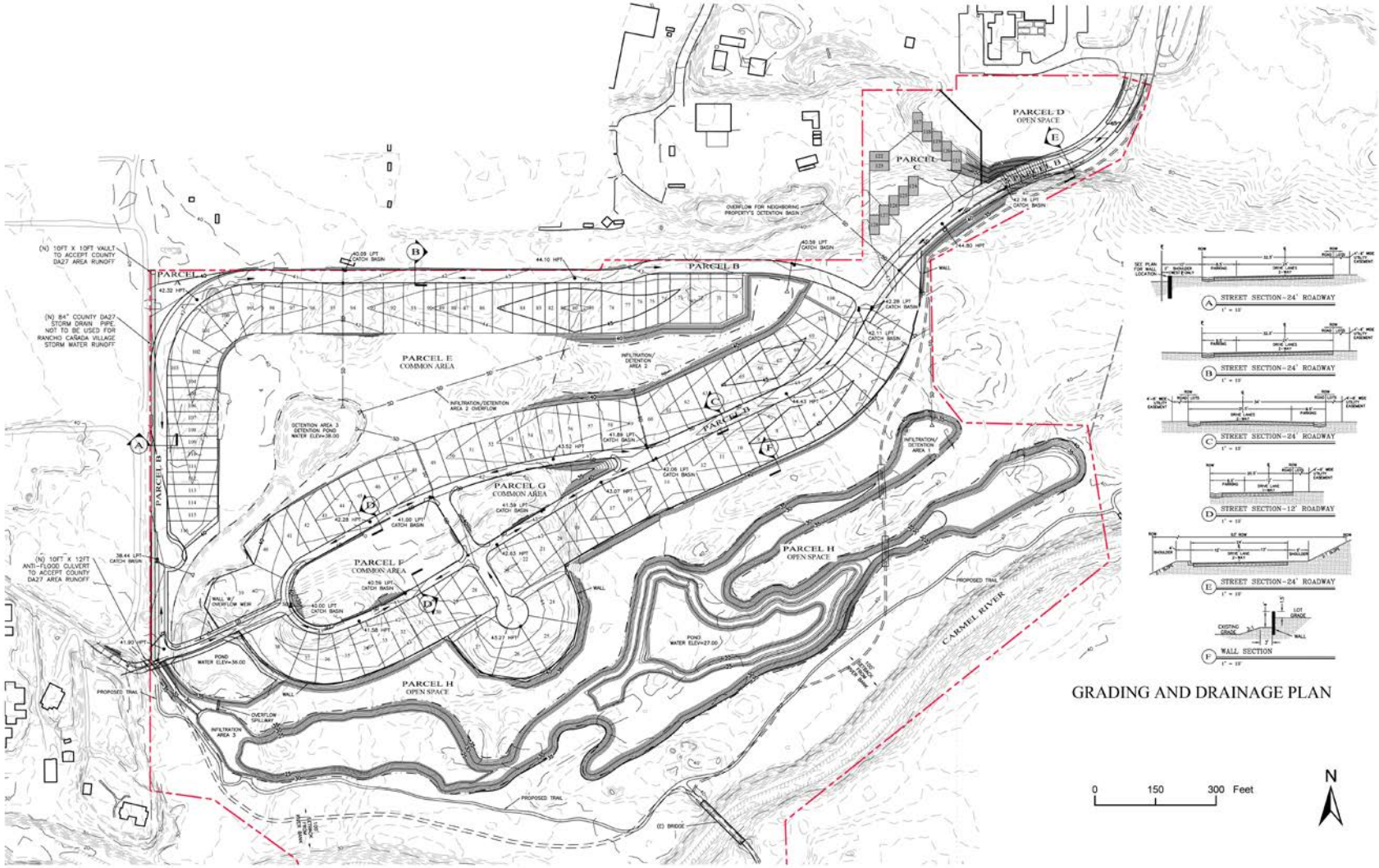
PARCEL SUMMARY

PARCEL	ACRES	USE
A	0.3	WELL SITE/DRAINAGE EASEMENT
B	5.6	ROADWAYS/DRAINAGE EASEMENT
C	2.4	CONDOMINIUMS
D	1.6	OPEN SPACE
E	8.8	COMMON AREA
F	1.7	COMMON AREA
G	0.9	COMMON AREA
H	38.4	OPEN SPACE/ CONSERVATION AND SCENIC EASEMENT/ DRAINAGE EASEMENT
LOTS	16.5	RESIDENTIAL
TOTAL	76.2	

SHEET INDEX

Source: L&S Engineering and Surveying, Inc., 2020.

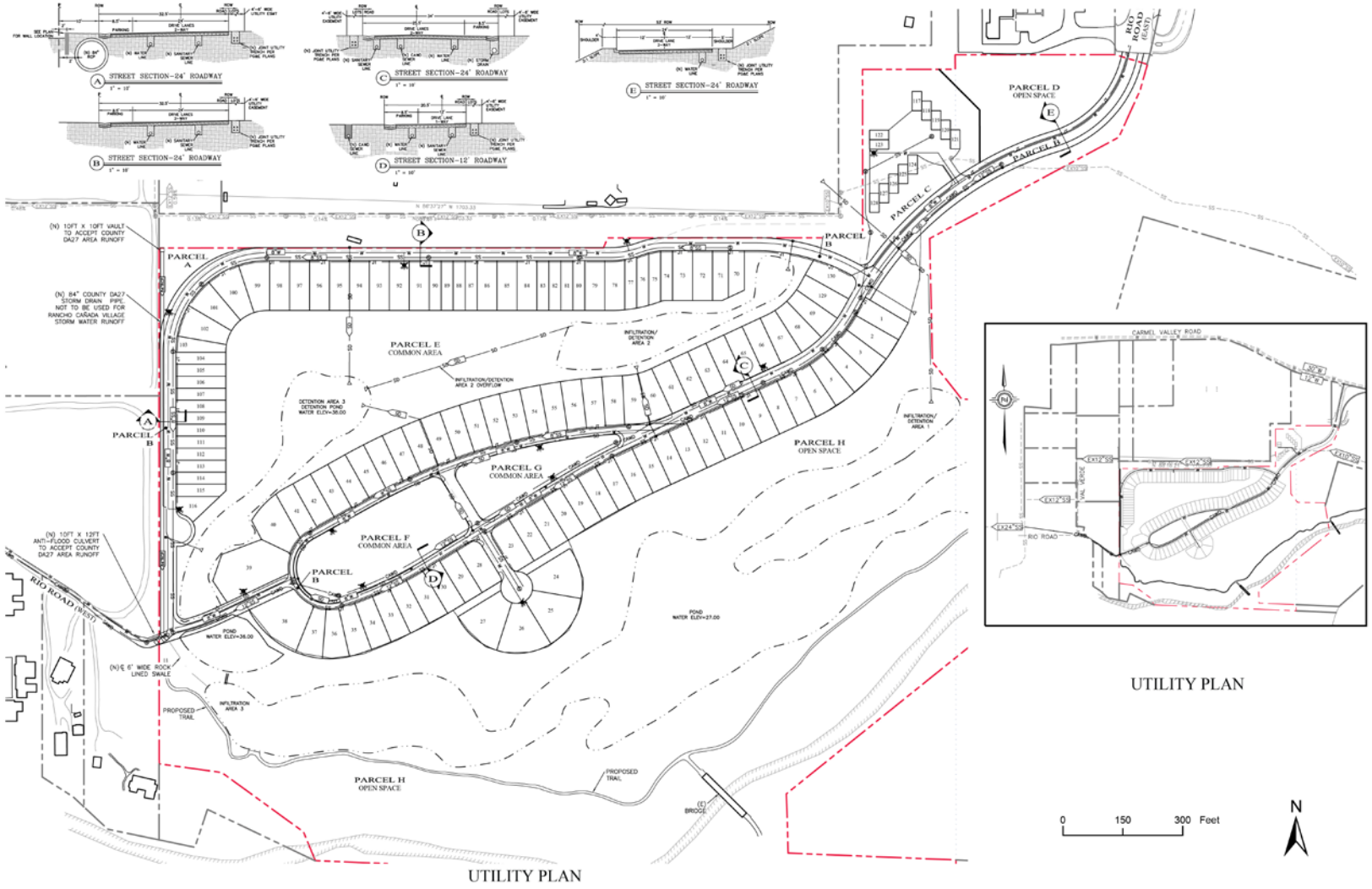
Figure 2-6 Vesting Tentative Map Grading and Drainage Plan



GRADING AND DRAINAGE PLAN

Source: L&S Engineering and Surveying, Inc., 2020.

Figure 2-7 Vesting Tentative Map Utility Plan



Source: L&S Engineering and Surveying, Inc., 2020.

The applicant has proposed that the Project ~~130-Unit alternative~~ would include 25 (20%) moderate income inclusionary units.[8] The moderate income housing units would be 100% affordable per the pricing and eligibility requirements at the moderate income level. Twelve of the moderate income housing would be condominium units located on Parcel C (**Figure 2-4~~8~~**). The remaining 13 units would be on the 30 X 120 foot lots. **Table 2-1 ~~3~~** lists the housing type and units proposed ~~by this alternative~~.

Table 2-1~~3~~. ~~130-Unit Alternative~~ Proposed Housing Mix

Unit Type	Number of Units	Percent of Total Units	Income Level
Condominiums	12	9%	Moderate
Small Lot Single Family (30 X 120')	13	11%	Moderate
Subtotal	**25 ~~26~~**	**20%**	
Small Lot Single Family (30 X 120')	15		Market Rate
Small Lot Single Family (50 X 120')	83 ~~82~~		Market Rate
Custom Single Family (Avg. ~0.30 acre)	7		Market Rate
~~Large Lot Single Family (4.6 acre)~~	~~1~~		~~Market Rate~~
Subtotal	**105 ~~104~~**	**81 ~~80~~%**	
Total	**130**	**100%**	

Note: Totals may not sum due to rounding.

Property development standards that would apply to new construction or alterations and additions in the Rancho Cañada Village subdivision for the Project ~~130-Unit Alternative~~ are shown in **Table 2-2~~4~~**. ~~These standards would apply to all lots except Lot 130, which would be rezoned to Low Density~~

[8] At present, the County's Inclusionary Housing Ordinance (Chapter 18.40) requires 20% of new housing units to be affordable to very low, low, and moderate income households at the percentages specified in Policy LU-2.13 (6%, 6%, 8% respectively). ~~Unlike~~ Policy LU-2.13 also~~, the Inclusionary Ordinance does not~~ requires an additional 5% of new units to be Workforce I. However, Policy CV-1.27, as it would be amended, requires 20% moderate income units *notwithstanding* any other General Plan policies. ~~To date, no residential projects have been required to provide 25% affordable units, consistent with Policy LU-2.13.~~ The applicant proposes to build 25 of the residences onsite as rental units affordable to moderate income households or to build 8% of the 130 units as moderate income units and seek approval from the County to pay an in-lieu fee for the required very low and low income units. Based on the ~~Inclusionary Ordinance's~~ 20% affordability requirement, a minimum of 25 26 units of the 130 proposed units would need to be affordable~~; however, the applicant is proposing 25 affordable (moderate income) units rather than 26~~ based on the premise that 125 *new* lots are being created through the proposed subdivision ~~even though 130 new units are proposed~~. The Inclusionary Ordinance (Section 18.40.070A) states, "to satisfy its inclusionary requirement on-site, a residential development must construct inclusionary units in an amount equal to or greater than twenty (20) percent of the total number of units approved for the residential development." The Project ~~130-unit Alternative~~ proposes 130 total units, 20% of which is 26 if the five (5) existing lots are not credited~~; therefore, a minimum of 26 affordable, or inclusionary, units is required, not 25.~~
This Second Revised Draft EIR analyzes the proposed 130-units ~~included in this alternative~~. The potential units that may be built through use of an in-lieu fee are not analyzed specifically in this Second Revised Draft EIR because their location, timing, and character cannot be reasonably ascertained at this time in order to provide any meaningful environmental analysis. Such new development would be subject to any required environmental analysis at the time that actual affordable units would be built in part or in-whole with the in-lieu fee. As to the general character of such environmental impacts, please see the general analysis of the environmental impacts of residential development facilitated by the water transfer included in this alternative found in the analysis of growth inducement in Chapter 4.

~~Residential (LDR)/2.5-acre minimum site area, consistent with existing residential development immediately to the east.~~

~~Under the 130-Unit Alternative, a~~ Architectural features such as bay windows, chimneys, stairways, recesses or projections, elements characteristic of Carmel Valley residences, would be encouraged to avoid long, unmodulated building facades.

The design and development features of this project alternative would be implemented with the rezoning of the site as a PUD, within the Medium Density Residential (MDR) Zoning District. The site would also be subject to the Design (D) Control and Site Plan (S) Review combining districts, typical of sites located in Carmel Valley.

Table 2-24. ~~130-Unit Alternative~~ Property Development Standards

Minimum Lot Area and Lot Depth per Dwelling Unit	
Single Family Detached Home	6,000 square feet
Half-Plex	3,000 square feet
Minimum Lot Depth	100 feet
Minimum Lot Width/Frontage	30 feet (except condominiums)
Setback Requirements[1]	
Front Setback – House	15 feet, minimum
Front Setback – Garage or Carport[2]	20 feet minimum
Side Setback– First Story[3]	4 feet, minimum, or zero setback on common lot line
Side setback – First Story Corner	10 feet minimum to house / 20 feet to garage
Side Setback – First Story Combined[4]	20% of lot width, minimum.
Side Setback – Second Story Individual	7 feet, minimum.
Side Setback – Second Story Corner	Greater of 25% of lot width or 15 feet, minimum
Side Setback – Second Story Combined[4]	40% of lot width
Rear Setback	20 feet minimum
Height	2 stories and 24 feet, maximum.
Maximum Lot Coverage (percent)[5]	40%
Maximum Floor Area Ratio (FAR)[6]	40%

Notes:

~~Lot 130 not subject to development standards cited in **Table 2-4**.~~

[1] Variances to the setbacks may be granted to achieve a variation between the dwelling and units on adjacent lots thereto, or to achieve design considerations described below. No variance shall be approved until notice is given to all adjoining owners and the owner across the street.

[2] The minimum front yard setback of any garage, carport, or parking pad is 20 feet from the front property line.

[3] The side yard setback for a single family residence shall be not less than four (4) feet. For a half-plex on a lot or a single family residence on two adjoining lots, there shall be a zero minimum side yard setback along the common lot line, and the four foot minimum setback shall be measured from the opposite side property line.

[4] A combined total of 40% of the lot width may be varied along the length of a structure, but not less than 7 feet or more than 15 feet. Combined side yard setbacks shall be measured along lines parallel to the front property line. Side yard setbacks for nonrectangular sites shall be computed using an average of the front and rear property lines.

[5] Uncovered decks and stairways shall not be counted in lot coverage.

[6] Floor area includes all space within the exterior dimensions of the structure, excluding garages or basements used for storage or mechanical uses (i.e., not home theaters or living areas).

Open Space, Recreation, and Common Areas

The Project ~~Similar to the Proposed Project, this alternative~~ proposes approximately 38 ~~39~~ acres of permanent habitat preserve open space, approximately 2 ~~1.7~~ acres of community park, and approximately 11 ~~12~~ acres of common areas within the development area (**Figure 2-~~4~~8**). The Project ~~This alternative~~ also proposes onsite trails for connection to the regional trail system to the County parks system. The 0.8-mile trail, including the existing golf bridge, would extend along the southern perimeter of the housing development and cross the existing golf cart bridge to connect to the Monterey Peninsula Regional Park District (MPRPD) park system. Landscaping in the common areas would primarily include planting of native trees and native grasses.

The habitat preserve area (approximately 38 ~~39~~ acres) ~~has been redesigned~~ for the Project is ~~130-Unit Alternative as~~ illustrated in the grading and drainage plans (**Figure 2-~~6~~9**). ~~Compared to the Proposed Project, the natural habitat preserve area for the 130-Unit Alternative would include larger basins and fewer trees than the 2006 Restoration Plan for the Proposed Project.~~ The natural habitat would include native riparian woodland, riparian scrub, grassland, and wetland vegetation, which would create wetland habitat and enhance habitat for biological resources, including species such as red-legged frog. ~~Unlike the Proposed Project, the 130-Unit Alternative does not propose a restoration plan.~~ A restoration plan for the Project ~~130-Unit Alternative~~ would be developed upon Project ~~project~~ approval. Thus, the restoration plan discussed in this Second Revised ~~Recirculated~~ Draft EIR is only applicable to the Proposed Project.

The habitat preserve area is at the southerly portion of the site abutting the Palo Corona Regional Park[9] property managed by the Monterey Peninsula Regional Park District. The natural open space area includes large basins. The natural habitat would include native riparian woodland, riparian scrub, grassland, and wetland vegetation, which would create wetland habitat and enhance habitat for biological resources, including species such as red-legged frog. To protect habitat areas, a network of public trails would be constructed to channel users through the open space. One of the existing bridges would be dedicated for trail access across the Carmel River connecting to Rio Road west. A restoration plan would be developed upon Project approval.

Public–Quasi Public Lot Reconfiguration

Due to proposed residential and open space development, the Project ~~this alternative~~ also includes reconfiguration of three existing public-quasi public (PQP) lots to adjust the boundary lines between the project site and the adjacent property to the east. MPRPD purchased the eastern golf course properties adjacent to the Project after the County took action on the 2016 EIR. ~~within the remaining golf course to exclude the areas not included in the golf course; since these reconfigured lots are presumed to remain in the golf course, they are not analyzed further in this Recirculated Draft EIR.~~

~~[9] At the time of the Notice of Preparation for the 2016 Recirculated Draft EIR (Monterey County 2016), this portion of Palo Corona Regional Park was a golf course. This description of the current park is added for this Second Revised Draft EIR; however, the retained environmental impact analysis in this Second Revised Draft EIR refers to the existing golf course that was in place at the time of the original analysis.~~

Circulation

Rio Road would be extended from the east southwest across the site to meet up with the emergency access section of Rio Road extending to the west. A local access road would connect to Rio Road on the southwest side of the development and run north and east along the boundary of the site. (**Figure 2-~~4~~8**). The portion of Rio Road west of the Project ~~130-Unit Alternative~~ would be used for emergency, bicycle, and pedestrian access only. All of the roads within the new development would be privately owned and maintained by a Community Services District (CSD) or Homeowners' Association (HOA).

A network of sidewalks and paths would connect the residential uses to the neighborhood parks and to amenities outside of the neighborhood such as the Crossroads Shopping Center, Carmel Valley Middle School, and the open space. The pedestrian plan would connect into the Carmel Valley trail system's planned regional trail system and would provide a link along the Carmel River, including a crossing that would provide access into Palo Corona Regional Park.

Utilities

The Project's ~~130-Unit Alternative's~~ proposed water uses are as follows (see analysis in Chapter 3.10, *Public Services, Utilities, and Recreation*).

- Residential and irrigation uses at the ~~130-Unit Alternative~~ site (approximately 70 AFY for an average year).
- A proposal to transfer up to 60 AFY for new connections (subscriber uses) pursuant to an appropriative right that has yet to be approved by SWRCB, to be served by Cal-Am and to be used by Cal-Am in the interim to offset its unauthorized diversions until subscription water use occurs. This water use would be offsite and could be anywhere within the Cal-Am service area.

The overall proposed water use would be approximately 130 AFY, including the proposed 60 AFY water transfer. The applicant proposes to dedicate an additional approximately 50 AFY for beneficial instream uses in the Carmel River to bring the total project water use to 180 AFY. However, the dedication for beneficial instream uses is not considered a water "use" for the purposes of this Second Revised Draft ~~RD~~EIR, since the project would not actually "use" water that is left for the Carmel River.

For more detailed discussion of water demand and supply, refer to Chapter 3.10, *Public Services, Utilities, and Recreation*.

Water use for domestic and municipal purposes would be diverted from an existing well or rehabilitated well(s) located onsite. A pipeline from the existing or new well to the nearby Cal-Am water distribution system would be constructed. The water use proposed under this alternative would require approval from the State Water Resources Control Board and Monterey Peninsula Water Management District.

AT&T would provide telecommunication and internet services, while cable television services would be provided by Comcast Cable. It is anticipated that a fiber-optic telephone distribution system would be installed in a common joint trench adjacent to roadways along with gas, electric, and cable television facilities. In addition, expansion and/or upgrade of existing transmission facilities outside of Rancho Cañada Village may be required and would be implemented by AT&T.

The Pacific Gas and Electric Company (PG&E) would provide gas and electrical service to the project site. Construction of the Project would include installation of gas mains and/or electrical distribution systems to serve the site. All new facilities would be constructed underground. Existing PG&E gas mains would be extended and new distribution mains would be installed in the joint trench. The need for new transmission facilities would be determined by PG&E.

The Carmel Area Wastewater District (CAWD) provides wastewater collection, treatment, and disposal services to the project site. The Project would connect to an existing 12-inch sewer trunk line that runs westerly, parallel, and about 60 feet north of the northern boundary line of the project site.

The solid waste and recycling program for the Project would be managed by a CSD or HOA in conjunction with the County. The Project is located within the Monterey Regional Waste Management District and is governed by the provisions of Chapter 10.41 of the County Code. All residences and businesses are required to store trash in approved containers and to have it removed weekly. Solid waste pick-up services would be provided by Waste Management, Inc. and materials collected would be transferred to the Monterey Peninsula Landfill and Recycling Facility.

~~The 130-Unit Alternative is within the same service provider area as the Proposed Project. Telecommunication and internet, gas and electrical, and wastewater utilities services would be similar to the Proposed Project.~~

Drainage

~~Similar to the Proposed Project, t~~ The project site ~~of 130-Unit Alternative~~ is in the lower reaches of the Carmel River Basin and is subject to flooding during severe storms. Approximately 55 acres of the project site is within the FEMA-designated 100-year floodplain of the Carmel River.

The Project ~~The 130-Unit Alternative~~ would place fill in the project site so that no new lots or streets would be in FEMA's Special Flood Hazard Area. The Project ~~130-Unit Alternative~~ would remove approximately 168,000 cubic yards of fill from the current golf course to create a passive river basin park area and the fill used to create the building pad for the development area. All structures would be placed on this building pad above the base flood elevation. The preliminary grading and drainage plan is shown in **Figure 2-6~~9~~**.

~~Similar to the Proposed Project, t~~ There are several minor drainage structures and storm drain lines that would be removed in the construction process. New storm drainage facilities, including conventional drainage facilities and stormwater infiltration areas, would be constructed to serve the ~~130-Unit Alternative~~ site. The conventional storm drainage facilities would intercept stormwater flows at the site boundaries, collect the water within the development, and convey it to a controlled point of discharge. The conventional facilities would include earth swales, lined ditches, concrete curb and gutter, manholes, catch basins, and underground storm drain pipes.

MCWRA has an unwritten policy that requires that the post Project ~~project~~, 100-year flow rate not exceed the preproject, 10-year flow rate. However, this policy is not practical for the Project because the site is so near the downstream end of the watershed. Stormwater infiltration areas would collect and store stormwater run-off for percolation and release into new outfall pipes in severe storms and in accordance with the MCWRA and state agency policy.

BMPs used for stormwater quality treatment may include wetlands, infiltration basins, or mechanical structures, and are designed to remove pollutants from the stormwater. Non-structural measures, such as street sweeping, public education, or hazardous substance/recycling centers, are preventative measures intended to control the source of pollutants.

The primary structural BMP would be the stormwater infiltration areas. These areas should be designed to take advantage of the high percolation rates of the native soils. This would promote infiltration and allow for the removal of pollutants as stormwater percolates down through the soil. Because these areas drain the entire site, they would be effective in improving the stormwater quality at this portion of Carmel River. ~~The proposed storm drainage facilities are shown in **Figure 2-9**.~~

Non-structural BMPs to be used ~~at~~ for the Project ~~130-Unit Alternative~~ would include an ongoing street sweeping program as part of the maintenance of the private streets, a public information package to be distributed to homeowners upon purchase of their homes, and catch basins stenciled with the words "No Dumping—Drains to River."

~~Similar to the proposed project, t~~ The County intends to construct a drainage channel from Carmel Valley Road, north of the project site, to the Carmel River that would run along the project site's western boundary. In order to accommodate the County's future drainage channel, the developer, at the time of construction ~~of the 130-unit alternative)~~ would install a below-grade drainage pipe on the project site that could connect to the drainage channel, when built, at a future date. While the County has determined that an open channel would be the most efficient, cost-effective type of drainage improvement, an open channel on the project site would be infeasible given the proposed site designs ~~of the 130-unit alternative~~. Therefore, the developer has proposed to install an 84-inch buried pipe during project construction and to be reimbursed by the County for such installation.[10]

~~Under the 130-Unit Alternative, t~~ The Project Applicant proposes to raise the Rio Road emergency access road. The raised road would essentially fill in the gap in the area from west of the project site ~~Project Site~~ to the Val Verde tie back levee. This would directly address the large potential flood flow path down Rio Road from the river, and provide a flood control benefit to the surrounding area. The proposed elevation would be high enough to qualify as a certified levee under FEMA guidelines (e.g. providing at least three feet of freeboard). A 10-foot by 12-foot box culvert would provide a path for stormwater runoff from the north to flow to the river.

Design Guidelines

The Project, ~~Unlike the Proposed Project, the 130-Unit Alternative,~~ following approval of the subdivision map, General Plan amendment and rezoning would likely be developed over time by individual property owners who have purchased the undeveloped lots. ~~Under the 130-unit Alternative, t~~ The Project ~~project~~ applicant proposes to develop only the affordable housing units, which will be available to income-qualified households as rental units. The Project ~~130-Unit Alternative~~ would be developed subject to General Plan/CVMP and policies and according to the standards and requirements specified in the MDR, Design Control and Site Plan Review Zoning Districts. ~~Lot 130 would be developed according to the standards and requirements specified in the LDR/2.5-acre minimum site Zoning District.~~

~~[10] A subsequent hydrology report submitted by the applicant (Balance Hydrologics, Inc., 2017) indicates that a smaller diameter pipe could provide sufficient capacity.~~

Land Use Requirements

The Project ~~130-unit Alternative~~ would require the following changes to current land use plans:

- Amendment of CVMP Policy 1.27 as follows, with changes to the Policy text shown in strikethrough/underline:
  - Special Treatment Area: Rancho Cañada ~~Canada~~ Village – Up to 40 acres within properties located generally between Val Verde Drive and the Rancho Cañada ~~Canada~~ Golf Course, from the Carmel River to Carmel Valley Road, excluding portions of properties in floodplain shall be designated as a Special Treatment Area. Notwithstanding any other General Plan policies, residential development may be allowed with a density of up to 10 units/acre in this area and shall provide a minimum of 20%~~50%~~ Affordable/~~Workforce~~ Housing. Prior to beginning new residential development (excluding the first unit on an existing lot of record), projects must address environmental resource constraints (e.g.; water, traffic, flooding).

Construction

The Project ~~Construction of the 130-Unit Alternative~~ would be constructed in four phases. Duration of construction would depend on market conditions.

Phase 1 would include the main entry off Rio Road east, the condominiums, and the grading for the natural habitat area. In addition to the grading of the natural habitat area, Phase 1 would include the development of the basin and utilities for the natural habitat area. Phase 2 would include the north and west road and lots, Phase 3 would include the center road and lots, and Phase 4 would include the completion of the natural habitat area. The final infrastructure plan will detail the improvements and the implementation schedule.

Grading of the project site would occur concurrently for all phases. Maximum depth of excavation during construction is 18 feet below surface. Grading would include the movement of approximately 168,000 cubic yards of fill, all of which would come from the onsite cut.

Intended Uses of this Second Revised Draft EIR

As indicated above, this Second Revised ~~Recirculated~~ Draft EIR is an informational document for decision-makers. CEQA requires that decision-makers review and consider the Second Revised Draft EIR in their consideration of this Project. Monterey County is the lead agency responsible for certifying the Second Revised Draft EIR and for approving land use regulatory and policy changes and the local land use permits related to the Project. Agencies with permit review or approval authority over the Project are summarized in **Table 2-35** ~~for both the Proposed Project and the 130-Unit Alternative~~. The agencies in **Table 2-3 5** ~~are~~ are the responsible agencies under CEQA and will use the Second Revised ~~Recirculated~~ Draft EIR as the environmental basis of their decisions.

Table 2-~~3~~5. Summary of Local, State, and Federal Discretionary Actions

Agency	Permit/Review Required
County of Monterey (County)	~~For both Proposed Project and 130-unit Alternative:~~ ▪ CEQA Lead Agency ▪ Amendment to the General Plan/Carmel Valley Master Plan, related to land use designations, and housing affordability (Special Treatment Area) ▪ Rezoning from Public/Quasi-Public to residential Medium-Density Residential and Low-Density Residential Zoning Districts based on proposed density. ▪ Combined development permit consisting of a vesting tentative standard subdivision to create 130 residential units, consisting of single-family dwellings, half-plexes and condominiums and including parks, trails and open space/habitat preserve areas ▪ Approval of Planned Unit Development ~~▪ Use Permit/Grading Permit for movement/placement of 112,000 to 220,000 cubic yards of soil.~~ ~~▪ Monterey County Water Resources Agency approval concerning floodplain management and drainage facilities~~ ~~▪ Monterey County Public Works approval for public road improvements~~ ~~Monterey County Department of Environmental Health for any well permits or permits for mutual water company~~ ~~▪ Use Permit for the development of public facilities and installation of infrastructure~~ ~~▪ Use Permit for development within the Carmel Valley Floodplain~~ ~~▪ Tree Removal Permit~~
Monterey County Environmental Health Bureau	▪ Well permits or permits for mutual water company ~~For Proposed Project only:~~ ~~Amendment to the General Plan/Carmel Valley Master Plan, related to land use designations and development intensity (residential unit subdivision cap)~~ ~~Rezoning to High-Density Residential (HDR) based on proposed density.~~ ~~Combined development permit consisting of a vesting tentative standard subdivision to create 281 residential units. The Project consisting of 182 single-family dwellings, 64 town-homes, and 35 condominium/flats; approximately 34 acres of open space including two parks and a habitat preserve~~ ~~Recorded CC&Rs~~
Monterey County Resource Management Agency (RMA)	▪ Use Permit/Grading Permit for movement/placement of 112,000 to 220,000 cubic yards of soil. ▪ Approval concerning floodplain management and drainage facilities ▪ Approval for public road improvements ▪ Use Permit for the development of public facilities and installation of infrastructure ▪ Use Permit for development within the Carmel Valley Floodplain ▪ Tree Removal Permit ~~For 130-unit Alternative only:~~ ~~Amendment to the General Plan/Carmel Valley Master Plan, related to land use designations, and housing affordability~~ ~~Rezoning to residential Medium-Density Residential and Low-Density Residential Zoning Districts based on proposed density.~~ ~~Combined development permit consisting of a vesting tentative standard subdivision to create 130 residential units, consisting of single-family dwellings, half-plexes and condominiums and including parks, trails and open space/habitat preserve areas~~ ~~Approval of Planned Unit Development~~

Agency	Permit/Review Required
Monterey Peninsula Water Management District (MPWMD)	▪ Potential approval of Cal-Am connection, through Cal-Am water distribution system, if pursued ▪ Potential approval of water distribution system for mutual water company or community services district if Cal-Am service is not pursued ▪ Approval of ordinance allowing for water use permits and water permit connections based on use of Rancho Cañada ~~Canada~~ Golf Course water usage ~~(130-Unit Alternative only)~~ ▪ Approval of a River Work Permit for any work with the Riparian Corridor
Monterey County Local Agency Formation Commission (LAFCO)	▪ Creation of a Community Services District (CSD) ▪ Annexation to Carmel Area Wastewater District
State Water Resources Control Board (State Water Board)	▪ Potential approval of permit to allow Rancho Cañada ~~Canada~~ Golf Course water to be conveyed by Cal-Am ▪ Potential approval of use of part of existing allotment for other approved development and existing lots of record ~~(130-Unit Alternative only)~~
California Department of Fish and Wildlife (DFW)	▪ Incidental take permit, if state-listed species affected ▪ Streambed Alteration Permit, if required ▪ Trustee agency for biological resources
Regional Water Quality Control Board (Regional Water Board)	▪ Waste discharge requirements for Section 402 of the federal Clean Water Act (CWA)~~;~~ ▪ Section 401 CWA certification or waiver~~;~~ ▪ General construction stormwater discharge permit
Federal Emergency Management Agency (FEMA)	▪ Approval of Conditional Letter of Map Revision (CLOMR)
U.S. Army Corps of Engineers (USACE)	▪ Permit under CWA Section 404 if jurisdictional waters or wetlands affected
U.S. Fish & Wildlife Service (FWS)	▪ Approval of incidental take permit if potential for effect on listed wildlife species~~; e~~ ▪ Consultation under Section 7 of the federal Endangered Species Act (ESA) if USACE permit required
National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS)	▪ Approval of incidental take permit if potential for effect on listed fish species~~; e~~ ▪ Consultation under Section 7 of the federal ESA if USACE permit required

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Chapter 3
Environmental Analysis

Introduction to the Analysis

Chapter 3 of this Second Revised ~~Recirculated~~ Draft Environmental Impact Report (EIR) contains individual subchapters that describe the potential environmental impacts of the Proposed Project ~~and 130-Unit Alternative~~. Each topical section (Chapters 3.1 through 3.13) describes the existing setting and background information to help the reader understand the conditions that could be affected by the ~~Proposed~~ Project ~~and the 130-Unit Alternative~~. In addition, each section includes a discussion of the criteria used in determining the significance levels of the ~~Proposed~~ Project's ~~and 130-Unit Alternative's~~ environmental impacts. Finally, each section recommends mitigation measures, where possible, for significant impacts identified.

Potential secondary environmental effects of the proposed transfer of 60 acre-feet per year (AFY) of water to other Cal-Am customers are addressed separately in Chapter 4, under *Growth-Inducing Impacts*.

The majority of the environmental analysis in Chapter 3 is retained from the 2016 EIR prepared for the 281-unit project that was previously proposed at the project site, as described in Chapter 2, *Project Description*. The analysis is revised to exclude the 281-unit project, which is no longer under consideration, and to focus on the 130-unit Project that was previously analyzed as an alternative alongside the 281-unit project in the 2016 EIR.

Significance of Environmental Impacts

According to the California Environmental Quality Act (CEQA), an EIR should define the threshold of significance and explain the criteria used to determine whether an impact is above or below that threshold. Significance criteria are identified for each environmental category to determine whether implementation of the project would result in a significant environmental impact when evaluated against the environmental setting baseline conditions. The significance criteria vary depending on the environmental category. In general, effects can be either significant (above threshold) or less than significant (below threshold). In some cases a significant impact may be identified as significant and unavoidable if no feasible mitigation measure(s) is/are available to reduce the impact to a less-than-significant level. If a project is subsequently adopted despite identified significant impacts that would result from the project, CEQA requires the lead agency to prepare and disclose a statement of overriding considerations describing the social, economic, and other reasons for adoption.

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Chapter 3.1
Geology, Seismicity, and Soils

Introduction

This chapter provides a discussion of the geology, seismicity, and soils issues related to the Proposed Project ~~and the 130-Unit Alternative~~ in Carmel Valley. This chapter includes a review of existing conditions based on available literature and field surveys; a summary of local, state, and federal policies and regulations related to geology, seismicity, and soils; and an analysis of direct and indirect environmental impacts of the Project ~~and 130-Unit Alternative~~. Where feasible, mitigation measures are recommended to reduce the level of impacts.

Impact Summary

The geology, seismicity, and soils impacts from the Proposed Project ~~and the 130-Unit Alternative~~ are summarized in **Table 3.1-1** below. The Proposed Project ~~and the 130-Unit Alternative~~ would not have any significant short- or long-term adverse impacts related to geologic, seismic, and soil conditions and hazards in the project area with mitigation. The Project ~~and the 130-Unit Alternative~~ would be designed in accordance with applicable seismic design standards to reduce the risk of damage during an earthquake. Likewise, standard engineering practices would be used to overcome the geologic constraints associated with the expansive soils and unstable hillslopes that were identified in the project area during geotechnical investigations performed for the Project (ENGEO 2005).

Table 3.1-1. Geology, Seismicity, and Soils Impact Summary

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
A. Seismic Hazards				
GEO-1: Substantial Adverse Effects Resulting From Fault Rupture	~~NI~~	NI	None Required	–
GEO-2: Substantial Adverse Effects Resulting from Earthquake-Induced Ground Shaking	~~LTS~~	LTS	None Required	–

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
GEO-3: Substantial Adverse Effects Resulting from Seismic-Related Ground Settlement	~~Potentially Significant~~	Potentially Significant	GEO-1: Design All Proposed Structures in Accordance with the Requirements of the California Building Code, Current Edition, and Recommendations Contained in the Site-Specific Geologic and Geotechnical Reports	LTS
GEO-4: Substantial Adverse Effects Resulting from Earthquake-Induced Liquefaction	~~LTS~~	LTS	None Required	–
B. Landslides and Slope Stability				
GEO-5: Substantial Adverse Effects Resulting from Landsliding	~~Potentially Significant~~	Potentially Significant	GEO-2: ~~Conduct Additional Site-Specific Investigation Relative to Lot 130 and~~ Implement Recommended Grading and Slope Design Criteria of the Site-Specific Geotechnical Reports	LTS
C. Erosion				
GEO-6: Accelerated Soil Erosion and Sedimentation	~~Potentially Significant~~	Potentially Significant	GEO-3: Prepare and Implement an Erosion and Sediment Control Plan	LTS
D. Soil Constraints				
GEO-7: Substantial Adverse Effects Resulting from Expansive Soils	~~Potentially Significant~~	Potentially Significant	GEO-1: Design All Proposed Structures in Accordance with the Requirements of the California Building Code, Current Edition, and Recommendations Contained in the Site-Specific Geologic and Geotechnical Reports GEO-4: Remove Localized Zones of Overly Loose Materials ~~GEO-5: Prepare a Geotechnical Report for Lot 130 Concerning Expansive Soils (130-Unit Alternative only)~~	LTS
GEO-8: Substantial Adverse Effects Resulting from Loss of Topsoil	~~LTS~~	LTS	None Required	–
GEO-9: Effects of Septic Systems on Soils	~~NI~~	NI	None Required	-
LTS = Less than Significant, NI = No Impact				

Environmental Setting

Research Methods

Information on the existing conditions was derived from sources in the published geologic and soils literature and from the geotechnical report prepared for the project. No additional fieldwork was performed for this Second Revised ~~Recirculated~~ Draft Environmental Impact Report (EIR).

Geotechnical Investigations

In order to obtain baseline information on existing geologic, seismic, and soil conditions, a series of site-specific geotechnical investigations were conducted by ENGEO on October 20, 2003, March 3, 2004, and July 22 and 23, 2004. The resulting geotechnical report, prepared by ENGEO on April 20, 2004 and subsequently revised on September 14, 2005, is summarized and supplemented with additional information herein. These reports were prepared for the Proposed Project.

Literature Reviewed

The following literature was reviewed to assess the geologic, seismic, and soil conditions found in the project area.

- California Building Standards Commission. 2013. *California Building Code*.
- California Division of Mines and Geology. 2000. Digital images of official maps of the Alquist-Priolo earthquake fault zones of California, Central Coast Region. (California Division of Mines and Geology. 2000.
- California Geological Survey. Seismic Hazards Mapping Program website. Accessed October 2014, http://www.conservation.ca.gov/cgs/shzp. 2014.
- Monterey County. 2007. *General Plan Update*. Chapter 4.4 Geology, Soils, and Seismicity.
- ENGEO. 2005. Geotechnical Exploration, Rancho Cañada Village, Carmel Valley, California. Prepared for Lombardo Land Group-1. San Ramon, CA.[1]
- Hart, E. W., Bryant, W. A. 1997. *Fault-Rupture Hazard Zones in California – Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zones Maps*. (Special Publication 42.) Sacramento, CA: California Division of Mines and Geology.
- Monterey County. 1986. *Carmel Valley Master Plan*. Amended November 5, 1996. Monterey County, CA.
- Monterey County. 1982. *Monterey County General Plan*. Monterey County, CA.
- U.S. Department of Agriculture Soil Conservation Service. 1978. Soil Survey: Monterey County, California.
- U.S. Department of Agriculture Soil Conservation Service. Web Soil Survey website. Accessed October 2014, http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. 2014.

[1] ~~This report was conducted for the Proposed Project. Its applicability to the 130-Unit Alternative pertains only to the areas where the Proposed Project and 130-Unit Alternative overlap.~~

Geologic Setting

The project area is located in the Carmel Valley, a broad alluvial flow that drains westward via the Carmel River into the Pacific Ocean. The rolling hills that immediately surround the valley lie within the Coast Ranges geomorphic province, which is characterized by a series of northwest trending mountains and valleys.

The Coast Range province is geologically complex. Regional geomorphic features within the Carmel and Monterey areas are related to complex tectonics of the San Andreas fault/plate boundary system. West of the San Andreas Fault Zone, the core of the Coast Ranges is underlain by Cretaceous granitic basement rock referred to as the Salinian block. Overlying the Salinian Block is a thick layer of Cretaceous and Tertiary sedimentary rocks, which are, in turn, overlain by late Pleistocene or early Holocene alluvial deposits consisting of poorly consolidated clay, silt, sand, and gravel (ENGEO 2005).

Soils

Soils on the West Course at Rancho Cañada Golf Club have been mapped primarily as Pico fine sandy loam. ~~The soils underlying Lot 130 are mapped as primarily Lockwood shaly loam, 2 to 9% slopes, and Santa Ynez fine sandy loam, 2 to 9% slopes (U.S. Department of Agriculture 2014).~~ Floodplain areas adjacent to the river channel are situated on Metz fine sandy loam and Tujunga fine sand, 0 to 5% slopes, while areas located nearer to Carmel Valley Road consist of Santa Ynez fine sandy loam, 2 to 9% slopes (U.S. Department of Agriculture 2014). The following sections provide additional information on the soil units of the project site.

Pico Fine Sandy loam

Pico fine sandy loam is a nearly level soil that is found primarily on flood plains. The surface layer typically consists of a grayish-brown, mildly to moderately alkaline fine sandy loam about 18 inches thick. Soils in this series are well-drained; permeability is moderately rapid and runoff is slow. The shrink-swell potential of Pico fine sandy loam is typically low. Risk of corrosion is high for uncoated steel and low for concrete (U.S. Soil Conservation Service 1978).

Metz Fine Sandy Loam

Metz fine sandy loam is a nearly level soil on flood plains. The surface layer typically consists of light brownish gray, moderately alkaline, stratified fine sand, sand, and very fine sandy loam extending to a depth of more than 60 inches. Soils of this series have a moderate permeability in the upper layers, but drain more rapidly at depths of 48 inches or more in some places. Runoff is typically slow, and erosion hazard is slight. The shrink-swell potential of Metz fine sandy loam is typically low. Risk of corrosion is high for uncoated steel and low for concrete (U.S. Soil Conservation Service 1978).

Tujunga Fine Sand, 0 to 5% Slopes

Soils in the vicinity of the Carmel River are mapped as Tujunga fine sand, 0 to 5% slopes, which typically occur on flood plains and alluvial fans, mainly in small, narrow areas along drainage ways. The surface layer consists of light brownish gray, slightly acid fine sand about 10 inches thick, which is underlain by pale brown and light gray, slightly acid and mildly alkaline fine sand and sand that extends to a depth of more than 60 inches. Tujunga fine sand is somewhat excessively drained;

runoff is very slow, and the erosion hazard is slight, but some channel erosion does occur. The shrink-swell potential of Tujunga fine sand, 0 to 5% slopes is typically low. Risk of corrosion is low for uncoated steel and low for concrete (U.S. Soil Conservation Service 1978).

Santa Ynez Fine Sandy Loam, 2 to 9% Slopes

The Santa Ynez soil series consists of moderately well drained soils on alluvial terraces. The surface layer is grayish brown and gray, medium acid fine sandy loam about 20 to 30 inches thick and is underlain by a 2-inch subsurface layer of light brownish gray, medium acid fine sandy loam. Runoff is slow or medium, and the erosion hazard is slight or moderate. The shrink-swell potential of Santa Ynez fine sandy loam, 2 to 9% slopes is typically low. Risk of corrosion is moderate for uncoated steel and low for concrete (U.S. Soil Conservation Service 1978).

Lockwood Shaly Loam, 2 to 9% Slopes

Lockwood shaly loam is a gently sloping to moderately sloping soil on alluvial fans and terraces. The surface layer is either gray very strongly acid to neutral shaly loam about 26 inches thick or shaly clay loam in some places. The subsoil is gray, neutral shaly heavy loam and brown, mildly alkaline shaly clay loam that extends to a depth of 82 inches. Lockwood shaly loam is well drained, runoff is slow or medium, and the erosion hazard is slight or moderate. The shrink-swell potential of Lockwood shaly loam, 2 to 9% slopes is typically moderate. Risk of corrosion is high for uncoated steel and low for concrete (U.S. Soil Conservation Service 1978).

Seismicity

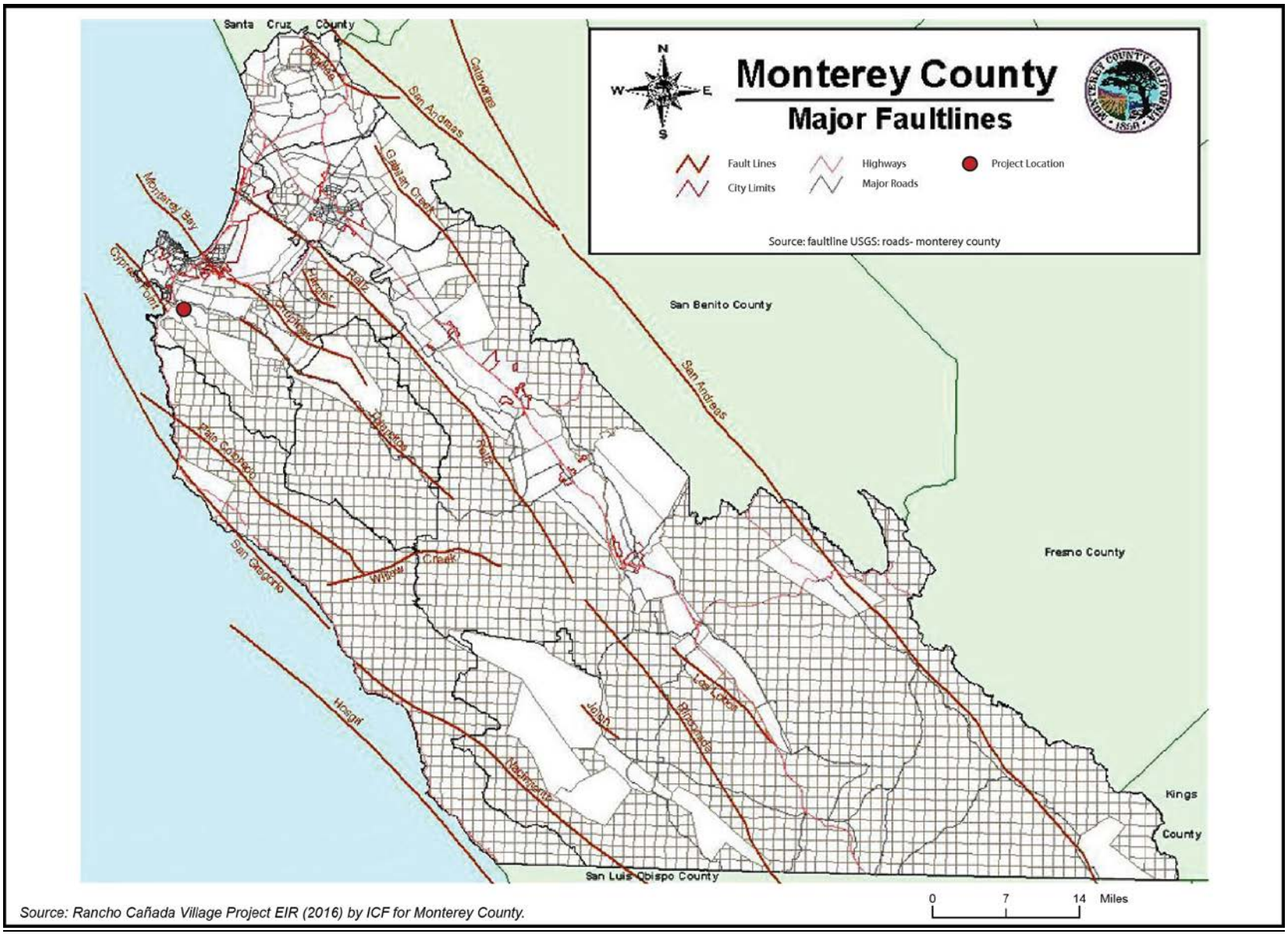
Primary Seismic Hazards—Surface Fault Rupture and Groundshaking

Numerous active[2] faults have been mapped in the regional vicinity of the project area. The project area lies within the *Low to Very High* seismic hazard zone in Figure 8a of the *Monterey County General Plan* (Monterey County 2010). The Uniform Building Code (UBC) (International Conference of Building Officials 1997), which recognizes as active some faults that are not currently included under the Alquist-Priolo Act, shows no active faults in the immediate site vicinity. The risk of surface rupture in the project area is thus considered minimal.

The project area does, however, have the potential to experience strong groundshaking as a result of seismic activity on any of the area's principal active faults; **Figure 3.1-1** shows the project location in relation to principal faults of the Central Coast region. Nearby active or potentially active faults include the Tularcitos fault, located about 3 miles northeast of the site; the San-Gregorio-Palo Colorado fault, located approximately 5 miles west of the site; and the Rinconada fault, located approximately 12 miles east of the site (ENGEO 2005).

[2] An active fault is defined by the State Mining and Geology Board as one that has had surface displacement within Holocene time (defined by the state as including about the last 11,000 years) (California Department of Conservation. No Date).

Figure 3.1-1 Regional Faulting and Seismicity



Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Secondary Seismic Hazards—Liquefaction and Ground Settlement

Liquefaction is a process by which soils and sediments lose shear strength and fail during episodes of intense seismic ground shaking. The susceptibility of a given soil or sediment to liquefaction is primarily a function of local groundwater conditions and certain soil and sediment properties such as particle size distribution and bulk density. Water-saturated fine sands and silts located within 50 feet of the surface are typically considered most susceptible to liquefaction. Unsaturated, well-consolidated soils and sediments that consist of coarser or finer materials are generally less susceptible to liquefaction. The potential for liquefaction to occur in a given area is a function of a soils susceptibility to liquefaction and ground shaking potential (i.e., proximity to active faults).

The site-specific geotechnical investigation performed for the project site suggests that most soils and sediments underlying the site do not have a high susceptibility to liquefaction or liquefaction-induced ground failure. In one area south of the West Course at Rancho Cañada Golf Club, the investigation encountered a thick liquefiable subsurface layer, overlain by an insufficient layer of nonliquefiable surface materials that was judged as having the potential to induce ground failure during a very strong seismic groundshaking event. However, the location of the deposit was determined to be of little consequence to the area overlapped by Proposed Project ~~and 130-Unit Alternative~~, since ground failure in that location would primarily affect an area of open space (ENGEO 2005).

In addition to the liquefaction hazards discussed previously, the investigation found that densification of the sandy soils above and below groundwater levels could result in ground settlement during an earthquake. Since some of the surface materials have densities ranging from loose to medium and are potentially liquefiable, it is estimated that up to 4 inches of settlement may occur as a result of densification within the residential development area (ENGEO 2005).

Landslide Hazards

Slope gradients in the immediate vicinity of the project area are gentle, and existing risk of slope failure, including seismically induced landslides, is low. Slope gradients in the project area are generally between 0 and 19%. Slope gradients north of ~~Lot 130 and~~ Carmel Valley Road are steeper, slopes can be as much as 50%, and risk of seismically induced landslides is moderate. A few areas on the project area have slopes between 20 and 30%, which correspond to the riverbanks and other water features of the existing golf course. Very few areas have slopes with gradients above 30%.

Regulatory Setting

This section discusses the local, state, and federal policies and regulations that are relevant to the analysis of geology, seismicity, and soils impacts of the Proposed Project ~~and the 130-Unit Alternative~~.

Federal Policies and Regulations

There are no relevant federal policies that regulate geologic, soils, or seismic-related resources that would apply to the Proposed Project ~~and 130-Unit Alternative~~.

State Policies and Regulations

Alquist-Priolo Earthquake Fault Zoning Act

California's Alquist-Priolo Earthquake Fault Zoning Act (California Public Resources Code Section 2621 et seq.), originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and renamed in 1994, is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults (Earthquake Fault Zones). It also defines criteria for identifying active faults, giving legal weight to terms such as *active*, and establishes a process for reviewing building proposals in and adjacent to Earthquake Fault Zones.

Under the Alquist-Priolo Act, faults are zoned and construction along or across them is strictly regulated if they are *sufficiently active* and *well-defined*. A fault is considered sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for purposes of the Act as referring to approximately the last 11,000 years). A fault is considered well-defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment (Hart and Bryant 1997).

California Building Code

The CBC is included in Title 24 of the California Code of Regulations (CCR), and composes part of the California Building Standards Code. The CBC incorporates the UBC, a widely adopted model building code in the United States. The CBC also includes necessary California amendments and expands on the UBC by providing more stringent standards addressing reduction of earthquake risk to structures in this seismically active state.

Chapter 16 of the CBC deals with General Design Requirements, including (but not limited to) regulations governing seismically resistant construction (Chapter 16, Division IV) and construction to protect people and property from hazards associated with excavation cave-ins and falling debris or construction materials. Chapters 18 and A33 deal with site demolition, excavations, foundations, retaining walls, and grading, including requirements for seismically resistant design, foundation investigations, stable cut and fill slopes, and drainage and erosion control. Among other things, the CBC defines different building regions in the state and ranks them according to their seismic hazard potential. There are four types of these regions: Seismic Zones 1 through 4, with Zone 1 having the least seismic potential and Zone 4 having the highest seismic potential. The project site is located within Zone 4, as is much of western California. Of the four seismic zones designated in the United States, Zone 4 is expected to experience the greatest effects from earthquake ground shaking and therefore has the most stringent requirements for seismic design.

Other Laws and Regulations

Other laws pertaining to hazardous materials include the Safe Drinking Water and Toxic Enforcement Act (Proposition 65) and the California Government Code, Section 2.65962.5, which require the Office of Permit Assistance to compile a list of potentially contaminated sites throughout the state.

Local Policies and Regulations

Current County Plans and Policies

The following plans and policies are currently in effect.

2010 Monterey County General Plan

The 2010 *Monterey County General Plan* (2010 General Plan) presents goals and policies that guide the general distribution and intensity of land uses, including residential, agricultural, commercial and industrial, public facilities, and open space uses, for lands in the County outside the Coastal Zone (Monterey County 2010).The following policies from the 2010 General Plan Conservation and Open Space Element and the Safety Element are relevant to the issues addressed in this section.

Conservation and Open Space Element

Policy OS-3.1: Best Management Practices (BMPs) to prevent and repair erosion damage shall be established and enforced.

Safety Element

Policy S-1.1: Land uses shall be sited and measures applied to reduce the potential for loss of life, injury, property damage, and economic and social dislocations resulting from ground shaking, liquefaction, landslides, and other geologic hazards in the high and moderate hazard susceptibility areas.

Policy S-1.3: Site-specific geologic studies may be used to verify the presence or absence and extent of the hazard on the property proposed for new development and to identify mitigation measures for any development proposed. An ordinance including permit requirements relative to the siting and design of structures and grading relative to seismic hazards shall be established.

Policy S-1.4: The Alquist-Priolo Earthquake Fault Zoning Act shall be enforced.

Policy S-1.5: Structures in areas that are at high risk from fault rupture, landslides, or coastal erosion shall not be permitted unless measures recommended by a registered engineering geologist are implemented to reduce the hazard to an acceptable level. Development shall be discouraged in the following areas:

a. Areas within 50 feet of active faults. Within State or County Earthquake Fault Zones, trenching or other suitable methodology shall be used to determine the location of the fault.

b. Areas within or adjacent to large active landslides. Large active landslides are those that are economically or technically infeasible to mitigate because of their rate of movement or size and volume.

Policy S-1.6: New development shall not be permitted in areas of known geologic or seismic hazards unless measures recommended by a California certified engineering geologist or geotechnical engineer are implemented to reduce the hazard to an acceptable level. Areas of known geologic or seismic hazards include:

a. Moderate or high relative landslide susceptibility.

b. High relative erosion susceptibility.

c. Moderate or high relative liquefaction susceptibility.

d. Coastal erosion and seacliff retreat.

e. Tsunami run-up hazards.

Policy S-1.7: Site-specific reports addressing geologic hazard and geotechnical conditions shall be required as part of the planning phase and review of discretionary development entitlements and as part of review of ministerial permits in accordance with the California Building Standards Code as follows:

a. Geotechnical reports prepared by State of California licensed Registered Geotechnical Engineers are required during building plan review for all habitable structures and habitable additions over 500 square feet in footprint area. Additions less than 500 square feet and non-habitable buildings may require geotechnical reports as determined by the pre-site inspection.

b. A Registered Geotechnical Engineer shall be required to review and approve the foundation conditions prior to plan check approval, and if recommended by the report, shall perform a site inspection to verify the foundation prior to approval to pour the footings. Setbacks shall be identified and verified in the field prior to construction.

c. All new development and subdivision applications in State- or County-designated Earthquake Fault Zones shall provide a geologic report addressing the potential for surface fault rupture and secondary fracturing adjacent to the fault zone before the application is considered complete. The report shall be prepared by a Registered Geologist or a Certified Engineering Geologist and conform to the State of California's most current Guidelines for evaluating the hazard of surface fault rupture.

d. Geologic reports and supplemental geotechnical reports for foundation design shall be required in areas with moderate or high landslide or liquefaction susceptibility to evaluate the potential on- and off-site impacts on subdivision layouts, grading, or building structures.

e. Where geologic reports with supplemental geotechnical reports determine that potential hazards effecting new development do not lead to an unacceptable level of risk to life and property, development in all Land Use Designations may be permissible, so long as all other applicable General Plan policies are complied with.

f. Appropriate site-specific mitigation measures and mitigation monitoring to protect public health and safety, including deed restrictions, shall be required.

Policy S-1.8: As part of the planning phase and review of discretionary development entitlements, and as part of review of ministerial permits in accordance with the California Building Standards Code, new development may be approved only if it can be demonstrated that the site is physically suitable and the development will neither create nor significantly contribute to geologic instability or geologic hazards.

Policy S-1.9: A California licensed civil engineer or a California licensed landscape architect can recommend measures to reduce moderate and high erosion hazards in the form of an Erosion Control Plan.

2013 Carmel Valley Master Plan

The 2013 CVMP is part of the 2010 General Plan. As such, the policies outlined in the 2013 CVMP and summarized below must be considered in conjunction with the 2010 General Plan.

Policy CV-4.1: In order to reduce potential erosion or rapid runoff:

a. The amount of land cleared at any one time shall be limited to the area that can be developed during one construction season.

b. Motorized vehicles shall be prohibited on the banks or in the bed of the Carmel River, except by permit from the Water Management District or Monterey County.

c. Native vegetative cover must be maintained on areas that have the following combination of soils and slope:

1. Santa Lucia shaly clay loam, 30–50% slope (SfF)
2. Santa Lucia-Reliz Association, 30–75% slope (Sg)
3. Cieneba fine gravelly sandy loam, 30–70% slope (CcG)
4. San Andreas fine sandy loam, 30–75% slope (ScG)
5. Sheridan coarse sandy loam, 30–75% slope (SoG)
6. Junipero-Sur complex, 50–85% slope (Jc)

Policy CV-4.4: The County shall require emergency road connections as necessary to provide controlled emergency access as determined by appropriate emergency service agencies (Fire Department, OES). The County shall coordinate with the emergency service agencies to periodically update the list of such connections.

Monterey County Building Code

The CBC, 2001 Edition, Volumes 1 and 2, published by the California Building Standards Commission and the International Conference of Building Officials, is adopted and incorporated, with subsequent amendments, into the Monterey County Building Code. All building guidelines used for the Proposed Project ~~and 130-Unit Alternative~~ will be dictated by the Monterey County Building Code.

Monterey County Erosion Control Ordinance

Monterey County has a specific Erosion Control Ordinance (Chapters 16.08 through 16.12 of the County Code). The County Building Services Department enforces the ordinance. The ordinance was adopted to safeguard the health, safety and public welfare and to minimize erosion, protect fish and wildlife, and otherwise protect the natural environment. Erosion control plans are required for building, grading, and land clearing.

Grading permits are required for all projects that move 100 cubic yards or more of soil. No grading permit can be issued if a determination is made that grading will result in hazards by reason of flood, geological hazard, seismic hazard or unstable soils, or is liable to endanger any other property or result in the deposition of debris on any public way or property or drainage course, or otherwise create a nuisance. Grading/erosion control inspectors and the chief building official conduct the procedural review associated with issuance of grading permits. Erosion control measures are enforced to eliminate and prevent conditions of accelerated erosion that have led to, or could lead to degradation of water quality, loss of fish habitat, damage to property, loss of topsoil or vegetation cover, disruption of water supply, and increased danger from flooding.

As part of this permit, the Project Applicant is required to submit a grading and erosion control plan, vicinity and site maps, and other supplemental information. Standard conditions in the grading permit include an extensive list of best management practices (BMPs) similar to those contained in a stormwater pollution prevention plan (SWPPP). All grading operations for which a permit is required are subject to inspection by the Director of Building Inspection, or an engineer responsible

for field inspection of his or her approved plans. In addition to meeting the conditions of the grading permit, the project applicant is required to uphold specific design standards, as adopted and/or amended by the County from the CBC, related to cuts and fills, erosion control devices or methods, and drainage facilities.

Emergency Response Planning

The County has adopted a comprehensive plan dealing with emergency response, including response to emergency earthquake, major fire, and flooding situations. The current *Monterey County Emergency Plan* is reviewed and updated yearly.

Prior County Plans and Policies

As stated in Chapter 1, *Introduction*, discussion pertaining to the 1982 General Plan and the 1986 CVMP is provided for informational purposes only.

1982 Monterey County General Plan

The 1982 *Monterey County General Plan* (1982 General Plan) contains the following policies that are intended to help avoid or mitigate geologic and seismic hazards.

Geology, Minerals, and Soils

Policy 3.1.1: Erosion control procedures shall be established and enforced for all private and public construction and grading projects.

Policy 3.1.2: The County shall support and encourage existing special district, state, and federal soil conservation and restoration programs within its borders.

Policy 3.1.3: In the absence of more detailed site specific studies, determinations of soil suitability for particular land uses shall be made according to the Soil Conservation Service's Soil Survey of Monterey County.

Seismic and Other Geologic Hazards

Policy 15.1.3: Lands within 1/8 mile of active or potentially active faults shall be treated as a fault zone until accepted geo-technical investigations indicate otherwise.

Policy 15.1.6: Prior to the construction of a new public facility or critical structure within a high hazard zone, the County shall require a full geological investigation by a registered geologist.

Policy 15.1.7: Prior to the issuance of a building or grading permit, the County shall require liquefaction investigations for proposed critical use structures and multi-family dwellings over four units when located in areas of moderate or high hazard for liquefaction or subject to the following conditions: location in primary floodways; and groundwater levels less than 20 feet, as measured in spring and fall.

Policy 15.1.8: The County should require a soils report on all building permits and grading permits within areas of known slope instability or where significant potential hazard has been identified.

Policy 15.1.12: The County shall require grading permits to have an approved site plan which minimizes grading and conforms to the recommendations of a detailed soils or geology investigation where required.

Policy 15.1.13: The County shall require septic leachfields and drainage plans to direct runoff and drainage away from unstable slopes.

Policy 15.1.15: Side castings from the grading of roads and building pads shall be removed from the site unless they can be distributed on the site so as not to change the natural landform. An exception to this policy will be made for those cases where changes in the natural landform are required as a condition of development approval.

1986 Carmel Valley Master Plan

The 1986 *Carmel Valley Master Plan* (1986 CVMP) is part of the 1982 General Plan. As such, the policies outlined in the 1986 CVMP and summarized below must be considered in conjunction with the 1982 General Plan.

Natural Resources: Geology, Minerals, and Soils

Policy 3.1.1.1: A soils report in accordance with the Monterey County Grading and Erosion Control ordinances shall be required for all changes in land use which require a discretionary approval in high or extreme erosion hazard areas as designated by the Soil Conservation Service manual, "Soil Surveys of Monterey County." This report shall include a discussion of existing or possible future deposition of upslope materials or downslope slippage for each site.

Policy 3.1.1.2: As part of the building permit process, the erosion control plan shall include these elements:

- Provision for keeping all sediment on-site.
- Provision for slow release of runoff water so that runoff rates after development do not exceed rates prevailing before development.
- Revegetation measures that provide both temporary and permanent cover.
- Map showing drainage for the site, including that coming onto and flowing off the property.
- Storm drainage facilities shall be designed to accommodate runoff from 10-year or 100-year storms as recommended by the Monterey County Flood Control and Water Conservation District.

Policy 3.1.1.3: All exposed areas within development projects subject to erosion and not involved in construction operations shall be protected by mulching or other means during the rainy season (October 15-April 15).

Policy 3.1.4: Grading shall be minimized through the use of step and pole foundations, where appropriate.

Policy 3.1.5: The amount of land cleared at any one time shall be limited to the area that can be developed during one construction season. This prevents unnecessary exposure of large areas of soil during the rainy season.

Policy 3.1.6: Site control shall be established throughout the Master Plan area, including lots of record and utilities extension, in order to minimize erosion and/or modification of landforms.

Impact Analysis

Methods for Analysis

Potential impacts related to geology, seismicity, and soils were analyzed qualitatively, based on a review of available data and information for the project area. Analysis focused on the Proposed Project's ~~and 130-Unit Alternative's~~ potential to increase the risk of personal injury, loss of life, and damage to property, including project facilities, as a result of existing or reasonably foreseeable geologic, seismic, and soil conditions in the project area.

Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, the 2010 General Plan plans and policies, the 2013 CVMP plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

A. Seismic Hazards

- Expose people or structures to potential substantial adverse effects resulting from the rupture of a known earthquake fault, seismic ground shaking, landslides, or seismic-related ground-failure, including liquefaction, and that cannot be mitigated through the use of standard engineering design techniques.

B. Landslides and Slope Stability

- 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 an onsite or offsite landslide or slope failure.
- Be located on an existing slope with a gradient greater than 30%.

C. Erosion

- Result in substantial soil erosion or the loss of topsoil and subsequent sedimentation into local drainage facilities and water bodies.

D. Soil Constraints

- Be located on an expansive soil, as defined by the California Building Code (1997) or be subject or to other soil constraints that might result in deformation of foundations or damage to structures, creating substantial risks to life or property.
- Result in substantial soil erosion or the loss of topsoil.
- 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.

Impacts and Mitigation Measures

A. Seismic Hazards

Impact GEO-1: Substantial Adverse Effects Resulting from Fault Rupture (no impact)

~~**Proposed Project**~~

No active or inactive faults cross the project site; the site is not within any Earthquake Fault Zone designated by the state under the Alquist-Priolo Earthquake Fault Zoning Act (California Division of Mines and Geology 2000). Consequently, the Proposed Project is unlikely to increase exposure of people or structures to hazards related to surface fault rupture. Therefore, there would be *no impact* and no mitigation is required.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative site, including Lot 130, is not within any Earthquake Fault Zone designated by the state under the Alquist-Priolo Earthquake Fault Zoning Act (California Division of Mines and Geology 2000);. Consequently, the 130-Unit Alternative would not increase exposure of people or structures to hazards related to surface fault rupture. Therefore, there would be *no impact.* No mitigation is required.~~

Impact GEO-2: Substantial Adverse Effects Resulting from Earthquake-Induced Ground Shaking (less than significant)

~~**Proposed Project**~~

~~The project site has the potential to experience strong ground shaking as a result of seismic activity on any of the region's principal active faults, and could expose people or structures to potential substantial adverse effects. All structures are required to be designed to meet or exceed the Monterey County Building Code requirements as adopted from the CBC. These codes include a wide variety of stipulations relevant to reducing earthquake-related risk, including foundation and structural design, and structural tolerances. Conformance to these codes does not constitute a guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake, but it would reduce the potential for structural damage resulting from a major earthquake to a less-significant level. Therefore, this impact would be *less than significant*. No mitigation is required.~~

~~**130-Unit Alternative**~~

The project site has the potential to ~~Similar to the Proposed Project, the 130-Unit Alternative site, including Lot 130, would~~ experience strong groundshaking as a result of seismic activity on any of the region's principal active faults, and could expose people or structures to potential substantial adverse effects. All structures ~~for the 130-Unit Alternative~~ would be designed to meet or exceed the Monterey County Building Code requirements as adopted from the CBC. Conformance to these codes does not constitute a guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake, but it would reduce the potential for structural damage resulting from a major earthquake to a less-significant level. Therefore, the impact would be *less than significant*. No mitigation is required.

Impact GEO-3: Substantial Adverse Effects Resulting from Seismic-Related Ground Settlement (less than significant with mitigation)

~~**Proposed Project**~~

Site settlement due to densification of sandy soils onsite could result in differential settlement of up to 4 inches within the residential development area. The differential ground settlement would expose people and structures to the adverse effects from seismic-related ground settlement. Exposure to the effects of ground settlement is considered a *potentially significant* impact. ~~Implementation of **Mitigation Measure GEO-1**, described below, would reduce this impact to a *less-than-significant* level.~~

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative, including Lot 130, could experience site settlement due to densification of sandy soils, resulting in differential settlement. This is considered a *potentially significant* impact.~~ Implementation of **Mitigation Measure GEO-1**, described below, would reduce this impact to a *less-than-significant* level.

Mitigation Measure GEO-1: Design All Proposed Structures in Accordance with the Requirements of the California Building Code, Current Edition, and Recommendations Contained in the Site-Specific Geologic and Geotechnical Reports

To minimize the potential for damage from seismic-related ground settlement, prior to construction the Applicant or successor(s) in interest will assure that all proposed structures are designed in accordance with the current and appropriate California Building Code standards and with recommendations made by the geotechnical reports prepared for the project (ENGEO 2006). In addition, the Project Applicant or successor(s) in interest will implement any recommendations made by the engineer of record and demonstrate to the County during the final stages of project design (prior to issuance of building permits) that the project is in compliance with all the above.

Impact GEO-4: Substantial Adverse Effects Resulting from Earthquake-Induced Liquefaction (less than significant)

~~**Proposed Project**~~

~~As discussed in the *Environmental Setting* section, one area south of the proposed development envelope contains a thick liquefiable subsurface layer, overlain by an insufficient layer of nonliquefiable surface materials that has the potential to induce ground failure during a very strong seismic groundshaking event. However, the location of the deposit was determined to be of little consequence to the Proposed Project because ground failure in that location would primarily affect an area of open space and would not pose a substantial risk to any habitable structures. This impact would be *less than significant*. No mitigation is required.~~

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, one~~ One area of the project ~~130-Unit Alternative~~ site, south of the proposed development envelope, ~~including Lot 130,~~ contains a thick liquefiable subsurface layer, overlain by an insufficient layer of nonliquefiable surface materials that has the potential to induce ground failure during a very strong seismic groundshaking event. However, ~~like the Proposed~~

~~Project,~~ the location of the deposit was determined to be of little consequence ~~to the 130-Unit Alternative~~ because ground failure in that location would primarily affect an area of open space and would not pose a substantial risk to any habitable structures. This impact would be *less than significant*. No mitigation is required.

B. Landslides and Slope Stability

Impact GEO-5: Substantial Adverse Effects Resulting from Landsliding (less than significant with mitigation)

~~Proposed Project~~

~~Slope gradients in the immediate vicinity of the project site are gentle, and no existing landslide hazard has been identified. Creation of cut slopes and fill embankments during project construction could, however, lead to a risk of localized slope failure if the slopes are improperly designed or implemented. Potential construction and placement of structures on steep slopes and manufacture of steep slopes are considered *potentially significant* impacts. However, implementation of **Mitigation Measure GEO-2** would reduce impacts to a *less-than-significant* level.~~

~~130-Unit Alternative~~

~~Similar to the Proposed Project, the c~~Slope gradients in the immediate vicinity of the project site are gentle, and no existing landslide hazard has been identified. Creation of cut slopes and fill embankments during construction could lead to a risk of localized slope failure if the slopes are improperly designed or implemented. ~~In contrast to the Proposed Project, slopes to the north of Lot 130 are much steeper than those in the immediate vicinity of the project site. The slopes north of Lot 130 have as much as 50% gradient. Carmel Valley Road separates the lot from the steeper slope gradients. The highway is approximately 90 feet across. Slope gradients on Lot 130 are gentle to moderate.~~ Potential construction of structures on steep slopes and manufacture of steep slopes are considered *potentially significant* impacts. Implementation of **Mitigation Measure GEO-2** would reduce this impact to a *less-than-significant* level.

Mitigation Measure GEO-2: ~~Conduct Additional Site-Specific Investigation Relative to Lot 130 and~~ Implement Recommended Grading and Slope Design Criteria of the Site-Specific Geotechnical Reports

~~The Project Applicant or successor(s) in interest will conduct additional geotechnical investigation to determine if there are any direct or indirect landsliding risks, including risks from landslides north of Carmel Valley Road, associated with the future development of Lot 130. If landslide hazards are identified, then site-specific recommendation of the additional investigation will be incorporated into site plans.~~

In order to reduce the potential for slope failure to occur, specific design measures, as recommended in the geotechnical investigations (ENGEO 2005 and as required by this measure), will be incorporated into the Proposed Project ~~and the 130-Unit Alternative~~ by the applicant or successor(s) in interest during construction. Such measures will include the following.

- The removal of loose or compressible surface soils from all areas to receive fill, followed by scarification, moisture conditioning, and recompaction to create a firm, non-yielding base, and replacement with engineered backfill.
- Grading operations will meet the requirements of the Guide Contract Specifications included in the geotechnical report (ENGEO 2005).
- The grading of cut and fill slopes to a gradient of no steeper than 2:1.
- Construction of a sub-drained keyway[3] system.
- Implementation of a site drainage plan to divert surface drainage away from potentially unstable foundation systems.

In addition to incorporating the recommendations of the site-specific geotechnical studies, all earthwork will conform to applicable design standards of the UBC and the County. All design and construction activities will be conducted by or under the supervision of a registered geological engineer or engineering geologist, and are subject to review by the County through the grading permit and construction oversight process.

C. Erosion

Impact GEO-6: Accelerated Soil Erosion and Sedimentation (less than significant with mitigation)

~~**Proposed Project**~~

~~Implementation of the Proposed Project would involve a substantial amount of earthwork to create the proposed subdivision lots and install necessary utilities. This earthwork would result in extensive soil and vegetation disturbance that would increase the potential for accelerated runoff, erosion, and sedimentation during project construction. This is considered to be a *potentially significant* impact. Implementation of **Mitigation Measure GEO-3** would reduce this impact to a *less-than-significant* level.~~

~~At project completion, there would be an increase in imperviousness in the project area. Potential downstream impacts from soil erosion and sedimentation from an increased stormwater runoff are discussed in Chapter 3.2, *Hydrology and Water Quality.*~~

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative~~ Implementation of the Proposed Project would involve a substantial amount of earthwork to create the proposed subdivision lots and install necessary utilities. This earthwork would result in extensive soil and vegetation disturbance that would increase the potential for accelerated runoff, erosion, and sedimentation during construction. This is considered a *potentially significant* impact, but implementation of **Mitigation Measure GEO-3** would reduce the impact to a *less-than-significant* level.

[3] A "keyway" is an excavated and backfilled trench beneath the toe of a proposed fill slope. It serves to anchor and support the fill slope.

At project completion, there would be an increase in imperviousness in the project area. Potential downstream impacts from soil erosion and sedimentation from an increased stormwater runoff are discussed in Chapter 3.2, *Hydrology and Water Quality.*

Mitigation Measure GEO-3: Prepare and Implement an Erosion and Sediment Control Plan

Prior to construction, the Applicant or successor(s) in interest responsible for project grading, or a qualified consultant acting on behalf of the above, will prepare and implement an erosion and sediment control plan. The plan will be prepared in accordance with the requirements of the local erosion and sediment control ordinances. The plan will contain details and specifications for a variety of standard and site-specific BMP's that will be implemented to control wind and water erosion, stormwater runoff, sediment, and other construction-related pollutants during project construction. The Erosion and Sediment Control Plan will remain in effect until all areas disturbed during construction have been revegetated or otherwise permanently stabilized. Additional measures may be prescribed during the final stages of project design and construction. The Erosion and Sediment Control Plan will be submitted to Monterey County Planning and Building Inspection Department for review and approval prior to issuance of any grading permit. This measure can be combined with requirements of **Mitigation Measure HYD-2** to prepare a SWPPP in compliance with National Pollutant Discharge Elimination System (NPDES) general construction permit requirements.

D. Soil Constraints

Impact GEO-7: Substantial Adverse Effects Resulting from Expansive Soils (less than significant with mitigation)

~~**Proposed Project**~~

Although the shrink-swell potential of the native soil and bedrock materials is typically low within the project ~~area~~ site, the presence of slightly more expansive soils may be encountered as the golf course topographic mounds and swales are disturbed during grading, or if imported soils are used to establish finished building pad grades above potential flood elevations. Loose or compressible surface soils encountered during grading should be addressed and mitigated in order to create a suitable base for building pads, areas to receive fill, or for shallow cut areas that do not extend below this zone. Implementation of **Mitigation Measures GEO-1** and **GEO-4** would reduce this impact to a *less-than-significant* level.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the majority of the 130-Unit Alternative site is located on soil with low shrink-swell potential. However, the presence of slightly more expansive soils may be encountered as the golf course topographic mounds and swales are disturbed during grading. Loose or compressible surface soils encountered during grading should be addressed and mitigated in order to create a suitable base for building pads, areas to receive fill, or for shallow cut areas that do not extend below this zone. The 130-Unit Alternative's Lot 130 is located on soil with moderate shrink-swell potential. Because the soils may expand when wet and contract when dry, foundation structures may experience cracking when this phenomenon occurs. To avoid impacts related to expansive soils, the applicant would be required prepare a geotechnical report that tests soils for expansion potential. The results of the geotechnical report would be used to design the unit on Lot~~

~~130 according to CBC standards. Implementation of **Mitigation Measure GEO-1, GEO-4, and GEO-5** would reduce this impact to a *less-than-significant* level.~~

Mitigation Measure GEO-4: Remove Localized Zones of Overly Loose Materials

During construction of the Proposed Project ~~or the 130-Unit Alternative~~, the Applicant or successor(s) in interest responsible for site grading and foundational work, will implement the recommended design criteria of the geotechnical report (ENGEO 2005). These criteria relating to loose materials include the following measures.

- Localized zones of overly loose materials will be removed to a firm, non-yielding base, then scarified, moisture condition, if necessary, and recompacted to create a suitable foundation soil prior to fill placement.
- The spatial extent will include at least the area encompassed by the building footprint plus a horizontal buffer of 5 feet surrounding the building footprint.
- The actual depth for reworking should be determined by a qualified geotechnical engineer at the time of grading.

The responsible party will also implement all other relevant soil recommendations detailed in the geotechnical report and shall demonstrate to the County that the project is in compliance with the criteria and recommendations.

~~**Mitigation Measure GEO-5: Prepare a Geotechnical Report for Lot 130 Concerning Expansive Soils**~~

~~Prior to construction, the Applicant or successor(s) in interest will prepare a geotechnical report for Lot 130 to determine soil expansion potential. Development on this lot will be designed by a qualified architect and/or engineer according to the recommended design criteria of the geotechnical report. The Applicant or successor(s) in interest will also implement all other relevant soil recommendations detailed in the geotechnical report and demonstrate to the County at the final design phase (prior to issuance of a building permit or any water use permits) that the project is in compliance with the design criteria and recommendations of the geotechnical report. .~~

Impact GEO-8: Substantial Adverse Effects Resulting from Loss of Topsoil (less than significant)

~~**Proposed Project**~~

~~Surface soils on the existing site have undergone varying degrees of disturbance and thus offer little topsoil value. In addition to having numerous artificial mounds and depressions, the site landscaping consists of many non-native species of trees, shrubs, and grasses. Given the highly disturbed nature of the site, further disturbance by construction activities would not result in a significant loss of topsoil. Therefore, this impact would be *less than significant*. No mitigation is required.~~

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, surface~~ Surface soils on the existing site~~, including Lot 130,~~ have undergone varying degrees of disturbance and thus offer little topsoil value. In addition to having

numerous artificial mounds and depressions, the site landscaping consists of coast live oaks, native to California, and many non-native species of trees, shrubs, and grasses. Given the highly disturbed nature of the site, further disturbance by construction activities would not result in a significant loss of topsoil. Therefore, this impact would be *less than significant*. No mitigation is required.

Impact GEO-9: Effects of Septic Systems on Soils (no impact)

~~**Proposed Project**~~

Septic systems, including the use of tanks and alternative disposal systems, are not included as part of the project design. New sewer connections to the main sewer trunk located near the project area would serve the proposed housing development. Soils to adequately support wastewater disposal would not be required. Therefore, the Project would have *no impact*. No mitigation is required.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, septic systems, including the use of tanks and alternative disposal systems, are not proposed by the 130-Unit Alternative. Therefore, this alternative would have *no impact*. No mitigation is required.~~

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Chapter 3.2
Hydrology and Water Quality

Introduction

This chapter provides a discussion of the hydrology and water quality issues related to the Proposed Project ~~and the 130-Unit Alternative~~ in Carmel Valley. This chapter includes a review of existing conditions based on available literature and field surveys; a summary of local, state, and federal policies and regulations related to hydrology and water quality; and an analysis of direct and indirect environmental impacts of the project. Where feasible, mitigation measures are recommended to reduce the level of impacts.

Impact Summary

The hydrology and water quality impacts of the Proposed Project ~~and the 130-Unit Alternative~~ are summarized in **Table 3.2-1.** As shown in **Table 3.2-1**, the Proposed Project ~~and the 130-Unit Alternative~~ would have some significant adverse impacts related to hydrology and water quality. However, with the implementation of the mitigation measures described in this Second Revised ~~Recirculated~~ Draft EIR, all of the impacts listed would be reduced to less-than-significant levels.

Table 3.2-1. Hydrology and Water Quality Impact Summary

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
A. Alteration of Drainage Patterns				
HYD-1: Alteration of Surface Drainage Patterns That Results in Increased Erosion or Siltation	~~Potentially Significant~~	Potentially Significant	~~Both the Proposed Project and the 130-unit Alternative~~ HYD-1: Prepare and Implement a Stormwater Control Plan HYD-2: Prepare and Implement Operation and Maintenance Plan for Stormwater Control Measures HYD-3: Enter into Maintenance Agreement for Stormwater Control Measures ~~Proposed Project Only~~ ~~BIO-4: Provide Funding Assurances and Reporting Concerning Restoration Progress and Success~~ ~~BIO-7: Monitor Bank Erosion in Project Reach and Restore Riparian Vegetation and River Bank As Necessary~~	LTS

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
B. Stormwater Runoff and Drainage Infrastructure				
HYD-2: Result in Increased Stormwater Runoff Due to an Increase in Impervious Surfaces and Topographic Alterations Resulting in Drainage or Flooding Impacts	~~Potentially Significant~~	Potentially Significant	HYD-1, HYD-2, HYD-3	LTS
C. Water Quality				
HYD-3: Degrade Surface Water Quality during Construction and from Operation	~~Potentially Significant~~	Potentially Significant	HYD-1, HYD-2, HYD-3 HYD-4: Implement a Spill Prevention and Control Program HYD-5: Implement Measures to Maintain Surface Water or Groundwater Quality GEO-3: Prepare and Implement an Erosion and Sediment Control Plan	LTS
D. Groundwater Supply				
HYD-4: Substantially Deplete Groundwater Supplies or Interfere with Groundwater Recharge	~~LTS~~	LTS	None Required	–
E. Risk of Flooding				
HYD-5: Place Housing or Structures Within a 100-Year Flood Hazard Area and Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Flooding	~~Potentially Significant~~	Potentially Significant	HYD-6: Protect Eastern Slope of Excavated Basin ~~HYD-7: Avoid Encroachment into the 100-year Floodplain for Lot 130 Uses (130-Unit Alternative Only)~~	LTS
F. Risk of Inundation by Seiche, Tsunami, or Mudflow or Due to Sea Level Rise				
HYD-6: Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Inundation Due to Seiche, Tsunami, or Mudflow Hazards or Flooding Associated with Sea Level Rise	~~LTS~~	LTS	None Required	–
LTS = Less than Significant				

Environmental Setting

Research Methods

The following project information was reviewed for analysis of hydrology and water quality in the project area.

- Balance Hydrologics, Inc. 2005c. *Preliminary Stormwater Management Plan for Rancho Cañada, County of Monterey, California*. Prepared for Carlson, Barbee & Gibson, Inc. San Ramon, California.
- Balance Hydrologics, Inc. 2005a. Request for conditional letter of map revision, Carmel River, County of Monterey, California.
- Balance Hydrologics, Inc. 2006a. Additional information requested for case number 05-09-2100A444-R, Carmel River, County of Monterey, California. January.
- Balance Hydrologics, Inc. 2006b. Additional information requested for case number 05-09-A444-R, Carmel River, County of Monterey, California. May.
- Balance Hydrologics, Inc. 2006c. *Public Notice of Regulatory Floodway Change and Changes to the BFEs on The Carmel River Per the Conditional Letter of Map Revision Request for Rancho Cañada* (FEMA Case Number 05-09-A444R). June.
- Balance Hydrologics, Inc. 2014a. Re: Implications of the revised FEMA floodplain mapping for the Rancho Cañada Village Project, County of Monterey. Letter to Jacqueline Zischke from Edward D. Ballman. September 18.
- Balance Hydrologics, Inc. 2014b. *County Service Area 50 Final Lower Carmel River Stormwater Management and Flood Control Report*. Prepared for Monterey County Resource Management Agency. October.
- Balance Hydrologics, Inc. 2014c. Response to Comments from Computational Hydraulics and Transport, LLC on the Hydrology and Water Quality Section of the *Rancho Cañada Village Specific Plan Draft Environmental Impact Report*. September 18.
- Federal Emergency Management Agency (FEMA). 2009. *Flood Insurance Study, Monterey County, California, Unincorporated Areas*.
- Jacqueline Zischke. 2015. Email to ICF regarding County Service Area (CSA)-50 Hydrology. January 12.
- Mark R. Sterner, L&S Engineering and Surveying, Inc. 2014. Letter to Jacqueline Zischke regarding Drainage Summary for the Rancho Cañada Village 130-Unit Project Alternative per the Monterey Regional Storm Water Management Program Requirements. September 23.

Existing Conditions

Climate

The Carmel Valley is located on the central California coast, immediately adjacent to the Pacific Ocean. The climate in this region consists of generally mild temperatures year-round, with average

high temperatures varying from the low 60s (Fahrenheit) in the winter to the low 70s in the summer. Average annual precipitation is 18 to 20 inches, and the majority falls in the winter as rain (Balance Hydrologics 2005a).

Surface Water

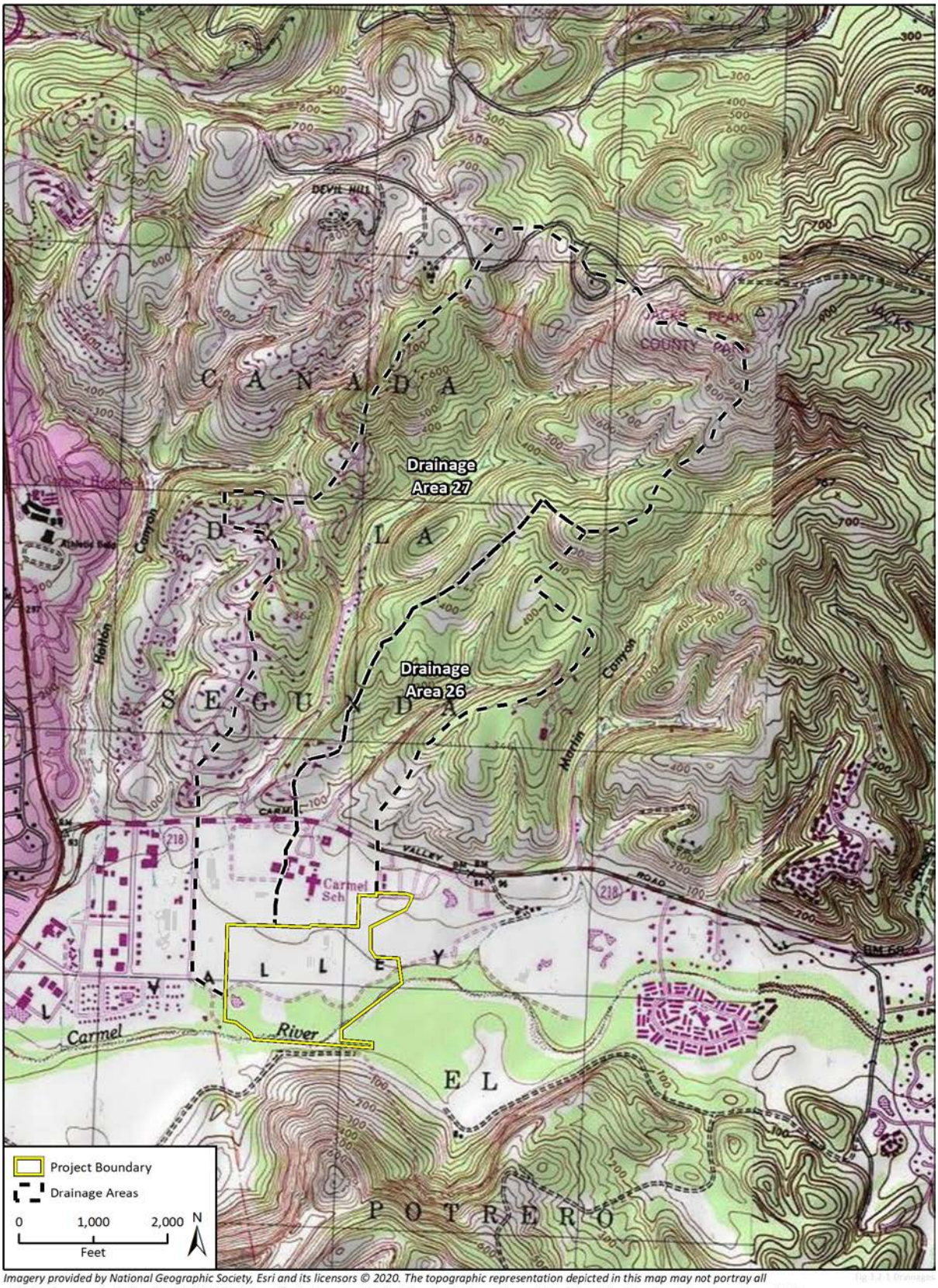
The primary surface water feature in the project area is the Carmel River, which borders approximately 1,900 feet of the southern edge of the project site (Balance Hydrologics 2005a). **Figure 3.2-1** depicts the watershed of the project area. The Carmel River originates in the Santa Lucia Range of the Coast Ranges and flows generally north and west, and discharges into the Carmel Bay in the Pacific Ocean. It has a watershed area of 246 square miles at Via Mallorca, about 1-mile upstream of the project area (Balance Hydrologics 2005a). Watershed elevations vary from sea level to 4,965 feet at the highest peak, and vegetation consists of primarily chaparral, grasslands, and oak woodlands (Carmel River Watershed Conservancy 2004).

Project area topography is divided between floodplain and terrace. Most of the site consists of floodplain immediately adjacent to the river, while the northern most area consists of a terrace in the northwest and northeast corners (**Figure 3.2-2**). Project area soils have relatively high infiltration rates, ranging from 2 to 6 inches per hour over most of the site, and from 6 to 20 inches per hour over a small portion of the site. As a result, there appears to have been insufficient overland flow to establish a defined drainage pattern (**Figure 2-5**). Any existing drainage patterns were likely also altered by construction of golf course topography for the Rancho Cañada Golf Club. Local runoff is currently routed through a series of swales and drainage pipe, and all project area runoff ultimately drains to the Carmel River (Balance Hydrologics 2005a).

As shown in **Figure 3.2-1,** the project area is located within two County drainage areas (DAs). Additional offsite run-on for the residential portion of the project area ~~(and the residential element of the 130-Unit Alternative)~~ is generated upslope from the project area in two drainages: the western drainage is referred to as DA 27 and the eastern drainage is referred to as DA 26 (Balance Hydrologics 2014b). DA 27 is located within County Service Area No. 50[1] (CSA-50, Lower Carmel Valley), which not only provides for drainage, but it also funds flood-control projects in areas at the mouth of the Valley. DA 27 is 578 acres, and runoff travels south under Carmel Valley Road to a ditch (DA 27 channel) along the west side of the Carmel Middle School property. The ditch ends at a large swale northwest of the project area, where flows continue to the west towards Val Verde Drive.

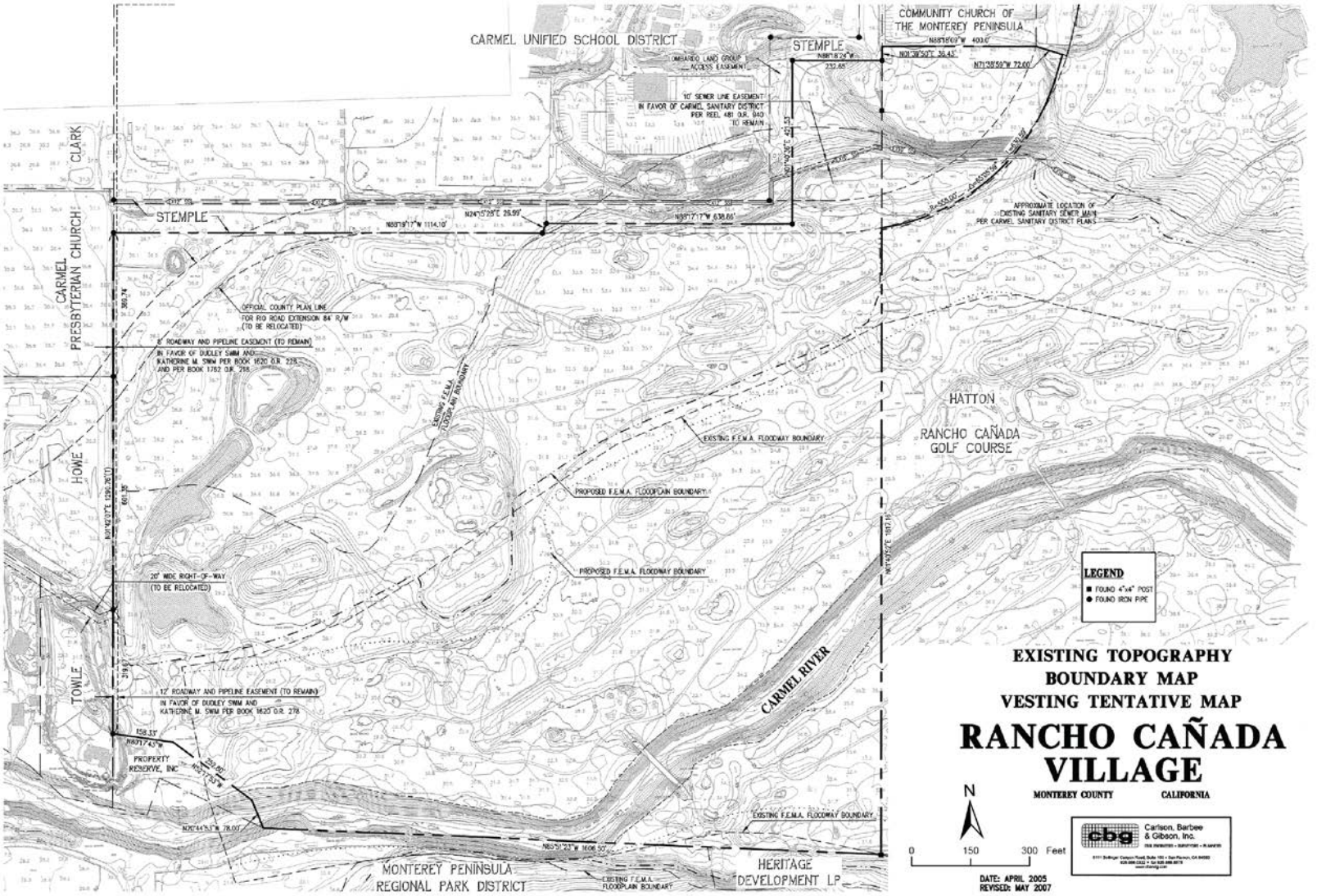
[1] DA 27 stormwater flows into CSA-50, but the actual DA 27 area is not located within the CSA-50 (Balance Hydrologics 2014b). This area is located north of the project site.

Figure 3.2-1 County Drainage Areas 26 and 27



Imagery provided by National Geographic Society, Esri and its licensors © 2020. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

Figure 3.2-2 Proposed Project Existing Topography



Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County; original figure prepared by Carlson, Barbee, & Gibson Inc. (2007)

None of the flow from this watershed typically enters or impacts the Rancho Cañada Village property. DA 26 is 199 acres, and runoff travels south to a detention basin system located on Carmel Middle School property just north of the project area. DA 26 drains onto the Rancho Cañada Golf Club.

~~The western part of the 130-Unit Alternative is within DA 26 and DA 27. There is a separate drainage area that drains the eastern portion of the golf course and includes Lot 130 in the 130-Unit Alternative.~~

Groundwater

The project lies within the Carmel Valley Alluvial Aquifer system, which functions as a water supply source for a large portion of the local area (Monterey County Water Resources Agency 2002 in Balance Hydrologics 2005a). The California-American (Cal-Am) Water Company utilizes this aquifer to provide water to 112,000 residents and 3,200 businesses in the greater Monterey Peninsula area, and numerous private wells also access the aquifer (Balance Hydrologics 2005a). Additional new wells must be permitted by the Monterey Peninsula Water Management District (MPWMD) (Monterey Peninsula Water Management District 2002). As explained in Chapter 3.10, *Public Services, Utilities, and Recreation*, Cal-Am is under State Water Resources Control Board (State Water Board) orders to reduce withdrawals from the Carmel River aquifer beyond its legal water rights.

The aquifer is formed from alluvial material along the Carmel River Valley and extends from San Clemente Dam to the Carmel River Lagoon at the Pacific Ocean (Balance Hydrologics 2005a). Lowered groundwater levels have been identified as the cause of several negative effects along the river: loss of riparian vegetation and associated bank instability and reduced steelhead habitat due to low river levels (Balance Hydrologics 2005a). Water levels are typically 5 to 30 feet below the ground surface, and increase rapidly during periods of recharge by the Carmel River (Department of Water Resources 2003). Water level elevations within the basin fluctuate by 5 to 15 feet during normal water years and may decline by as much as 50 feet during drought years (Department of Water Resources 2003).

One of the Cal-Am wells is located in the project area. Of the 21 wells that Cal-Am has along the Carmel River, the well at the Rancho Cañada golf course site is the farthest downstream. This well was drilled in 1981. At this well, the groundwater is approximately 15 feet below the surface and pumping occurs at 49 feet below the surface (State Water Resources Control Board 1995).

Water supply related to the Proposed Project ~~and 130-Unit Alternative~~ is discussed further in Chapter 3.10, *Public Services, Utilities, and Recreation*.

Flooding and Drainage

Flooding has occurred along the Carmel River on multiple occasions. Levees have been constructed by private interests on the Carmel River from State Route 1 upstream approximately 4,000 feet on the north bank, and from 3,000 feet upstream of the mouth to 10,000 feet upstream of the mouth on the south bank. These levees are not adequate to hold the 1% annual chance flood (Federal Emergency Management Agency 2009).

Peak flows on the Carmel River typically occur between January and March, and large flood events are driven by seasonal storm patterns. Although the river has a large watershed, the lowest reaches

of the river often go dry in the late summer months due to water supply withdrawals (ENTRIX 2008).

Table 3.2-2 presents the current estimated 10-year through 500-year Carmel River flows near the project area

Table 3.2-2. FEMA Flood Insurance Flows along the Carmel River

Return Period	10-Year	50-Year	100-Year	500-Year
Flow (cubic feet per second [cfs])[1]	9,500	18,500	22,700	32,600

Source: Federal Emergency Management Agency 2009.

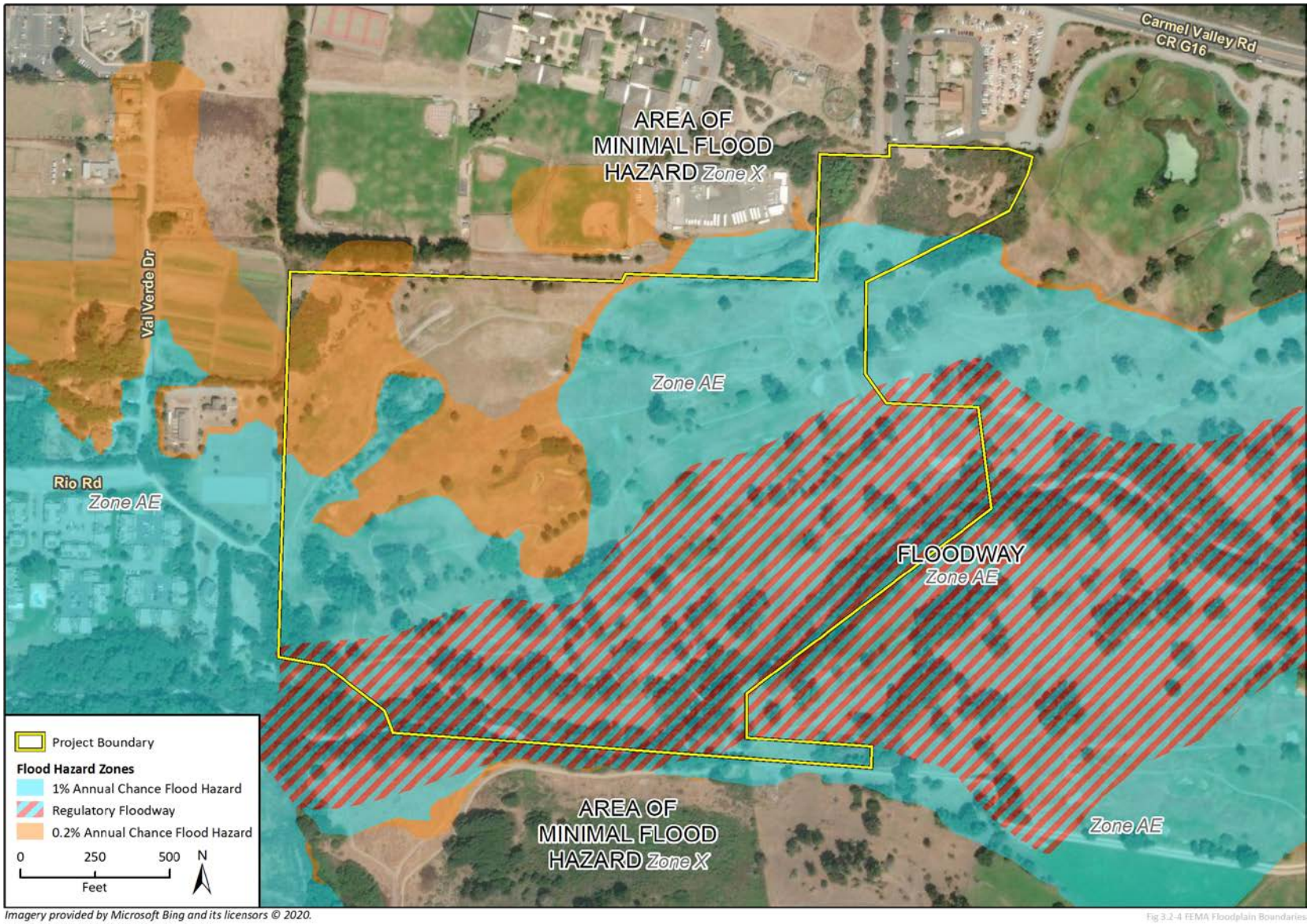
[1] At U.S. Geological Survey Gage Near Carmel below Potrero Creek.

Within the project area, the water surface elevations at the 100-year flow (the base flood elevations) range from 39 feet (NAVD) at the southwest portion of the project area to 43 feet NAVD at the northeast portion of the project area. The 100-year water surface elevation near the intersection of Val Verde Road and Rio Road is approximately 36 feet NAVD (Federal Emergency Management Agency 2015).

~~As shown in **Figure 3.2-3**, approximately 56 acres of the project area is within the FEMA-designated 100-year floodplain of the Carmel River of which 30 acres are located within the regulatory floodway (Federal Emergency Management Agency 2009).~~ As shown in **Figure 3.2-34**, 55 acres of the project site ~~130-Unit Alternative~~ are within the FEMA-designated 100-year floodplain of the Carmel River, of which 31 acres are within the regulatory floodway (Federal Emergency Management Agency 2009). Monterey County (County) enforces flood control standards within 100-year flood hazard areas in accord with National Flood Insurance Program (NFIP) requirements, as discussed in more detail under the *Regulatory Setting*.

Drainage conditions within the County drainage areas are variable. The Monterey County Resource Management Agency (MCRMA) is responsible for flood control facilities within drainage areas of CSA-50. The 10-year discharge on DA 26 is estimated to be 28 cubic feet per second (cfs), while the 100-year discharge is estimated to be 78 cfs (Balance Hydrologics 2005a). The 10-year discharge on DA 27 is estimated to be 86 cfs (Balance Hydrologics 2005a) and the 100-year discharge is estimated to be 392 cfs (Balance Hydrologics 2014b). Runoff from the upstream portions of DA 27 is conveyed by natural upland channels to a 30-inch and two 24-inch culverts under Carmel Valley Road and then to an intermittent channel that flows along the western boundary of the Carmel Middle School property for a short distance before tapering out to existing grade. The channel becomes largely undefined before reaching the southwest corner of the school property. During large storm events, storm drain modeling (discussed below) indicates that flood flows will overtop the channel and be routed as overland flow into and through CSA-50 (Balance Hydrologics 2014b).

Figure 3.2-3 FEMA Floodplain Boundaries



There have been two significant dams on the Carmel River: Los Padres Dam and San Clemente Dam. These structures were constructed by Cal-AM for water supply purposes. No flood-control storage was allocated in either reservoir, although some flood-control benefits may have been attributable to the dams early in the flood season when storage space is available as a result of summer draw down for water supply. The dams have had little effect on reducing peak discharges downstream late in the flood season once they have become full (Federal Emergency Management Agency 2009). San Clemente Dam has been removed as part of habitat restoration efforts along the Carmel River along with the Old Carmel River Dam. There are discussions about the potential future removal of Los Padres Dam as well, but its fate is uncertain at this point in time.

Water Quality

Surface Water Quality

The Carmel River is not listed by the state as an impaired water body pursuant to the Clean Water Act Section 303(d). Designated beneficial uses for the Carmel River (downstream from Tularcitos Creek), are as follows.

- Municipal and Domestic Supply (MUN)
- Agricultural Supply (AGR)
- Ground Water Recharge (GWR)
- Water Contact Recreation (REC-1)
- Non-Contact Water Recreation (REC-2)
- Wildlife Habitat (WILD)
- Cold Fresh Water Habitat (COLD)
- Warm Fresh Water Habitat (WARM) Migration of Aquatic Organisms (MIGR)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Commercial and Sport Fishing (COMM)

Surface water quality objectives have been established by the Central Coast Regional Water Quality Control Board (Regional Water Board) for the Carmel River watershed, as shown in **Table 3.2-3**.

Table 3.2-3 Water Quality Objectives for the Carmel River[1] (milligrams per liter)

Watershed (Subbasin)	Total Dissolved Solids (TDS)	Chloride (Cl)	Sulfate (SO_4)	Boron (B)	Sodium (Na)
Carmel River	200	20	50	0.2	20

Source: Central Coast Regional Water Quality Control Board 2011.

[1] Objectives shown are annual mean values. Objectives are based on preservation of existing quality or water quality enhancement believed attainable following control of point sources.

Water quality in the Carmel River has been measured by MPWMD since 1991. Sampling has primarily occurred at two locations: below Los Padres Dam and below San Clemente Dam. The following water quality constituents are typically measured: temperature (in Fahrenheit [F°), dissolved oxygen (in milligrams per liter [mg/L]), pH, carbon dioxide (in mg/L), specific conductance (in microSiemens/centimeter [uS/cm]), and turbidity (in nephelometric turbidity units [NTU])(Monterey Peninsula Water Management District 2004).

Water temperature data have been collected at six additional locations along the Carmel River since 1996. In general, water temperatures in the river are within the desirable range for aquatic species in the winter and spring months. Lower temperatures are found during these seasons due to larger and cooler river inflows. As flows drop and the water warms, temperatures often exceed the recommended range for aquatic species during the summer and fall months. For example, maximum measured daily water temperatures can exceed 70° F in the mainstem, which is considerably higher than the optimal 50° F to 60° F range identified for steelhead growth. All six water temperature monitoring stations indicate stressful temperature conditions during the summer and fall seasons (Monterey Peninsula Water Management District 2004).

Dissolved oxygen values measured on the Carmel River generally meet or exceed 7 mg/L, while measured pH values uniformly fall between 7 and 8.5. Measured carbon dioxide values occasionally rise above the 10 mg/L upper limit recommended for fish. Measured specific conductance has ranged from 129 to 550 uS/cm, with an average of 267 uS/cm over the sampling period (Monterey Peninsula Water Management District 2004).

Measured turbidity in Carmel River is typically very low. Increases in turbidity have been observed during large winter storm events and for several months after large-scale landslide and bank erosion activity within the watershed. Turbidity levels also appear to have increased after water levels in San Clemente Reservoir were lowered in June 2003, releasing a large amount of previously trapped sediment. It is unclear how long turbidity levels in the Carmel River remained elevated from this event, as monitoring data are only available through August 2004 (Monterey Peninsula Water Management District 2004).

No water quality data are available for local project area runoff. Surface water quality in the project area is directly affected by stormwater runoff from adjacent streets and properties delivering fertilizers, pesticides, metals, hydrocarbons, and other pollutants. The project site is currently in use as a golf course, and local runoff is likely to contain phosphorus, nitrogen, and fine sediments. Golf Course landscaping activities often include the use of pesticides, herbicides (e.g., glyphosate), fungicides (e.g., chlorothalonil, flutolanil, propiconazole, and iprodione), and fertilizers.

Groundwater Quality

Groundwater quality constituents of concern in the Carmel Valley Groundwater Basin are nitrates from septic tanks, iron, and manganese. Data collected by MPWMD in 1995 through 1996 indicated that nitrate concentrations in the basin, however, are actually much lower than state drinking water standards (Department of Water Resources 2003). Groundwater withdrawals for water supply in the lower portion of the basin must be treated for iron and manganese prior to distribution (Department of Water Resources 2003).

Beneficial uses of groundwater in the project area include MUN, AGR, and industrial use (IND). Water quality objectives have been set for groundwater regarding bacteria, chemical constituents, organic chemicals, radioactivity, and tastes and odors.

Regulatory Setting

This section discusses the federal, state, and local policies and regulations that are relevant to the analysis of hydrology and water quality impacts of the Proposed Project ~~and 130-Unit Alternative~~.

Federal Policies and Regulations

Clean Water Act

The State Water Board is the state agency with primary responsibility for implementation of state and federally established regulations relating to water resource issues. Typically, all regulatory requirements are implemented by the State Water Board through Regional Water Boards established throughout the state. The Central Coast Regional Water Board is the agency responsible for regulating discharges in the Carmel River Valley.

The Clean Water Act (CWA) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. It operates on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit.

Section 303

The State of California adopts water quality standards to protect beneficial uses of state waters as required by Section 303 of the CWA and the Porter-Cologne Water Quality Control Act of 1969. Section 303(d) of the CWA established the total maximum daily load (TMDL) process to guide the application of state water quality standards (see discussion of state water quality standards below). To identify candidate water bodies for TMDL analysis, a list of water quality–limited streams was generated. These streams are impaired by the presence of pollutants, including sediment, and are more sensitive to disturbance. No drainages in or immediately adjacent to the project area are 303(d) listed, including the Carmel River.

Section 401

Section 401 of the CWA requires that an applicant pursuing a federal permit to conduct any activity that may result in a discharge of a pollutant obtain a Water Quality Certification (or waiver). Water Quality Certifications are issued by Regional Water Quality Control Boards (Regional Water Boards) in California. Under the CWA, the state (via Regional Water Boards) must issue or waive Section 401 Water Quality Certification for the project to be permitted under Section 404. Water Quality Certification requires the evaluation of water quality considerations associated with dredging or placement of fill materials into waters of the United States and imposes project-specific conditions on development. A Section 401 waiver establishes standard conditions that apply to any project that qualifies for a waiver.

Section 404

Section 404 of the CWA regulates the discharge of dredged and fill materials into waters of the United States, which include oceans, bays, rivers, streams, lakes, ponds, and wetlands. Project proponents must obtain a permit from the U.S. Army Corps of Engineers (USACE) for all discharges of dredged or fill material into waters of the United States, including wetlands, before proceeding with a proposed activity. Before any actions that may impact surface waters are carried out, a delineation of jurisdictional waters of the United States must be completed, following USACE protocols in order to determine whether the project area encompasses wetlands or other waters of the United States that qualify for CWA protection. These include any or all of the following.

- Areas within the ordinary high water mark of a stream, including non-perennial streams with a defined bed and bank and any stream channel that conveys natural runoff, even if it has been realigned.
- Seasonal and perennial wetlands, including coastal wetlands.

Wetlands are defined for regulatory purposes as areas "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" (33 Code of Federal Regulations [CFR] 328.3, 40 CFR 230.3).

Section 404 permits may be issued only for the least environmentally damaging practicable alternative. That is, authorization of a proposed discharge is prohibited if there is a practicable alternative that would have fewer adverse impacts and lacks other significant adverse consequences.

Section 402

Section 402 of the CWA regulates discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program, administered by the Environmental Protection Agency (EPA). In California, the State Water Board is authorized by the EPA to oversee the NPDES program through the Regional Water Boards (see related discussion under *Porter-Cologne Water Quality Control Act*). The NPDES program provides for both general permits (those that cover a number of similar or related activities) and individual permits.

Federal Flood Insurance Program

Alarmed by increasing costs of disaster relief, Congress passed the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. The intent of these acts was to reduce the need for large, publicly funded flood control structures and disaster relief by restricting development on floodplains.

FEMA administers the NFIP to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA issues flood insurance rate maps for communities participating in the NFIP. These maps delineate flood hazard zones in the community. The locations of FEMA-designated floodplains in the project area are included in the *Environmental Setting*.

Executive Order 11988

Executive Order 11988 (Floodplain Management) addresses floodplain issues related to public safety, conservation, and economics. The order generally requires federal agencies constructing, permitting, or funding a project to do the following.

- Avoid incompatible floodplain development.
- Be consistent with the standards and criteria of the NFIP and restore and preserve natural and beneficial floodplain values.

State Policies and Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, passed in 1969, articulates with the federal CWA. It established the State Water Board and divided the state into nine regions, each overseen by a Regional Water Board. The State Water Board is the primary state agency responsible for protecting the quality of the state's surface and groundwater supplies, but much of its daily implementation authority is delegated to the nine Regional Water Boards, which are responsible for implementing CWA Sections 401, 402, and 303(d). In general, the State Water Board manages both water rights and statewide regulation of water quality, while the Regional Water Boards focus exclusively on water quality within their regions.

California Regional Water Quality Control Board, Central Coast Region—Basin Plan

The Regional Water Board is responsible for implementing the *Water Quality Control Plan for the Central Coast Region* (Basin Plan), which includes Monterey County. The Basin Plan designates beneficial uses and water quality objectives for waters of the state, including surface waters and groundwaters. The Basin Plan includes both narrative and quantitative water quality objectives that can differ depending on the specific beneficial uses being protected. Narrative objectives are established for parameters such as color, suspended and settleable material, oil and grease, biostimulatory substances, and toxicity. Numeric objectives can include such parameters as dissolved oxygen, temperature, turbidity, pH, and specific chemical constituents such as trace metals and synthetic organic compounds.

The Regional Water Board implements the Basin Plan through the issuance and enforcement of Waste Discharge Requirements (WDRs) and waivers of WDRs. WDRs may be issued to any entity that discharges waste that may affect the quality of any Central Coast surface water or groundwater. For discharges to waters protected under CWA, WDRs also could serve as a federally required NPDES permit (under CWA) to regulate waste discharges so that water quality objectives are met and to incorporate the requirements of other applicable regulations. Basin Plans are required to be reviewed every 3 years and provide the regulatory basis for determining WDRs and waivers of WDRs.

General Construction Permit

Construction activities are regulated under the NPDES General Permit for Construction Activities (General Construction Permit) provided that the total amount of ground disturbance during construction exceeds 1 acre. For qualifying projects, the project applicant must submit, before construction begins, a Notice of Intent (NOI) to the Regional Water Board to be covered by the General Construction Permit. The General Construction Permit requires the preparation and implementation of a stormwater pollution prevention plan (SWPPP), which also must be completed before construction begins. Implementation of the plan starts with the commencement of construction and continues through the completion of the project. Upon completion of the project, the applicant must submit a Notice of Termination to the Regional Water Board to indicate that construction is complete. The SWPPP needs to be prepared by a Qualified SWPPP Developer (QSD) and include pollution prevention measures (i.e., erosion and sediment control measures and measures to control nonstormwater discharges and hazardous spills), demonstration of compliance with all applicable local and regional erosion and sediment control standards, identification of

responsible parties, a detailed construction timeline, and a best management practice (BMP) monitoring and maintenance schedule.

Coverage under the General Construction Permit is expected to be required as part of the Proposed Project ~~(or the 130-Unit Alternative)~~.

Permitting for Dewatering Activities

Under the NPDES program, the Regional Water Board has also adopted a General Permit for Discharges with Low Threat to Water Quality (Order No. R3-2011-0223, NPDES Permit No. CAG993001) (General Low Threat Permit). This permit applies to various categories of activities, and would be likely to apply to the Proposed Project ~~or 130-Unit Alternative~~ if the applicant conducted dewatering activities during construction and discharged the effluent to surface water or groundwater. This permit contains waste discharge and effluent limitations similar to those in the General Construction and General Industrial Permits. To obtain coverage, the applicant must submit an NOI and data establishing the chemical characteristics of the dewatering discharge. A standard monitoring and reporting program is included as part of the permit. For dewatering activities that are not covered by the general permit, an individual NPDES permit and WDRs must be obtained from the Regional Water Board.

The General Dewatering Permit is applicable to the Rancho Cañada Village development if there will be any excavation below the water table where dewatering to waters of the United Sates or state will take place.

Municipal Stormwater Permits

Under the CWA, urban areas with municipal separate storm sewer systems (MS4s) are required to obtain an NPDES permit. The Regional Water Boards administer the NPDES stormwater permitting program for MS4s. MS4s are categorized as either large or small. Cities with populations greater than 100,000 are considered to have large MS4 systems and are required to get permits under Phase I of the EPA's stormwater program. The only Phase I city in the Monterey Bay Region is Salinas. Other urban areas (areas with greater than 1,000 residents per square mile or areas with high growth potential), are considered to have small MS4s and are required to get permits under Phase II of the EPA's stormwater program.

The Phase II MS4 General Permit (Order No. 2003-0005-DWQ, NPDES No. CAS000004) was adopted by the State Water Board to provide NPDES permit coverage to municipalities not covered under the NPDES Phase I Rule (i.e., small MS4s generally for fewer than 100,000 people). To comply with the Phase II, MS4 permit, it is necessary for operators of small MS4s to create a stormwater management program (SWMP).

The County implements the Monterey Regional Stormwater Management Program (MRSWMP) in compliance with the Phase II MS4 Permit. The Phase II MS4 Permit applies to the permittees in the Monterey Regional Stormwater Group consist of the cities of Pacific Grove, Monterey, Seaside, Del Rey Oaks, Sand City, Carmel-by-the-Sea, and the urbanized, unincorporated areas of Monterey County. The Storm Water Management Plan (SWMP) used by each of these permittees is Revision 3 of the MRSWMP document, which was approved on June 23, 2011 by Regional Water Board staff. The SWMP includes unincorporated urban areas of Monterey County. The project area is located within Monterey County urbanized area C (Central Coast Regional Water Quality Control Board 2006b) and would be subject to the SWMP guidelines.

Phase II Municipal General Permit Section E.12.k requires the permittee to comply with alternative post-construction stormwater management requirements based on a watershed process approach after development and approval by the Regional Water Board. The urbanized portions of the Central Coast Region are categorized into 10 Watershed Management Zones (WMZs), based on common key watershed processes and receiving water type (i.e., creek, marine nearshore waters, lake). Post-construction requirements are specific to WMZ, and are described below.

Post-Construction Stormwater Requirements

In July 2013, the Regional Water Board adopted Order R3-2013-0032, with new, more stringent Post-Construction Requirements (PCRs). These requirements supersede the post-construction requirements in the State Phase II MS4 permit. Projects are subject to the PCRs if they create or replace 2,500 square feet or more of impervious area. PCRs involve Low Impact Development (LID) measures to be implemented based on a tier-level approach, as shown in **Table 3.2-4**. These requirements are implemented via the Monterey Regional Stormwater Management Program (MRSWMP) in compliance with the County's MS4 Permit. The County RMA Environmental Services administers the County's NPDES General Permit issued by the State Water Resources Control Board. RMA Environmental Services is responsible for reviewing land use development proposals and ensuring regulated projects implement post-construction requirements.

Table 3.2-4 Central Coast Regional Water Board MS4 Post-Construction Stormwater Requirements

Tier Level	Project Applicability/Trigger[1]	Requirements
1	Projects that create or replace 2,500 square feet or more of impervious area	Implement LID Measures: • Limit disturbance of natural drainage features. • Limit clearing, grading, and soil compaction. • Minimize impervious surfaces. • Minimize runoff by dispersing runoff to landscape or using permeable pavements.
2	Projects that create or replace 5,000 square feet or more of impervious area	• Tier 1 requirements. • Treat runoff with an approved and appropriately sized LID treatment system prior to discharge from the site.
3	Projects that create or replace 15,000 square feet or more of impervious area	• Tier 2 requirements. • Prevent offsite discharge from events up to the 95th percentile rainfall event using Stormwater Control Measures.
4[2]	Projects that create or replace 22,500 square feet or more of impervious area	• Tier 3 requirements. • Control peak flows to not exceed preproject flows for the 2-year through 10-year events.

Source: Central Coast Regional Water Quality Control Board 2014.

Notes:

[1] Applicable projects are those that are located within the MS4 permit boundaries defined by the Regional Water Board, including cities, certain institutions, and unincorporated urban areas are subject to the PCRs.

[2] The PCRs Tier 4 requirements are consistent with flood control requirements that were previously in effect. Additional peak-flow management, based on different criteria, may be required by the local flood control agency.

Section 1602 of the California Fish and Game Code

Under Chapter 6 of the California Fish and Game Code, California Department of Fish and Wildlife (DFW) is responsible for the protection and conservation of the state's fish and wildlife resources. Section 1602 et seq. of the code defines the responsibilities of DFW and requires that public and private applicants obtain an agreement to "divert, obstruct, or change the natural flow or bed, channel, or bank of any river, stream, or lake designated by the DFW in which there is at any time an existing fish or wildlife resource or from which those resources derive benefit, or will use material from the streambeds designated by the department." A streambed alteration agreement is required under Section 1602 of the California Fish and Game Code for all activities that involve temporary or permanent activities within state jurisdictional waters.

Local Policies and Regulations

Current County Plans and Policies

2010 Monterey County General Plan

Goals and policies defined in the 2010 General Plan and relevant to the Proposed Project ~~and 130-Unit Alternative~~ are provided below.

Conservation and Open Space Element

Soils

Goal OS-3: Prevent Soil Erosion To Conserve Soils And Enhance Water Quality.

Policy OS-3.1: Best Management Practices (BMPs) to prevent and repair erosion damage shall be established and enforced.

Policy OS-3.3: Criteria for studies to evaluate and address, through appropriate designs and BMPs, geologic and hydrologic constraints and hazardous conditions, such as slope and soil instability, moderate and high erosion hazards, and drainage, water quality, and stream stability problems created by increased stormwater runoff, shall be established for new development and changes in land use designations.

Policy OS-3.7: Voluntary preparation and implementation of a coordinated resource management plan shall be encouraged in watersheds of State designated impaired waterways.

Policy OS-3.8: The County shall cooperate with appropriate regional, state and federal agencies to provide public education/outreach and technical assistance programs on erosion and sediment control, efficient water use, water conservation and re-use, and groundwater management. This cooperative effort shall be centered through the Monterey County Water Resources Agency.

Marine and River Resources

Goal OS-4: Protect and conserve the quality of coastal, marine, and river environments, as applied in areas not in the coastal zone.

Policy OS-4.2: Direct and indirect discharges of harmful substances into marine waters, rivers or streams shall not exceed state or federal standards.

Policy OS-4.3: Estuaries, salt and fresh water marshes, tide pools, wetlands, sloughs, river and stream mouth areas, plus all waterways that drain and have impact on State designated Areas of Special Biological Significance (ASBS) shall be protected, maintained, and preserved in accordance with state and federal water quality regulations.

Safety Element

Flood Hazards

Goal S-2: Reduce the amount of new development in floodplains and, for any development that does occur, minimize the risk from flooding and erosion.

Policy S-2.1: Land Use planning to avoid incompatible structural development in flood prone areas shall be the primary means of minimizing risk from flood hazards.

Policy S-2.2: Uses such as agriculture, passive to low intensity recreation, and open space/conservation are the most acceptable land uses in the 100-year floodplain to lessen the potential for loss of life, injury, property damage, and economic and social dislocations to the maximum extent feasible.

Policy S-2.3: All new development, including filling, grading, and construction, within designated 100-year floodplain areas shall conform to the guidelines of FEMA and the National Flood Insurance Program and ordinances established by the County Board of Supervisors. With the exception of the construction of structures, Routine and Ongoing Agricultural Activities shall be exempt from this policy.

Policy S-2.6: Drainage and flood control improvements needed to mitigate flood hazard impacts associated with potential development in the 100-year floodplain shall be determined prior to approval of new development and shall be constructed concurrently with the development.

Goal S-3: Ensure effective storm drainage and flood control to protect life, property, and the environment.

Policy S-3.1: Post-development, off-site peak flow drainage from the area being developed shall not be greater than pre-development peak flow drainage. On-site improvements or other methods for storm water detention shall be required to maintain post-development, off-site, peak flows at no greater than predevelopment levels, where appropriate, as determined by the Monterey County Water Resources Agency.

Policy S-3.2: Best Management Practices to protect groundwater and surface water quality shall be incorporated into all development.

Policy S-3.3: Drainage facilities to mitigate the post-development peak flow impact of new development shall be installed concurrent with new development.

Policy S-3.5: Runoff Performance Standards that result in an array of site planning and design techniques to reduce storm flows plus capture and recharge runoff shall be developed and implemented, where appropriate, as determined by the Monterey County Water Resources Agency.

Policy S-3.9: In order to minimize urban runoff affecting water quality, the County shall require all future development within urban and suburban areas to implement Best Management Practices (BMPs) as approved in the Monterey Regional Storm Water Management Program which are designed to incorporate Low Impact Development techniques. BMPs may include, but are not limited to, grassy swales, rain gardens, bioretention cells, and tree box filters. BMPs should preserve as much native vegetation as feasible on the project site.

Public Services Element

Water Quality and Supply

Goal PS-2: Assure an Adequate and Safe Water Supply to Meet the County's Current and Long-Term Needs.

Policy PS-2.1: Coordination among, and consolidation with, those public water service providers drawing from a common water table to prevent overdrawing the water table is encouraged.

Policy PS-2.2: The County of Monterey shall assure adequate monitoring of wells in those areas experiencing rapid growth provided adequate funding mechanisms for monitoring are established in the CIFP.

Policy PS-2.3: New development shall be required to connect to existing water service providers where feasible. Connection to public utilities is preferable to other providers.

Policy PS-2.8: The County shall require that all projects be designed to maintain or increase the site's pre-development absorption of rainfall (minimize runoff), and to recharge groundwater where appropriate. Implementation shall include standards that could regulate impervious surfaces, vary by project type, land use, soils and area characteristics, and provide for water impoundments (retention/detention structures), protecting and planting vegetation, use of permeable paving materials, bioswales, water gardens, and cisterns, and other measures to increase runoff retention, protect water quality, and enhance groundwater recharge.

Policy PS-2.8: The County shall use discretionary permits to manage construction of impervious surfaces in important groundwater recharge areas in order to protect and manage groundwater as a valuable and limited shared resource. Potential recharge are protection measures at sites in important groundwater recharge areas may include, but are not limited to, the following:

a. Restrict coverage by impervious materials.

b. Limit building or parking footprints.

c. Require construction of detention/retention facilities on large-scale development project sites overlying important groundwater recharge areas as identified by Monterey County Water Resources Agency.

The County recognizes that detention/retention facilities on small sites may not be practical, or feasible, and may be difficult to maintain and manage.

2013 Carmel Valley Master Plan

The 2013 CVMP was enacted as part of the 2010 General Plan and is intended to guide future land use within the 2013 CVMP plan area boundary. The project is subject to the following policies from the 2013 CVMP.

3.0 – Conservation/Open Space

Policy CV-3.4: Alteration of hillsides and natural landforms caused by cutting, filling, grading, or vegetation removal shall be minimized through sensitive siting and design of all improvements and maximum feasible restoration including botanically appropriate landscaping. Where cut and fill is unavoidable on steep slopes, disturbed areas shall be revegetated.

Policy CV-3.8: Development shall be sited to protect riparian vegetation, minimize erosion, and preserve the visual aspects of the Carmel River. In places where the riparian vegetation no longer exists, it should be planted to a width of 150 feet from the river bank, or the face of adjacent bluffs, whichever is less. Density may be transferred from this area to other areas within a lot.

Policy CV-3.9: Willow cover along the banks and bed of the Carmel River shall be maintained in a natural state for erosion control. Constructing levees, altering the course of the river, or dredging the river shall only be allowed by permit from the Monterey Peninsula Water Management District or Monterey County.

Policy CV-3.10: Predominant landscaping and erosion control material shall consist of plants native to the valley that are similar in habitat, form, and water requirements. The following guidelines shall apply for landscape and erosion control plans:

a. Existing native vegetation should be maintained as much as possible throughout the valley.

b. Valley oaks should be incorporated on floodplain terraces.

c. Weedy species such as pampas grass and genista shall not be planted in the Valley.

d. Eradication plans for weedy species shall be incorporated.

e. The chaparral community shall be maintained in its natural state to the maximum extent feasible in order to preserve soil stability and wildlife habitat and also be consistent with fire safety standards.

Policy CV-3.20: A discretionary permit shall be required for new wells in the Carmel Valley alluvial aquifer. All new wells shall be required to fully offset any increase in extractions from this aquifer (see Policies PS-3.4 and PS-3.5). These requirements shall be maintained until such a time that the Coastal Water project (or its equivalent) results in elimination of all Cal-Am withdrawals in excess of its legal rights.

4.0 – Safety

Policy CV-4.1: In order to reduce potential erosion or rapid runoff:

a. The amount of land cleared at any one time shall be limited to the area that can be developed during one construction season.

b. Motorized vehicles shall be prohibited on the banks or in the bed of the Carmel River, except by permit from the Water Management District or Monterey County.

c. Native vegetative cover must be maintained on areas that have the following combination of soils and slope:

1. Santa Lucia shaly clay loam, 30–50% slope (SfF)
2. Santa Lucia-Reliz Association, 30–75% slope (Sg)
3. Cieneba fine gravelly sandy loam, 30–70% slope (CcG)
4. San Andreas fine sandy loam, 30–75% slope (ScG)
5. Sheridan coarse sandy loam, 30-75% slope (SoG)
6. Junipero-Sur complex, 50–85% slope (Jc)

Policy CV-4.2: A comprehensive drainage maintenance program should be established by the identification of either sub-basins or valley-wide watershed zones.

Policy CV-4.3: In addition to required on-site improvements for development projects, a fee shall be imposed to help finance the improvement and maintenance of the drainage facilities identified in the Drainage Design Manual for Carmel Valley.

5.0 – Public Services

Policy CV-5.1: Pumping from the Carmel River aquifer shall be managed in a manner consistent with the Carmel River Management Program. All beneficial uses of the total water resources of the Carmel River and its tributaries shall be considered and provided for in planning decisions.

Policy CV-5.2: Water projects designed to address future growth in the Carmel Valley may be supported.

Policy CV-5.3: Development shall incorporate designs with water reclamation, conservation, and new source production in order to:

a. maintain the ecological and economic environment;

b. maintain the rural character; and

c. create additional water for the area where possible including, but not limited to, on-site stormwater retention and infiltration basins.

Policy CV-5.4: The County shall establish regulations for Carmel Valley that limit development to vacant lots of record and already approved projects, unless additional supplies are identified. Reclaimed water may be used as an additional water source to replace domestic water supply in landscape irrigation and other approved uses provided the project shows conclusively that it would not create any adverse environmental impacts such as groundwater degradation.

Policy CV-5.5: Parts of the Carmel Valley aquifer are susceptible to contamination from development in areas not served by a regional wastewater treatment facility. Development projects that include an on-site wastewater treatment system shall provide geologic and soils surveys that assess if conditions could preclude or restrict the possibility of satisfactorily locating such a system where it would not pose a threat of contamination to the aquifer. New development on existing lots of record shall be carefully reviewed for proper siting and design of any conventional or alternative on-site wastewater treatment systems in accordance with standards of the Monterey County Code 15.20, the Central Coast Basin Plan and the Carmel Valley Wastewater Study.

Policy CV-5.6: Containment structures or other measures shall be required to control the runoff of pollutants from commercial areas or other sites where chemical storage or accidental chemical spillage is possible.

Monterey County Ordinances

Grading Ordinance

The Grading Ordinance (Chapter 16.08) was adopted to safeguard health, safety, and the public welfare, to minimize erosion, protect fish and wildlife, and to otherwise protect the natural environment of Monterey County. The Grading Ordinance sets forth rules and regulations to control all grading, including excavations, earthwork, road construction, fills and embankments, and establishes the administration procedure for issuance of permits; and provides for approval of plans and inspections of grading construction.

Erosion Control Ordinance

The Erosion Control Ordinance (Chapter 16.12) was adopted to eliminate and prevent conditions of accelerated erosion that have led to, or could lead to, degradation of water quality, loss of fish habitat, damage to property, loss of topsoil or vegetation cover, disruption of water supply, increased danger from flooding. The Erosion Control Ordinance requires control of all existing and potential conditions of accelerated (human-induced) erosion; sets forth required provisions for project planning, preparation of erosion control plans, runoff control, land clearing, and winter operations; and establishes procedures for administering those provisions.

Urban Stormwater Quality Management and Discharge Control Ordinance

Monterey County Code Chapter 16.14, Urban Stormwater Quality Management and Discharge Control Ordinance (Stormwater Ordinance) was adopted to enhance watercourses within the unincorporated urbanized areas by, amongst other things, controlling the entry of urban pollutants into stormwater runoff that may enter the County storm drain system. This ordinance is applicable to all dischargers located within the unincorporated urbanized areas that discharge directly or indirectly into the County storm drain system.

Floodplain Ordinance

Regulations for floodplains in Monterey County are contained in Chapter 16.16 of Monterey County Code. The purpose of this ordinance is to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas. This ordinance applies to all Special Flood Hazards Areas (100-year floodplain) within the jurisdiction of the County, as identified on Flood Insurance Rate Maps, and areas within 200-feet of a river of within 50 feet of a watercourse.

As defined in County Code, development means “any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation, or drilling operations” located within the Special Flood Hazard Area. There are more restrictive regulations for development within the FEMA-defined floodway.

The project area falls under Monterey Regional Storm Water Management Program Tier 4 Water Management Zone 1. This requires projects to retain the 95th percentile storm event and to ensure that post-development peak flow rates are less than predevelopment peak flow rates for 2-year through 10-year storm events through detention measures onsite.

The Monterey County Water Resources Agency (MCWRA) is the primary regulatory authority for review and approval of flood control and drainage measures. For flood design criteria, peak runoff rates must not exceed predevelopment flows under comparable storm events, and runoff must not cause erosion. For drainage design criteria, stormwater detention facilities must be sized to limit the 100-year post-development runoff rate to the 10-year predevelopment rate.

Prior County Plans and Policies

As stated in Chapter 1, *Introduction*, discussion pertaining to the 1982 General Plan and the 1986 CVMP is provided for informational purposes only.

1982 Monterey County General Plan

Objectives and policies defined in the 1982 *Monterey County General Plan* (1982 General Plan) and relevant to the Proposed Project ~~and 130-Unit Alternative~~ are provided below.

Objective 5.2: Preserve vegetation where necessary to protect waterways from bank erosion and siltation.

Policy 5.2.1: Owners of property adjacent to waterways or responsible agencies shall be encouraged to maintain healthy vegetation along the drainage course, or provide other suitable means of preventing bank erosion or siltation.

Policy 5.2.2: The County shall establish special procedures for land use, building locations, grading operations, and vegetation removal adjacent to all waterways and significant water features.

Objective 16.2: Reduce the risk from flooding and erosion to an acceptable level by regulating the location, type, and density of land use.

Policy 16.2.3: All new development for which a discretionary permit is required, including filling, grading, and construction, shall be prohibited within 200 feet of the riverbank or within the 100-year floodway except as permitted by ordinance. No new development, including structural flood control projects, shall be allowed within the riparian corridor. However, improvements to existing dikes and levees shall be allowed if riparian vegetation damage can be minimized and at least an equivalent amount and quality of replacement is planted. In addition, exceptions may be made for carefully sited recreational trails.

Policy 16.2.4: All new development, including filling, grading, and construction, within designated 100-year floodplain areas shall conform to the guidelines of the National Flood Insurance Program and policies established by the County Board of Supervisors, with the advice of the Monterey County Flood Control and Water Conservation District.

Policy 16.2.5: All new development, including filling, grading, and construction, proposed within designated floodplains shall require submission of a written assessment prepared by a qualified hydrologist/engineer on whether the development will significantly contribute to the existing flood hazard. Development shall be conditioned on receiving approval of this assessment by the County Flood Control and Water Conservation District.

Objective 21.1: Enhance the quality of water in the County by regulating the type, location, and intensity of land use, and grading operations.

Policy 21.2.1: The County shall require all new and existing development to meet federal, state, and County water quality regulations.

Policy 21.2.3: Residential, commercial, and industrial developments which require 20 or more parking spaces shall include oil, grease, and silt traps, or other suitable means, as approved by the Monterey County Surveyor, to protect water quality; a condition of maintenance and operation shall be placed upon the development.

Policy 21.2.4: The County shall require the installation and maintenance of appropriate check valves on irrigation systems where liquid fertilizers are dispensed.

1986 Carmel Valley Master Plan

The 1986 Carmel Valley Master Plan (CVMP) is part of the 1982 General Plan. As such, the policies outlined in the 1986 CVMP and provided below must be considered in conjunction with the 1982 General Plan.

Policy 3.1.1.2 (CV): As part of the building permit process, the erosion control plan shall include these elements: Provision for keeping all sediment on-site. Provision for slow release of runoff water so that runoff rates after development do not exceed rates prevailing before development. Revegetation measures that provide both temporary and permanent cover. Map showing drainage for the site, including that coming onto and flowing off the property.

Storm drainage facilities shall be designed to accommodate runoff from 10-year or 100-year storms as recommended by the Monterey County Flood Control and Water Conservation District.

Policy 3.1.11 (CV): Development of on-site stormwater retention and infiltration basins is encouraged in groundwater recharge areas subject to approval by the Monterey Peninsula Water Management District, the County Health Department, the County Flood Control and Water Conservation District and the County Surveyor.

Policy 6.1.3 (CV): All beneficial uses of the total water resources of the Carmel River and its tributaries shall be considered and provided for in future planning decisions.

Policy 16.2.3.1 (CV): In order to protect the public health, welfare, and safety, development of land within 200 feet of the nominal Carmel River bank or 30 feet from any tributary bank as shown on the latest United States Geological Survey Topographic Maps shall require a special permit as set forth in the Carmel Valley Floodplain Ordinance. Where development of such an area may not be feasible due to public health, welfare and safety consideration. Density may be transferred from this area to other areas within a parcel.

Policy 16.2.10 (CV): No changes in zoning from FP-2 (stream overflow and backwater areas) to FP-3 (areas protected by dikes or levees) will be permitted except in areas with existing dikes. Also, no new FP-3 District shall be created.

Policy 35.1.3 (CV): Development shall be so designed that additional runoff, additional erosion or additional sedimentation will not occur off of the development site.

Storm drainage facilities shall be designed to accommodate runoff from the 10-year or 100-year storms as recommended by the Monterey County Flood Control and Water Conservation District.

Monterey Peninsula Water Management District Riparian Corridor Regulations

The following rules apply to work in the vicinity of the Carmel River 10-year flow line, including work to install outfalls into the Carmel River:

Rule 11 (Definitions) "RIPARIAN CORRIDOR – shall mean: a. All that area which comprises the Riverbed and riverbanks of the Carmel River which lies within the boundaries of the Carmel River Management Zone (Zone No. 3), and b. All those areas which lie within 25 lineal feet of the Riverbank Assessment Line, excepting however, all lands which lie outside of the Zone No. 3 boundary, and exempting lawns, landscaping and cultivated areas as shown on the spring 1983 aerial photographs taken by California American Water pursuant to the agreement with the District in accord with Rule 123 A."

Rule 20 (Permits), Part D: "Before any individual may undertake any Work or Project within the Riparian Corridor, including but not limited to channel modification, riverbank Works, or vegetation removal, such Person shall obtain a prior written River Work Permit from the District in accord with Rule 126 or meet the emergency River Work Permit criteria of Rule 126 C, or be expressly exempt from the River Work Permit requirement pursuant to Rule 126 B."

Rule 126 – River Work Permits:

"A. REGULAR PROCEDURE: River Work Permits shall be required by any Person who undertakes riverbank or Riverbed protection, riparian vegetation removal, channel modification or activities prohibited by Rule 124 within the Riparian Corridor, except where such activity is expressly exempt from this Permit process in accord with Rule 126 B. Such a Permit must be obtained prior to the commencement or any work or activity unless that activity is defined as a "minor work" or unless that activity is "emergency work". Minor works may be undertaken in accord with the process set forth in Rule 127 A (4) below. Emergency works may be undertaken in accord with the process set forth in Rule 127 B.

B. PERMIT EXEMPTIONS: This District Board may from time to time, upon advice of the Carmel River Advisory Committee, designate River Works which shall be exempt from this Permit process, and therefore not be subject to the prohibitions set forth in Rule 124. District staff shall maintain and distribute a list of such exempt activities.

C. EMERGENCY PROCEDURE: Emergency riverbank or Riverbed protection or channel modification measures are excepted from the prior requirement for a River Work Permit, provided that the General Manager or District Engineer must first declare such an emergency to exist or to be imminent. Emergency work Permits shall be processed in accord with Rule 127 B.

When declaring an emergency, the General Manager or District Engineer shall take into account the high probability of flooding, erosion danger, blockage and structural damage. During a declared period of emergency, the District must be notified as soon as possible in writing of the type, location and extent of any emergency works. Application for approval shall then be made within 10 days after such emergency works were begun to the Monterey Peninsula Water Management District on forms supplied by the District and, if required by the General Manger or District Engineer, shall be accompanied by appropriate plans.

D. PROCEDURE WHERE A LIFE OR PROPERTY IS THREATENED: Should an emergency situation arise that requires immediate bank protection actions to mitigate a clear and present danger to life or property, such actions may be performed without prior approval of the General Manager or District Engineer. Protective measures performed under this subsection shall be limited to those needed to mitigate such clear and present danger to life or property.

Such activity shall immediately be communicated to the District, and within ten calendar days of the commencement of such actions the type, location, and extent of protective measures performed under this subsection shall be reported in writing to the District."

Impact Analysis

Methods for Analysis

The evaluation of hydrology and water quality effects is based on professional standards and the conclusions of technical reports prepared for the project area. The key effects were identified and evaluated based on the physical characteristics of the project area and the magnitude, intensity and duration of activities. It is assumed that the Proposed Project ~~and 130-Unit Alternative~~ would conform to County building standards, grading permit requirements, and erosion control requirements.

Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, 2010 General Plan plans and policies, 2013 ~~CMVP~~ CVMP plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

A. Alteration of Drainage Patterns

- Substantially alter the existing drainage pattern of the site or area, including changes that result in substantial erosion or siltation on- or offsite.

B. Stormwater Runoff and Drainage Infrastructure

- Substantially increase the rate or amount of surface runoff which would exceed capacity of existing or planned storm drain facilities, cause downstream or offsite drainage problems, or increase the risk or severity of flooding in downstream areas.

C. Water Quality

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality or contribute substantial non-point sources of pollution to the Carmel Bay Water Quality Protection Area.

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade groundwater quality.

D. Groundwater Supply

- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).

E. Risk of Flooding

- Result in construction of habitable structures within a 100-year floodplain, which would expose people or structures to a significant risk of loss, injury, or death due to flooding.

- Expose people or structures to a significant risk of loss, injury, or death involving flooding.

F. Risk of Inundation by Seiche, Tsunami, or Mudflow or Due to Sea Level Rise

- Expose people, structures, or facilities to increased risk of inundation by seiche, tsunami, or mudflow or coastal flooding related to sea level rise.

Impacts and Mitigation Measures

A. Alteration of Drainage Patterns

Impact HYD-1: Alteration of Surface Drainage Patterns That Results in Increased Erosion or Siltation (less than significant with mitigation)

Overview

The approximately 76 ~~81~~-acre project area is currently a golf course with gentle slopes and undulating topography. The majority of stormwater currently infiltrates the ground, and what runoff is left is routed through swales and drainage pipes to the Carmel River. As shown in **Table 3.2-5**, Proposed Project development would result in an estimated 15 ~~25~~-acres of new impervious surfaces.

~~The 83-acre proposed 130-Unit Alternative is nearly entirely golf course as well, with the exception of Lot 130 which has a maintenance facility. As shown in **Table 3.2-5**, development of the 130-Unit Alternative would result in approximately 14 acres of new impervious surfaces in the residential element.~~

Table 3.2-5: Estimated New Impervious Areas for the Proposed Project ~~and 130-Unit Alternative~~

~~Alternative~~	Total Project Area (acres)	Residential Element (w/roads) (acres)	Open Space/Common Area within Residential Element (acres)	Residential without Open Space/ Common Areas (acres)	Total New Impervious Area for Residential Element (acres)
~~Proposed Project~~	~~81~~	~~45~~	~~3~~	~~42~~	~~25~~[1]
~~130-Unit Alternative~~	76 ~~83~~	38 ~~38~~	13 ~~14~~	25 ~~24~~	15[1] ~~14~~[1]

Notes:

[1] New impervious surfaces were calculated using the total area of the development area excluding the habitat preserve, common areas, and park areas and then applying a 60% impervious area factor for buildings and roadways. The 60% factor is from the *Preliminary Stormwater Management Plan* (Balance Hydrologics 2005c).

~~**Proposed Project**~~

~~***Construction***~~

~~Construction effects on water quality, including erosion and siltation, are addressed under Impact HYD-3.~~

~~***Operation***~~

~~Implementation of the Proposed Project would change existing site drainage patterns and also result in new impervious surfaces associated with the creation of housing and roads, thereby preventing precipitation from infiltrating and causing it to pond or run off.~~

~~*Stormwater Management*~~

~~A preliminary stormwater management plan (Balance Hydrologics 2005a) has been prepared to address stormwater requirements for the Project. The measures identified in the plan, and recent updates (Balance Hydrologics 2005c; L&S Engineering and Surveying, Inc. 2014), would be implemented to maintain onsite infiltration and control peak flows.~~ **~~Figure 2-5~~** ~~shows the preliminary drainage plan for the Proposed Project. The final drainage plan would include, but is not limited to, the following post-construction BMPs.~~

- ~~Good housekeeping: To minimize the amount of pollutants entering the storm drain system, project roadways and other paved areas shall be cleaned regularly using street sweeping equipment. Additionally, litter and debris that may accumulate on the streets of the project site will be regularly collected and properly disposed. These activities will be the responsibility of Rancho Cañada Village and/or its contractors.~~
- ~~Bioswales: Grass strips, high infiltration substrates, and grassy swales will be used where feasible throughout the project site to reduce runoff, serve as biofilters, and provide initial stormwater treatment. This type of treatment will apply particularly to parking lots.~~
- ~~Velocity dissipation measures: Physical devices will be placed at outlets of pipes and channels to reduce the velocity or the energy of exiting water. Outlet protection helps to prevent scour and to minimize the potential for downstream erosion by reducing the velocity or energy of concentrated stormwater flows.~~

~~The Proposed Project includes a conventional gravity-flow storm drain network to collect runoff from the site and route it to the Carmel River. Runoff would be directed to stormwater infiltration areas prior to being discharged into the river. The stormwater infiltration areas would cover a total of 0.8 acre and be located in the southern portion of the project site, within the proposed habitat reserve area, on the northern Carmel River floodplain.~~

~~Peak flows generated within the eastern portion of the project area would increase from 5 to 21 cfs for the 10-year storm, and from 8 to 31 cfs for the 100-year storm. Peak flows generated within the western portion of the project area would increase from 9 to 36 cfs for the 10-year storm, and from 13 to 54 cfs for the 100-year storm. Peak stormwater flows generated within the project area would be routed directly to the Carmel River without detention. Peak flows on the Carmel River generally occur several hours later than local runoff peak flows at this location. Utilizing direct conveyance of local runoff to the river would ensure that the two peak flows are not coincident and that stormwater produced within the project area does not increase peak flows on the Carmel River.~~

~~The Proposed Project falls under Monterey Regional Storm Water Management Program Water Management Zone 1 in Tier 4 (create/replace 22,500 square feet or more of impervious surface). This requires the Proposed Project to retain the 95th percentile storm event and to ensure that post-development peak flow rates are less than predevelopment peak flow rates for 2-year through 10-year storm events through detention measures on site. The infiltration system will be designed to infiltrate runoff from small to moderate rainfall events, up to and including the 95th percentile storm. Other conventional storm drain facilities, such as earth swales, lined ditches, concrete curb and gutter, manholes, catch basins, and underground storm drain pipes, would be incorporated into the Proposed Project to intercept stormwater flows at the project site boundaries, collect water within the development, and convey it to the stormwater infiltration basins.~~

Erosion and Scour due to Drainage Changes

Due to fill placement within portions of the existing floodplain, based on a relatively frequent 10-year storm flow, velocities in the main channel of the Carmel River would increase markedly for a short distance (about 100 feet) at a location roughly parallel with the eastern end of the proposed development. Velocities in this area would increase with the Proposed Project and could potentially cause erosion of larger sediment, resulting in increased sedimentation under post-project conditions, but because of the short distance of channel scour, the channel would not be permanently changed. The channel is expected to adjust to the change in velocities, eventually reaching a new equilibrium. Local bank erosion could occur during this period. If this occurs, then there could be loss of riparian vegetation along the eroded bank. These impacts are considered *potentially significant*. Implementation of **Mitigation Measure BIO-4** Provide Funding Assurances and Reporting Concerning Restoration Progress and Success, and **Mitigation Measure BIO-7**, Monitor Bank Erosion in Project Reach and Restore Riparian Vegetation and River Bank As Necessary, described in Chapter 3.3, *Biological Resources,* would ensure that this impact would be lowered to *less-than-significant* levels.

In addition, with the alterations of the floodplain, velocities in the right overbank may increase in one location under post-project conditions (at the eastern end of the proposed excavated basin). The increase in velocities in this area may result in erosion under bare-earth conditions. Application of the planting plan defined in the 2006 *Rancho Cañada Village Restoration and Mitigation Plan* (2006 Restoration Plan) for this area would ensure that this potential impact would remain *less-than-significant.*

Managing Offsite Drainage

The Proposed Project is not required to provide maintenance for offsite drainage from County drainage areas. However, offsite run-on originating in DA 26 would be collected downstream of the existing detention basin system on the Carmel Middle School property and routed through the project area in a new 18-inch storm drain line. This line would also collect runoff from the eastern portion of the developed area and route it through a larger 40-inch storm drain leading to the proposed stormwater infiltration area to the east. A second onsite drainage 30-inch line[2] would be installed to collect runoff from the western portion of the developed area to route flows through a larger 42-inch storm drain line leading to the proposed stormwater filtration area to the west.

Stormwater flows generated in DA 27 offsite would continue to flow along the ditch along the Carmel Middle School and westward toward CSA-50 as they do at present (Balance Hydrologics 2014b). While the offsite DA 27 flows may continue to flow west of the project site, the Project would not change the offsite DA 27 flows since they do not cross the project area. For local drainage, the Proposed Project would install a 24-inch line at the existing swale west of the project site just north of the Rio Road extension that would drain to an existing basin/wetland/swale located south of the residential area that is hydrologically connected to the Carmel River.[3]

[2] As shown in **Figure 2-5**, the northwestern area of the project site would drain into an 18-inch line. This line would continue south and connect to a 24-inch line and then a 30-inch line. Only the 30-inch line is discussed above.

[3] The Project Applicant has indicated that in the event the County chooses to raise Val Verde Road as part of a CSA-50 flood protection project, the Project Applicant would be willing to accommodate a 10 foot by 10 foot culvert under the Rio Road extension to accommodate the 100-year offsite flows from DA 27 (Zischke pers. comm.).

~~As noted in Chapter 2, *Project Description*, the County intends to construct a drainage channel from Carmel Valley Road, north of the project site, to the Carmel River that would run along the project site's western boundary to handle DA 27 flow. In order to accommodate the County's future drainage channel, the developer, at the time of construction would install a below-grade 84-inch buried drainage pipe on the project site that could connect to the drainage channel, when built, at a future date.~~

~~*Conclusion*~~

~~**Mitigation Measures HYD-1, HYD-2, and HYD-3** would ensure the drainage facilities are properly designed, maintained and monitored so they operate as intended. With implementation of the proposed drainage system approved by MCWRA and with implementation of **Mitigation Measures BIO-4** and **BIO-7**, the Proposed Project would not substantially alter the existing drainage pattern of the site in a manner which would result in flooding or substantial erosion or siltation on or off the site and thus would have a *less-than-significant* impact.~~

~~**130-Unit Alternative**~~

Construction

Construction effects on water quality, including erosion and siltation, are addressed under Impact HYD-3.

Operation

Implementation of the Proposed Project would change existing site drainage patterns and also result in new impervious surfaces associated with the creation of housing and roads, thereby preventing precipitation from infiltrating and causing it to pond or runoff. ~~Drainage changes resulting from the 130-Unit Alternative would be similar to the Proposed Project during operation, although the amount of new impervious space within the residential element would be much lower than the Proposed Project, and there could be some areas of new impervious surfaces at Lot 130.~~ **Figure 2-~~6~~9** shows the preliminary drainage plan for the residential element of the Project ~~130-Unit Alternative~~.

~~There is no preliminary drainage plan for Lot 130.~~

Stormwater Management

The total retention/detention volume for the Project ~~130-Unit Alternative~~ is 108,665 cubic feet. Due to the grading of the site, this volume would be split between three different infiltration/detention areas, as shown in **Figure 2-~~6~~9** (L&S Engineering and Surveying, Inc. 2014). Stormwater runoff from the Project ~~130-Unit Alternative~~ would be routed to one of the three areas by an underground storm drain system that collects runoff captured by roadway swales or curb and gutter. All runoff would be collected and controlled onsite. Overflows would allow for the controlled release of regulated and larger storm events to the basins created at the southern end of the property for further infiltration/retention. A vegetated drainage swale at the north edge of the property would maintain existing offsite run-on drainage paths and a new overflow standpipe for the neighboring property's detention basin (referred to as detention basin systems on the Carmel Middle School

~~However, since this is not a project-related impact, the installation of a culvert is not a required project mitigation measure and is not included as part of the Proposed Project.~~

property in the discussion above[4]) would control and route offsite run-on from the adjacent property through the Project's ~~130-Unit Alternative's~~ proposed infiltration detention area 1 and 2 to the south (L&S Engineering and Surveying, Inc. 2014).

Proposed basins at the southern end of the property were created to offset the proposed earthwork within FEMA Zone AE. The volume of those basins equates to 3,023,758 cubic feet. One of the infiltration/detention areas ~~for the 130-Unit Alternative~~ is incorporated into the volume of these basins. The required retention/detention volume for this area equals 8,483 cubic feet. This results in an excess retention volume of 3,015,275 cubic feet for the Project ~~130-Unit Alternative~~ (L&S Engineering and Surveying, Inc. 2014).

~~The proposed 130-Unit Alternative also falls under Monterey Regional Storm Water Management Program Water Management Zone 1, in Tier 4. As noted above, this requires the 130-Unit Alternative to retain the 95th percentile storm event and to ensure that post-development peak flow rates are less than predevelopment peak flow rates for 2-year through 10-year storm events through detention measures onsite.~~

~~With implementation of the proposed drainage system approved by MCWRA, the residential element of the 130-Unit Alternative would not substantially alter the existing drainage pattern of the site in a manner which would result in substantial erosion or siltation on or off the site.~~

A preliminary stormwater management plan (Balance Hydrologics 2005a) has been prepared to address stormwater requirements for the Project. The measures identified in the plan, and recent updates (Balance Hydrologics 2005c; L&S Engineering and Surveying, Inc. 2014), would be implemented to maintain onsite infiltration and control peak flows. **Figure 2-6** shows the preliminary drainage plan for the Proposed Project. The final drainage plan would include, but is not limited to, the following post-construction BMPs.

- Good housekeeping: To minimize the amount of pollutants entering the storm drain system, project roadways and other paved areas shall be cleaned regularly using street sweeping equipment. Additionally, litter and debris that may accumulate on the streets of the project site will be regularly collected and properly disposed. These activities will be the responsibility of Rancho Cañada Village and/or its contractors.
- Bioswales: Grass strips, high infiltration substrates, and grassy swales will be used where feasible throughout the project site to reduce runoff, serve as biofilters, and provide initial stormwater treatment. This type of treatment will apply particularly to parking lots.
- Velocity dissipation measures: Physical devices will be placed at outlets of pipes and channels to reduce the velocity or the energy of exiting water. Outlet protection helps to prevent scour and to minimize the potential for downstream erosion by reducing the velocity or energy of concentrated stormwater flows.

The Proposed Project includes a conventional gravity-flow storm drain network to collect runoff from the site and route it to the Carmel River. Runoff would be directed to stormwater infiltration areas prior to being discharged into the river. The stormwater infiltration areas would cover a total of 0.8 acre and be located in the southern portion of the project site, within the proposed habitat reserve area, on the northern Carmel River floodplain.

[4] Note: The DA 26 detention area on Carmel Middle School property is referred to as the neighboring property's detention basin ~~in the 130-Unit Alternative analysis~~ for consistency purposes with the drainage plan figures.

Peak flows generated within the eastern portion of the project area would increase from 5 to 21 cfs for the 10-year storm, and from 8 to 31 cfs for the 100-year storm. Peak flows generated within the western portion of the project site would increase from 9 to 36 cfs for the 10-year storm, and from 13 to 54 cfs for the 100-year storm. Peak stormwater flows generated within the project site would be routed directly to the Carmel River without detention. Peak flows on the Carmel River generally occur several hours later than local runoff peak flows at this location. Utilizing direct conveyance of local runoff to the river would ensure that the two peak flows are not coincident and that stormwater produced within the project area does not increase peak flows on the Carmel River.

The Proposed Project falls under Monterey Regional Storm Water Management Program Water Management Zone 1 in Tier 4 (create/replace 22,500 square feet or more of impervious surface). This requires the Proposed Project to retain the 95th percentile storm event and to ensure that post-development peak flow rates are less than predevelopment peak flow rates for 2-year through 10-year storm events through detention measures on site. The infiltration system will be designed to infiltrate runoff from small to moderate rainfall events, up to and including the 95th percentile storm. Other conventional storm drain facilities, such as earth swales, lined ditches, concrete curb and gutter, manholes, catch basins, and underground storm drain pipes, would be incorporated into the Proposed Project to intercept stormwater flows at the project site boundaries, collect water within the development, and convey it to the stormwater infiltration basins.

Erosion and Scour

The hydraulic analysis for the Proposed Project ~~130-Unit Alternative~~ was done as part of the CSA 50 report (Balance Hydrologics 2014b). Based on that analysis, the Proposed Project ~~130-unit Alternative~~ would not result in substantial changes in velocities in the Carmel River channel or the overbank areas and thus would not be expected to result in substantial erosion and scour, and thus this impact would be *less-than-significant* level.

Managing Offsite Drainage

The Proposed Project is not required to provide maintenance for offsite drainage from County drainage areas. However, the ~~Similar to the Proposed Project, the~~ residential element of the Proposed Project ~~130-Unit Alternative~~ would accommodate DA 26 offsite flows with the proposed drainage facilities. Stormwater flows generated in DA 27 would continue to flow along the ditch along the Carmel Middle School and the westward toward CSA-50 as they do at present (Balance Hydrologics 2014b).[5] ~~Drainage plans for Lot 130 were not provided. **Mitigation Measure HYD-1** would require such drainage plans to be developed and reviewed and approved by the County before issuance of building permits (Lot 130).~~

As noted in Chapter 2, *Project Description*, the County intends to construct a drainage channel from Carmel Valley Road, north of the project site, to the Carmel River that would run along the project site's western boundary to handle DA 27 flow. In order to accommodate the County's future drainage channel, the developer, at the time of construction would install a below-grade 84-inch

[5] ~~As noted above, the Project Applicant has indicated that in the event the County chooses to raise Val Verde Road as part of a CSA-50 flood-protection project, the Project Applicant would be willing to accommodate a 10 foot by 10 foot culvert under the Rio Road emergency access road to accommodate the 100-year offsite flows from DA 27 (Zischke pers. comm.). However, since this is not an impact related to the 130-Unit Alternative, the installation of a culvert is not a required mitigation measure, and is not included as part of the 130-Unit Alternative.~~

buried drainage pipe on the project site that could connect to the drainage channel, when built, at a future date.[6]

Conclusion

Mitigation Measures HYD-1, HYD-2, and **HYD-3** would ensure the drainage facilities are properly designed, maintained and monitored so they operate as intended. With implementation of these measures, this impact related to the residential element would be *less than significant*.

Mitigation Measure HYD-1: Prepare and Implement a Stormwater Control Plan

Prior to recordation of a final map, the applicant or successor(s) in interest shall submit to Monterey County RMA Environmental Services a Stormwater Control Plan prepared by a registered professional engineer, addressing Post-Construction Stormwater Management Requirements (PCRs) for Development Projects in the Central Coast region. The Plan shall include the location of drainage facilities and construction details. A report with supporting calculations shall also be provided. The Plan shall be reviewed by a licensed Geotechnical Engineer to ensure conformance with the Geotechnical Investigation or Engineering Geology Report. The Plan shall be reviewed and approved by the County RMA-Environmental Services prior to recording the final map.

Mitigation Measure HYD-2: Prepare and Implement Operation and Maintenance Plan for Stormwater Control Measures

Prior to recordation of a final map, the applicant or successor(s) in interest shall submit an Operation and Maintenance Plan to RMA Environmental Services for review and approval. The plan shall be prepared by a registered Professional Engineer and include, at a minimum, the following: 1) Site map identifying all structural Stormwater Control Measures requiring O&M practices to function as designed; 2) O&M procedures for each structural Stormwater Control Measure, including, but not limited to, LID facilities, retention/detention basins and proprietorship devices; 3) O&M Plan shall include short- and long-term maintenance requirements, recommended frequency of maintenance and estimated maintenance costs. The County approved plan shall be implemented by successor(s) in interest responsible for operation and maintenance of the stormwater drainage systems, such as a Homeowner's Association (HOA).

Mitigation Measure HYD-3: Enter into Maintenance Agreement for Stormwater Control Measures

Prior to recordation of a final map, the applicant or successor(s) in interest shall enter into Maintenance Agreement with Monterey County. The applicant shall submit a signed and notarized Agreement to RMA Environmental Services for review and approval. The Agreement shall clearly identify the responsible party for ongoing maintenance of structural Stormwater Control Measures. The Agreement shall contain provisions for an annual report to be prepared by a registered Professional Engineer. The annual report shall be submitted to RMA-Environmental Services for review and approval no later than August 15 of each year. All recommended maintenance shall be completed by October 15 of the same year. If maintenance

[6] A subsequent hydrology report submitted by the applicant (Balance Hydrologics, Inc., 2017) indicates that a smaller diameter pipe could provide sufficient capacity.

is required, certification shall be provided that all recommended maintenance has been completed before the start of the rainy season.

B. Stormwater Runoff and Drainage Infrastructure

Impact HYD-2: Result in Increased Stormwater Runoff Due to an Increase in Impervious Surfaces and Topographic Alterations Resulting in Drainage or Flooding Impacts (less than significant with mitigation)

~~**Proposed Project**~~

As described under Impact HYD-1, stormwater currently infiltrates the ground at the project site, and remaining runoff flows to the Carmel River. As shown in **Table 3.2-5**, Proposed Project development would result in approximately 15 ~~25~~ acres of new impervious surfaces. The introduction of new impervious surfaces would reduce the ground surface available for infiltration of rainfall and increase surface stormwater runoff. Increased runoff could contribute to localized flooding of the Carmel River and increase the risk of downstream flooding. The Proposed Project would include the installation of new storm drainage facilities, including conventional drainage facilities and stormwater infiltration areas. The infrastructure systems would be designed and engineered with sufficient capacity to accommodate anticipated peak flows, minimizing the potential for upset.

These impacts would be *potentially significant*. With implementation of **Mitigation Measures HYD-1** and **HYD-2** to ensure the drainage facilities are properly maintained and monitored so they operate as intended this impact would be *less than significant*.

~~**130-Unit Alternative**~~

~~The volume of runoff for the residential element of the 130-Unit Alternative would be far less than the Proposed Project due to the smaller number of residential units and the smaller increase in impervious space. The 130-Unit Alternative would include the installation of new storm drainage facilities in the residential element, including conventional drainage facilities and stormwater infiltration areas. The infrastructure systems would be designed and engineered with sufficient capacity to accommodate anticipated peak flows, minimizing the potential for flooding downstream areas. As currently designed this system has excess capacity. **Mitigation Measures HYD-1** and **HYD-2** would ensure the drainage facilities are properly maintained and monitored so they operate as intended, this impact would be maintained at a *less-than-significant* level.~~

~~The 130-Unit Alternative would have different impacts related to Lot 130. As there is no design for the potential Lot 130 uses, project-level analysis of stormwater runoff and infrastructure will need to be done as part of subsequent review (or prior to issuance of building permits) as required by **Mitigation Measure HYD-3**. With this mitigation, impacts related to stormwater runoff and infrastructure for the 130-Unit Alternative would be reduced to *less-than-significant* levels.~~

C. Water Quality

Impact HYD-3: Degrade Surface Water Quality during Construction and from Operation (less than significant with mitigation)

~~**Proposed Project**~~

Construction

Surface Water

Construction-related earth disturbing activities would occur in the development of the Proposed Project. These activities could cause soil erosion and sedimentation to local waterways. Construction of new sewer pipelines, retention basins, and grading would require heavy equipment such as earth-moving devices. Large trucks would be used in the transportation of construction materials to the site. Such machines have potential to leak hazardous materials that may include oil and gasoline. In addition, improper use of fuels, oils, and other construction-related hazardous materials, such as pipe sealant, may also pose a threat to surface or groundwater quality.

To reduce or eliminate construction-related water quality effects, before onset of any construction activities, the Project Applicant will demonstrate coverage under the General Construction Permit. The Regional Water Board and the County would be responsible to ensure that construction activities comply with conditions in this permit, which will require development of a SWPPP, implementation of BMPs identified in the SWPPP, and monitoring to ensure that effects on water quality are minimized.

As part of this process, the Project Applicant would be required to implement multiple erosion[7] and sediment control[8] BMPs in areas with potential to drain to surface water. These BMPs would be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. BMPs to be implemented may include, but are not limited to, the following measures.

- Erosion Control Measures: soil stabilization measures, such as hydraulic mulch, hydroseeding, geofabric, and other soil binders will be applied to disturbed areas.
- Sediment Control Measures: measures, such as silt fences, staked fiber rolls/straw wattles, silt/sediment basins and traps, storm drain inlet protection, street sweeping, will be implemented to prevent erosion and sedimentation near water bodies and storm drains.
- Drainage facilities in downstream offsite areas will be protected from sediment using BMPs acceptable to the County and the Regional Water Board.
- Grass or other vegetative cover will be re-established on the construction site as soon as possible after disturbance.

Final selection of BMPs would be subject to review by the County. The County would need to verify that an NOI and SWPPP have been filed before allowing construction to begin. The County or its

[7] Erosion control measures are source control measures that protect the soil surface and prevent soil particles from being detached by rainfall, flowing water, or wind.

[8] Sediment control measures are those that trap soil particles after they have been detached and moved by rain, flowing water, or wind.

agent (i.e., State Water Board Qualified Stormwater Practitioner) shall perform routine inspections of the construction area to verify that the BMPs specified in the SWPPP are properly implemented and maintained. The County would notify contractors immediately if there is a noncompliance issue and will require compliance.

The County would verify that coverage under the General Construction Permit and the Regional Water Board's General Low Threat Permit, if applicable, has been obtained before allowing dewatering activities to water bodies to begin. Dewatering requirements, such as treatment, monitoring and report, would be implemented.

These impacts are considered *potentially significant*. Implementation of the SWPPP, **Mitigation Measure GEO-3** (Prepare and Implement an Erosion and Sediment Control Plan, refer to Chapter 3.1, *Geology, Seismicity, and Soils*) and **Mitigation Measures HYD-4** and **HYD-5** (described further below), would ensure that impacts would be reduced to *less-than-significant* levels.

Groundwater

Trenching and excavation associated with the Proposed Project are not expected to reach a depth that can expose the water table, in which a path to the groundwater basin may become available for contaminants to enter the groundwater system. If this were to occur, primary construction-related contaminants that could reach groundwater would include oil and grease and construction-related hazardous materials. Discharge of construction-related dewatering effluent could result in the release of contaminants to surface water.

In addition, if dewatering to waters of the United States or state is necessary, it would be conducted according to the Central Coast Regional Water Quality Control Board General Low Threat Permit. Before discharging any dewatered effluent to surface water, the Project Applicant would obtain a General Low Threat Permit. Depending on the volume and characteristics of the discharge, coverage under the State Water Board's General Construction Permit or the Regional Water Board's General Dewatering Permit is possible. As part of the permit, the permittee would design and implement measures as necessary so that the discharge limits identified in the relevant permit are met. As a performance standard, these measures would be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. Implemented measures may include retention of dewatering effluent until particulate matter has settled before it is discharged, use of infiltration areas, and other BMPs. Final selection of water quality control measures would be subject to approval by the County. With implementation of the SWPPP and potentially the requirements of a Low Threat Permit, impacts would be reduced to *less-than significant* levels.

Operation

As discussed in Impact HYD-1, the Project would result in an increase in impervious surfaces. As such, the Proposed Project could increase stormwater and non-stormwater runoff, transporting contaminants to adjacent receiving waters. Contaminated runoff waters could flow into the Carmel River and further downstream into the Carmel Lagoon and could degrade the water quality of these water bodies.

During the dry season, vehicles release contaminants onto the impervious surfaces where they will accumulate until the first storm event. During this initial storm event or "first flush," the concentrated pollutants would be transported via runoff to stormwater drainage systems.

Anticipated runoff contaminants associated with the Proposed Project include sediment, pesticides, oil and grease, metals, bacteria, and trash.

The Preliminary Stormwater Management Plan described above would be required to include BMPs to maximize stormwater quality. The BMPs will include a combination of source control, structural improvements, and site design to the extent required to ensure compliance with the CWA and regulations noted in the *Regulatory Setting*.

The proposed development is located in an area identified as "Urbanized Area C" in the Monterey Regional Storm Water Management Plan (SWMP). A homeowner's association, community services district, or similar entity would be formed for the maintenance of roads, drainage facilities, erosion control improvements, and open spaces. The Project Applicant would enter into a Drainage Systems Agreement with the County. The Agreement would include requirements for the type and frequency of cleaning and maintenance of catch basins, sediment traps, stormwater inlets, and other drainage facilities. The storm drainage system would be maintained on a regular basis to remove pollutants, reduce high pollutant concentrations during the first flush of storms, prevent clogging of the downstream conveyance system, and maintain the catch basins sediment trapping capacity. The homeowner's association, or similar responsible entity, would provide an annual drainage report to the MCWRA for review and approval. An annual erosion control report, analyzing Carmel River bank erosion adjacent to the project site, would also be submitted to the MCWRA.

The Proposed Project's stormwater drainage system, which includes two infiltration basins and conventional drainage facilities, would treat surface runoff. With implementation of **Mitigation Measures HYD-1** and **HYD-2** to ensure the stormwater drainage system is properly maintained and monitored so it operates as intended, impacts on water quality as it relates to stormwater runoff would be reduced to a *less-than-significant* level.

~~**130-Unit Alternative**~~

~~***Construction***~~

~~Impacts of construction of the 130-Unit Alternative on surface water and groundwater quality would be similar to those of the Proposed Project. All relevant regulatory requirements, including preparation and implementation of a SWPPP and potentially requirements of a Low Threat Permit would apply. Impact of construction of the residential element would be less than the Proposed Project due to a smaller area of construction and less fill. However, this alternative would result in slightly larger area of construction related to the future Lot 130 development.~~

~~The 130-Unit Alternative's impact on water quality during construction would be *potentially significant*.~~ Implementation of a SWPPP, ~~**Mitigation Measure GEO-3** (Prepare and Implement an Erosion and Sediment Control Plan, refer to Chapter 3.1, *Geology, Seismicity, and Soils*), and **Mitigation Measures HYD-4** and **HYD-5** would ensure that impacts would be reduced to a *less-than-significant* level.~~

~~***Operation***~~

~~Operation of the 130-Unit Alternative would have similar water quality impacts as those for the Proposed Project but would result in a different area and an additional location of new impervious surfaces. Although the residential area of the 130-Unit Alternative would result in approximately 14 acres of new impervious surfaces, which would be much less than the Proposed Project, the new impervious area resulting from development of Lot 130 is not yet known. This alternative would~~

~~result in a new volume of polluted stormwater runoff from Lot 130 compared to existing conditions. This impact would be *potentially significant*.~~

~~The proposed stormwater drainage system for the 130-Unit Alternative described in Impact HYD-1 includes three different infiltration/detention areas and vegetated drainage swales that would treat surface runoff. With the proposed stormwater drainage system, implementation of **Mitigation Measures HYD-1** and **HYD-2** to ensure the stormwater drainage system is properly maintained and monitored so it operates as intended, and implementation of **Mitigation Measure HYD-3** to address drainage for Lot 130, operational impacts on water quality would be reduced to a *less-than-significant* level.~~

Mitigation Measure HYD-4: Implement a Spill Prevention and Control Program

Prior to construction, the applicant or successor(s) in interest will develop and implement a spill prevention and control program to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. The program will be completed before any construction activities begin. Implementation of this measure will comply with state and federal water quality regulations.

The County will review and approve the spill prevention and control program before onset of construction activities. The County will routinely inspect the construction area to verify that the measures specified in the spill prevention and control program are properly implemented and maintained. The County will notify contractors immediately if there is a noncompliance issue and will require compliance.

The federal reportable spill quantity for petroleum products, as defined in the EPA's CFR (40 CFR 110) is any oil spill that (1) violates applicable water quality standards, (2) causes a film or sheen upon or discoloration of the water surface or adjoining shoreline, or (3) causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.

If an appreciable spill has occurred and is reportable, the contractor's superintendent will notify the County and the County will need to take action to contact the appropriate safety and clean-up crews to ensure the spill prevention plan is followed. A written description of reportable releases must be submitted to the Regional Water Board. This submittal must include a description of the release, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases would be documented on a spill report form.

If surface water or groundwater quality levels have been degraded in excess of water quality standards, **Mitigation Measure HYD-5** would be required and would reduce this impact to a *less-than-significant* level.

Mitigation Measure HYD-5: Implement Measures to Maintain Surface Water or Groundwater Quality

If an appreciable spill has occurred and results determine that project activities have adversely affected surface water or groundwater quality, the Project Applicant will provide a detailed analysis performed by a Registered Environmental Assessor to identify the likely cause of contamination. This analysis will conform to the American Society for Testing and Materials (ASTM) standards, and will include recommendations for reducing or eliminating the source of

mechanisms of contamination. Based on this analysis, the Applicant or successor(s) in interest will select and implement measures to control contamination, with a performance standard that groundwater quality must be returned to baseline conditions. These measures will be subject to approval by the County Environmental Health Bureau.

D. Groundwater Supply

Impact HYD-4: Substantially Deplete Groundwater Supplies or Interfere with Groundwater Recharge (less than significant)

~~**Proposed Project**~~

Construction

During construction, excavation for the Proposed Project would be required for removal and installation of utilities (gas mains, electrical distribution systems, and storm drains), building foundation, and other infrastructure. The depth to groundwater at the project site is typically 5 to 30 feet below ground surface. Groundwater levels increase rapidly during periods of recharge by the Carmel River and may decline by as much as 50 feet during drought years. The groundwater within the project area was detected at a well location at 15 feet below the surface and pumping occurs at 49 feet below the surface. Although utility improvements and other activities during construction would excavate areas, potential dewatering activities would be temporary and minor and would be subject to the requirements of the SWPPP. Potential use of groundwater during construction for dust control, concrete pouring, and other activities would be minimal and temporary and, therefore, would not result in groundwater depletion.

Therefore, because potential dewatering and groundwater use for the Proposed Project would be temporary and minimal, impacts from construction on groundwater recharge and supplies would be *less than significant*. No mitigation is required.

Operation

During operation, groundwater recharge[9] may be affected by the Proposed Project. The Proposed Project would include approximately 15 ~~25~~ acres of new impervious surface. The remaining portions of the project site would maintain existing groundwater recharge capabilities. Stormwater runoff from small to moderate rainfall events would be routed to infiltration areas onsite, providing recharge of storms up to the 95th percentile event.

Stormwater infiltration areas would collect and store stormwater runoff for percolation and release into new outfall pipes in severe storms. Low-impact development stormwater treatment methods such as this would be designed in accordance with the MCWRA and state agency policy and the design would ensure infiltrated groundwater would not cause underlying groundwater to exceed water quality objectives or adversely affect beneficial uses. These areas would promote infiltration and allow for the removal of pollutants as stormwater percolates down through the soil.

The Proposed Project is anticipated to use groundwater as a supply but would result in a reduction in withdrawals over current usage (see Chapter 3.10, *Public Services, Utilities, and Recreation*). In order to meet the Proposed Project's water demands Cal-Am would use pumped groundwater from

[9] Recharge is determined by the ability of water to infiltrate into the soil.

onsite wells or a connection to Cal-Am facilitated by dedication of an appropriate amount of the applicant's water right to Cal-Am. Overall annual water use during Proposed Project operation would decrease because existing baseline golf course irrigation (approximately 204 acre-feet per year [AFY] on average) associated with the golf course that would be removed is much higher than the estimated water demand for the Proposed Project (estimated average of 130 ~~101~~ AFY).

The recharge analysis examined the net recharge to the Carmel Valley Alluvial Aquifer under baseline and with-project conditions. The amount of recharge on-site was subtracted from the groundwater pumping to identify the net recharge to the aquifer under both baseline and with-project conditions.

Baseline recharge for the project site as well as recharge for the non-impervious portions of the project were both estimated using a soil-water balance approach considering precipitation, evapotranspiration, land cover water demands, changes in soil moisture, and soil permeability conditions. The analysis included both turf/landscaped areas and areas of natural land cover. Climatic data was developed using a combination of the on-site CIMIS weather station data, Monterey weather station data, and Castroville weather station data in order to develop a representative precipitation and evapotranspiration data set for on-site conditions. Baseline and with-project land covers were identified using the GIS analysis that supported the biological resources assessment. Plant factors for different landscape water demands were identified from literature values. Applied water (irrigation) monthly amounts were estimated by using recent (WY 2009 – WY 2014) data on monthly irrigation and applying to prior irrigation data sets (WY 1991 – WY 2008). Using this data, the soil-water balance calculations were done for each year between 1991 and 2014 in order to estimate aquifer recharge amounts on-site for non-impervious areas. For project impervious areas, annual post-project groundwater recharge was estimated using the same model used in the Preliminary Stormwater Management Plan (Balance Hydrologics 2005a), but the model was adjusted to use the more recent CIMIS data to more accurately reflect on-site conditions.

The results of the analysis described above are presented in **Table 3.2-6** (and in greater detail in Appendix H):

Therefore, with implementation of stormwater infiltration areas for recharge and the estimated minimal change in recharge combined with a reduction in water supply withdrawals, impacts on groundwater supplies would be *less than significant*. From a water supply point of view, the overall increase in net recharge compared to baseline conditions would have a *beneficial* impact on the Carmel River aquifer. No mitigation is required.

Table 3.2-6: Summary of Groundwater Recharge Analysis

	Factors	Baseline		Project	
Groundwater Pumping					
Groundwater Pumping (1)		*204.78*		122.21	
Groundwater Recharge					
	Recharge (2)	Landcover (3)	Recharge (4)	Landcover (3)	Recharge (4)
Landcover	AFY Per Acre	Acre	AFY	Acres	AFY
Turf	1.07	56.90	60.80	7.70	8.23
Developed Area - Impervious	NA	3.40	17.10	17.10	22.64
Developed Area - Pervious (5)	NA	0.00	0.00	11.40	12.18
Detention Basin (6)	NA	0.00	0.00	0.84	NA
Woodland	1.18	7.10	8.35	22.04	25.92
Scrub	1.04	10.90	11.35	0.50	0.52
Pond	0.47	1.40	0.65	0.00	0.00
Wetland	0.47	0.30	0.14	1.20	0.56
Grassland	0.64	0.00	0.00	19.26	12.28
Subtotal		*80.00*	*98.40*	*80.04*	*82.33*
Net Groundwater Recharge					
Net Recharge			-106.38		-39.88
				Change with Project	*66.50*

Notes:

1. Pumping amounts are total irrigation (See Chapter 3.10 and **Appendix H**).

2. Recharge estimates for natural and landscape land covers from soil-water balance calculations in Appendix H.

3. Land cover acreages from GIS analysis for biological resource evaluation. Adjustments made to avoid double-counting areas and to match baseline and project acreage overall.

4. Recharge estimated by multiplying recharge estimate per acre by land cover acreage, except for analysis of impervious areas for the Proposed Project which were estimated using a modified runoff-infiltration model used by Balance Hydrologics for the Preliminary Stormwater Management Plan.

5. Pervious areas within the development footprint were treated as if they were turf.

6. Detention basin is tied to impervious space; to avoid double-counting, no infiltration of direct precipitation in this area was included.

~~**Table 3.2-6: Summary of Proposed Project Groundwater Recharge Analysis (Acre-Feet) [NEW TABLE]**~~

Groundwater Pumping					
-	Factors	Baseline		Project	
Groundwater Pumping (1)		*204.78*		*100.79*	
Groundwater Recharge					
	Recharge (2)	Landcover (3)	Recharge (4)	Landcover (3)	Recharge (4)
Landcover	AFY Per Acre	Acre	AFY	Acres	AFY
Turf	1.07	56.70	60.59	5.90	6.30
Developed Area - Impervious	NA	0.00	0.00	22.59	29.83
Developed Area - Pervious (5)	NA	0.00	0.00	14.46	15.45
Detention Basin (6)	NA	0.00	0.00	1.10	NA
Woodland	1.18	7.10	8.35	22.04	25.92
Scrub	1.04	10.90	11.35	0.50	0.52
Pond	0.47	1.40	0.65	0.00	0.00
Wetland	0.47	0.30	0.14	1.20	0.00
Grassland	0.64	0.00	0.00	8.60	5.49
Subtotal		*76.40*	*81.08*	*76.39*	*83.52*
Net Groundwater Recharge					
Net Recharge			-123.70		-17.27
				Change with Proposed Project	*106.42*

Notes:

1. Pumping amounts are total irrigation (See Chapter 3.10 and Appendix H).

2. Recharge estimates for natural and landscape land covers from soil-water balance calculations in Appendix H.

3. Land cover acreages from GIS analysis for biological resource evaluation. Adjustments made to avoid double-counting areas and to match baseline and project acreage overall.

4. Recharge estimated by multiplying recharge estimate per acre by land cover acreage, except for analysis of impervious areas for the Proposed Project which were estimated using a modified runoff-infiltration model used by Balance Hydrologics for the Preliminary Stormwater Management Plan.

5. Pervious areas within the development footprint were treated as if they were turf.

6. Detention basin is tied to impervious space; to avoid double-counting, no infiltration of direct precipitation in this area was included.

The Proposed Project ~~(or the 130-unit Alternative)~~ would also change the relative timing of pumping with the shift from the baseline irrigation pumping (pumping between April and October accounts for about 89% of golf course pumping) to a more even pattern of pumping to support residential use (62% to 68% of pumping between April and October), since residential use has much less irrigated areas and indoor use does not vary with climatic conditions. Analysis accounting for seasonal variation ~~ICF completed additional analysis of the change in seasonal use. The resultant analysis~~ (see Appendix H) shows that the Proposed Project ~~and the 130-unit Alternative~~ would result in a slight increase in pumping from November to March and a decrease in pumping from April through October with a substantial net overall annual decrease, compared to baseline. The relative increase in pumping levels in November to March compared to baseline levels would be on the order of 1 to 6 AF. As a rough comparison, 6 AF per month is equivalent to approximately 0.2 AF per day, which corresponds to about 0.1 ~~cubic feet per second (~~cfs~~)~~ of flow. This amount of this change in daily pumping is not expected to result in any substantial change in instream flow conditions. The relative monthly decreased pumping levels in April to October compared to baseline levels is on the order of 4 to 23 AF. As a rough comparison, 23 AF per month is equivalent to approximately 0.74 AF per day, which corresponds to about 0.37 ~~cubic feet per second (~~cfs~~)~~ of flow. If anything, the relative shift from a baseline of more pumping in the spring and summer to a project condition of less spring/summer and more fall/winter pumping should be beneficial to instream flows during the critical low flow period in spring and summer.

~~**130-Unit Alternative**~~

~~***Construction***~~

~~Potential impacts on groundwater conditions during construction of the 130-Unit Alternative would be the similar to those for the Proposed Project. Therefore, because potential dewatering and groundwater use for the Proposed Project would be would be temporary and minimal, and SWPPP requirements would address any associated water quality issues, impacts from construction of the 130 Unit Alternative on groundwater recharge and supplies would be *less than significant*. No mitigation is required.~~

~~***Operation***~~

~~Groundwater conditions for the 130-Unit Alternative would be similar to the Proposed Project during operation in regards to groundwater quality but different in terms of groundwater supply.~~

~~The 130-Unit Alternative would include approximately 14 acres of new impervious surface in the residential element. Lot 130 is not likely to substantially change the amount of impervious space from existing conditions with the maintenance facility. The proposed stormwater treatment areas would be designed to accommodate any potential runoff volumes based on the additional new impervious area and would allow for infiltration.~~

~~Annual water use during operation of the 130-Unit Alternative would decrease because the golf course baseline irrigation (approximately 204 AFY on average) is greater than the 130-Unit Alternative water demand (estimated average of 130 AFY, including potential water transfers to other Cal-Am users).~~

Table 3.2-7: Summary of Groundwater Recharge Analysis, 130-unit Alternative [NEW TABLE]

-	Factors	Baseline		130-Unit Alternative	
Groundwater Pumping					
Groundwater Pumping (1)		*204.78*		122.21	
Groundwater Recharge					
-	Recharge (2)	Landcover (3)	Recharge (4)	Landcover (3)	Recharge (4)
Landcover	AFY Per Acre	Acre	AFY	Acres	AFY
Turf	1.07	56.90	60.80	7.70	8.23
Developed Area - Impervious	NA	3.40	17.10	17.10	22.64
Developed Area - Pervious (5)	NA	0.00	0.00	11.40	12.18
Detention Basin (6)	NA	0.00	0.00	0.84	NA
Woodland	1.18	7.10	8.35	22.04	25.92
Scrub	1.04	10.90	11.35	0.50	0.52
Pond	0.47	1.40	0.65	0.00	0.00
Wetland	0.47	0.30	0.14	1.20	0.56
Grassland	0.64	0.00	0.00	19.26	12.28
Subtotal		*80.00*	*98.40*	*80.04*	*82.33*
Net Groundwater Recharge					
Net Recharge			-106.38		-39.88
				Change with 130-unit Alternative	*66.50*

Notes:

1. Pumping amounts are total irrigation (See Chapter 3.10 and Appendix H).

2. Recharge estimates for natural and landscape land covers from soil-water balance calculations in Appendix H.

3. Land cover acreages from GIS analysis for biological resource evaluation. Adjustments made to avoid double-counting areas and to match baseline and project acreage overall.

4. Recharge estimated by multiplying recharge estimate per acre by land cover acreage, except for analysis of impervious areas for the Proposed Project which were estimated using a modified runoff-infiltration model used by Balance Hydrologics for the Preliminary Stormwater Management Plan.

5. Pervious areas within the development footprint were treated as if they were turf.

6. Detention basin is tied to impervious space; to avoid double-counting, no infiltration of direct precipitation in this area was included.

~~The recharge analysis examined the net recharge to the Carmel Valley Alluvial Aquifer under baseline and with-130-unit Alternative conditions. The amount of recharge on-site was subtracted from the groundwater pumping to identify the net recharge to the aquifer under both baseline and with-project conditions. The methodology was the same as described above for the Proposed Project.~~

~~The results of the analysis described above are presented in Table 3.2-7 (and in greater detail in Appendix H):~~

~~Therefore, with construction and operation of stormwater infiltration areas for recharge and reduced overall water use per year, despite the reduction in gross recharge due to landcover change, overall there would be a net increase in recharge compared to baseline conditions, and impacts on groundwater recharge and supplies would be *less than significant.* From a water supply point of view, the reduction in water use would have a *beneficial* impact on the Carmel River aquifer. No mitigation is required.~~

E. Risk of Flooding

Impact HYD-5: Place Housing or Structures Within a 100-Year Flood Hazard Area and Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Flooding (less than significant with mitigation)

~~Proposed Project~~

Impacts Associated with Inundation

As shown in **Figure 3.2-3**, housing for the Proposed Project would not be built within the current FEMA floodway, but would be built partially ~~fill would be placed~~ within the 100-year floodplain (Balance Hydrologics 2014b). The land where structures are built would be raised sufficiently to keep structures above the 100-year flood elevation, reducing the likelihood of flooding in the Proposed Project development. While the houses in the Rancho Cañada Village Project are unlikely to be flooded, the fill on which they are built and increases in runoff from new impervious area have the potential to cause a constriction in the river channel during high flow events, which could raise water levels upstream.

The CSA-50 2014 flood study determined that the Project would not substantially change flooding conditions. In fact, the Project would provide flood control benefits to CSA-50. The Project Applicant proposed to raise the Rio Road emergency access toad which would essentially fill in the gap in the area from west of the project site to the Val Verde tie back levee. This will directly address the large potential flood flow path down Rio Road from the river.

A portion of the northern Carmel River floodplain would be excavated to provide fill material for a building pad; all structures would be placed on this building pad above the base flood elevation and, therefore, outside of the 100-year floodplain. In addition, no fill would be placed within the regulatory floodway (Balance Hydrologics 2005b). The County floodplain regulations allow fill in the floodway fringe, which is the area within the 100-year flood zone, but outside of the floodway. The floodway limit is defined such that, if fill intruded on the floodway, there would be potential for the river upstream of the fill to rise more than 1 foot. Because the Proposed Project would not be intruding on the floodway, this project is acceptable under FEMA guidelines and County floodplain

regulations. A Conditional Letter of Map Revision has been approved by FEMA, which would effectively move the floodplain and floodway boundaries if the Project is built as proposed so that none of the development area would be located within the floodway or floodplain.

The Proposed Project would have a relatively small effect on water surface elevations during flood events. A hydraulic model analysis of existing and post-project water surface elevations indicates that a maximum increase of 0.75 feet occurs approximately 700 feet upstream of the downstream end of the project area. This value was determined by comparing the post-project water surface elevation at Cross-Section 52 reported in Balance Hydrologics' May 2006 model results to the existing conditions water surface elevation at the same location as reported in Balance Hydrologics' January 2006 model results. This increase is located within the project area boundary, and all project structures would be placed above the post-project water surface elevation at this location (36.6 feet).

The maximum post-project increase at the upstream limit of the hydraulic model is 0.11 feet, based on the same model comparison described above. Given that the upstream limit of the model is in the middle of the Rancho Cañada Golf Club golf course, it is expected that the difference in water surface elevations would attenuate to essentially zero at the upstream end of the golf course. Downstream of the project area, the modeled 100-year water surface elevations are unchanged.

The modeled existing and post-project 100-year water surface elevations at the proposed Rio Road location are 33.8 feet (Balance Hydrologic 2006a and 2006b), while the existing ground elevation at the same location is 35.5 feet.

It is important to note that the hydraulic modelling done by Balance Hydrologics in 2006 used more conservative flooding assumptions than those in the latest FEMA study (Federal Emergency Management Agency 2009) and, thus, the EIR analysis would, if anything, overstate the water surface elevations of the Proposed Project (Balance Hydrologics 2014a).

Impacts Associated with Redirected Flows

During some flood events, the Carmel River is expected to rise high enough to spread onto the right bank in the project area (**Figure 3.2-3**). At the upstream (east) end of the project area, such flood flows would likely enter the excavated basin along its eastern edge, spilling over a drop of about seven ~~8 to 10~~ feet. It is possible that flows spilling over this drop could scour the steep slope, causing a headcut back toward the river. If the headcut extends far enough, the channel may shift course and end up flowing through the excavated area. This would be undesirable because it would bring the river close to the houses adjacent to the excavated area and possibly redirect the river downstream of the project area.

This impact would be *potentially significant*. Implementation of **Mitigation Measure HYD-6** would ensure that the impact would be reduced to *less than significant*.

There is an existing unconsolidated berm near the southwest corner of the project area that may be subject to erosion during overbank flows on the north bank. However, the Carmel River embankment is wooded at and upstream of the berm, and there are mature trees throughout the 100-year floodplain on the southwestern side of the project. Model results show that these trees and other roughness elements reduce flow velocities and shear stresses by a minimum of 50% (Wallace et al., 2014) from those experienced within the main river channel during the 100-year flood scenario. The model results show overbank velocities and shear stresses in the area of the berm are predicted to be approximately 4.5 feet/second and less than 1 pound/square foot respectively in the

100-year flood scenario. Compared to hydraulic modeling of the preproject conditions, overbank flow velocity during the 100-year flood event for the downstream, western end of the Rancho Cañada project is predicted to increase from 3.27 feet/second to 4.45 feet/second, an increase of 1.18 feet/second. Shear stress at the same location is predicted to increase from 0.39 to 0.82 pounds/square foot, an increase of 0.43 pounds/square foot. Typical permissible velocities for established streambanks with vegetation range from 3 to 8 feet/second, and typical permissible shear stresses are up to 3 pounds/square foot (NEH, 2007). Model results near the existing unconsolidated berm at the western edge of the project fall at the low end for velocity and below the values for shear stress, respectively and thus the Proposed Project would not substantially change erosive conditions for the aforementioned unconsolidated soil berm and this thus impact would be *less than significant*.

Mitigation HYD-6: Protect Eastern Slope of Excavated Basin

No protection should be needed for the downstream portions of the excavated area because rapid movement of water over a drop is not expected to occur there. To the extent that the upstream portion of the excavated area is exposed to higher velocities, erosion risks shall be mitigated by the Applicant or successor(s) in interest through slope protection measures that could include rock or turf-reinforced mats. The Applicant or successor(s) in interest responsible for installation of the excavated basin shall provide plans to the County RMA-Environmental Services and Public Works prior to issuance of grading permits showing slope protection design for the upstream portion of the excavated area.

~~**130-Unit Alternative**~~

~~***Impacts Associated with Inundation***~~

~~Flood conditions resulting from the 130-Unit Alternative would be similar to the Proposed Project As shown in **Figure 3.2-4**, housing for the 130-Unit Alternative would not be built within the current 100-year FEMA floodway but would be built partially within the 100-year floodplain. The 130-Unit Alternative would result in a slightly larger amount of fill within the 100-year floodplain (168,000 cubic yards vs. 120,000 cubic yards with the Proposed Project). The areas of cut within the floodplain for the 130-Unit Alternative have been designed to compensate in terms of volume with the new fill within the floodplain, similar to the Proposed Project, such that there would be no net decrease in flood storage volumes on the north bank of the Carmel River. As a result, this alternative would have similar effects on water surface elevations as the Proposed Project. The 130-Unit Alternative was included in the CSA-50 2014 flood study (Balance Hydrologics 2014b) which shows that this alternative would not substantially change flooding conditions. In fact, the 130-Unit Alternative would provide flood control benefits to CSA-50. Under the 130-Unit Alternative, the Project Applicant proposes to raise the Rio Road emergency access road which would essentially fill in the gap in the area from west of the Project Site to the Val Verde tie back levee. This will directly address the large potential flood flow path down Rio Road from the river.~~

~~Lot 130 is mostly outside the 100-year floodplain with the exception of the southern edge. **Mitigation Measure HYD-7** requires development on Lot 130 to avoid placement of any structures or fill within the 100-year floodplain at these locations. With implementation of **Mitigation Measure HYD-7,** the 130-Unit Alternative would have *less-than-significant* impacts related to flood inundation.~~

Impacts Associated with Redirected Flows

As noted above for the Proposed Project, during some flood events, the Carmel River is expected to rise high enough to spread onto the right bank in the project area (**Figure 3.2-4**). At the upstream (east) end of the western part of the 130-Unit Alternative area, such flood flows would likely enter the excavated basin along its eastern edge, spilling over a drop of 7 feet. It is possible that flows spilling over this drop could scour the steep slope, causing a headcut back toward the river. If the headcut extends far enough, the channel may shift course and end up flowing through the excavated area. This would be undesirable because it would bring the river close to the houses adjacent to the excavated area and possibly redirect the river downstream of the project area. This impact would be *potentially significant*. Implementation of **Mitigation Measure HYD-6** would reduce this impact to *less than significant.*

Concerning the existing unconsolidated berm near the southwest corner of the project area described above, model results for the 130-unit Alternative show that overbank flow velocity in this area during the 100-year flood event for the downstream, western end of the Rancho Cañada project is predicted to increase from 3.05 feet/second to 3.66 feet/second, an increase of 0.57 feet/second. Shear stress at the same location is predicted to increase from 0.52 to 0.75 pounds/square foot, an increase of 0.23 pounds/square foot. Typical permissible velocities for established streambanks with vegetation range from 3 to 8 feet/second, and typical permissible shear stresses are up to 3 pounds/square foot (NEH, 2007). Model results near the existing unconsolidated berm at the western edge of the project fall at the low end for velocity and below the values for shear stress, respectively and thus this alternative would not substantially change erosive conditions for the aforementioned unconsolidated soil berm and this thus impact would be *less than significant.*

Mitigation HYD-7: Avoid Encroachment into the 100-Year Floodplain for Lot 130 Uses

If the 130-Unit Alternative is approved by the County, no structures or fill will be placed within the 100-year floodplain area on the south side of the newly created Lot 130. The Applicant of successor(s) in interest shall provide plans for proposed residential improvements to the County RMA-Environmental Services and Public Works demonstrating avoidance of the floodplain area prior to issuance of any building permits for Lot 130.

F. Risk of Inundation by Seiche, Tsunami, or Mudflow or Due to Sea Level Rise

Impact HYD-6: Expose People or Structures to a Significant Risk of Loss, Injury or Death Involving Inundation Due to Seiche, Tsunami, or Mudflow Hazards or Flooding Associated with Sea Level Rise (less than significant)

Proposed Project

The effect of tsunamis depends on elevation and proximity to the ocean. The project site is approximately 1.5 miles from the tidally affected portion of the Carmel River, and the elevation of the houses would be at approximately 40 feet above mean sea level. Tsunamis pose a negligible hazard to the project site because only a very large tsunami could affect the project area. It is unlikely a seiche would occur in the project area because no large water bodies are nearby. The project area is relatively flat (elevations range from 25 to 40 feet above mean sea level), with little risk of mudflow.

Due to its elevation, the project site is not subject to coastal flooding that might result from sea level rise as a result of climate change. The high range of projected sea level range is up to 66 inches (5.5 feet) by 2100 compared to 2000 levels. Existing extreme water surface elevations at the Carmel Lagoon, including coincident high tide and riverine flooding, are estimated at 14.6 feet (Balance Hydrologics 2014b). Thus, 2100 flood potential at the high end of the range of potential sea level rise would be 20 feet above mean sea level. This level is considered an unlikely flood level because it would combine the top of the projected sea level rise with extreme event of coincident high tide and riverine flooding, but even in this low-probability contingency, the project site would still be above the flood level.

Therefore, this impact would be *less than significant*. No mitigation is required.

~~130-Unit Alternative~~

~~Potential impacts of the 130-Unit Alternative on increasing the risk of a seiche, tsunami, or mudflow or related to coastal flooding with sea level rise would be the same as the Proposed Project. Therefore, this impact would be *less than significant*. No mitigation is required.~~

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Chapter 3.3
Biological Resources

Introduction

This chapter provides a discussion of the biological resources issues related to the Proposed Project ~~and the 130-Unit Alternative~~ in Carmel Valley. This chapter includes a review of existing conditions based on available literature, field surveys, and other biological assessments; a summary of federal, state, and local policies and regulations related to biological resources; and an analysis of environmental impacts of the Proposed Project ~~and 130-Unit Alternative~~. Where feasible, mitigation measures are recommended to reduce the level of impacts.

In preparation of the 2016 Recirculated EIR, the biological resources analysis ~~This chapter~~ was revised from the Draft EIR released in January 2008 to update the analysis to include consideration of the *2006 Rancho Cañada Village Restoration and Mitigation Plan* (2006 Restoration Plan) (the January 2008 Draft EIR was based on an earlier, outdated 2004 version of the Restoration Plan) and to consider issues raised in comments on the January 2008 Draft EIR regarding biological resources. In this Second Revised Draft EIR, the 2016 Restoration Plan is no longer considered part of the Proposed Project, as that plan was designed for the previously considered 281-unit project. The 2016 EIR analysis stated that a new restoration plan would be developed if the 130-unit Project (which at the time was an alternative to the 281-unit project) was selected for development. The applicant plans to develop a restoration plan for the Project. That plan is not yet developed. This analysis assumes that such a plan would be developed, and mitigation is required as needed to stipulate measures that would be required for inclusion in the plan. ~~This chapter was also revised in this Recirculated Draft EIR to discuss the impact for the 130-Unit Alternative.~~

Impact Summary

Table 3.3-1 lists the impacts and mitigation measures for the Proposed Project ~~and the 130-Unit Alternative~~. As shown in **Table 3.3-1**, the Proposed Project ~~and 130-Unit Alternative~~ would have some significant adverse impacts related to biological resources within the project area. However, with the implementation of the mitigation measures described within this chapter, all of the impacts listed would be reduced to less-than-significant levels.

Table 3.3-1. Biological Resources Impact Summary

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
A. Impact on Vegetation				
BIO-1: Loss of Coyote Brush Scrub Habitat	~~LTS~~	LTS	None Required	--

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
BIO-2: Loss of Non-Native Monterey Pine Stands	~~LTS~~	LTS	None Required	--
BIO-3: Loss or Disturbance of Special-Status Plant Occurrences	~~LTS~~	LTS ~~Potentially significant~~	None required ~~BIO-1: Conduct a Floristic Survey of Coast Live Oak Woodland Habitat in Lot 130 during the Blooming Period for Potential Special-Status Plant Species (130-Unit Alternative only)~~ ~~BIO-2: Avoid or Minimize Impacts on Special-Status Plant Species Populations by Redesigning the Project, Protecting Populations, and Implementing a Compensation Plan (If Necessary) (130-Unit Alternative only)~~ ~~BIO-3: Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel (130-Unit Alternative only)~~	-- ~~LTS~~
BIO-4: Loss of Riparian Forest and Woodland Habitat	~~Potentially Significant~~	Potentially Significant	~~Both Proposed Project and the 130-unit Alternative~~ ~~BIO-3~~ BIO-14: Provide Funding Assurances and Reporting Concerning Restoration Progress and Success BIO-25: Restore Riparian Forest/Woodland Concurrent with Impact to Compensate for the Permanent Loss of Riparian Forest Habitat BIO-36: Minimize Disturbance of Riparian Forest and Woodland BIO-4: Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel ~~Proposed Project Only~~ ~~BIO-7: Monitor Bank Erosion in Project Reach and Restore Riparian Vegetation and River Bank, as Necessary~~	LTS
BIO-5: Loss of Coast Live Oak Woodland	~~No impact~~	No impact ~~Potentially Significant~~	None Required ~~BIO-8: Create Coast Live Oak Woodland Habitat to Mitigate Permanent Loss of Coast Live Oak Woodland Habitat (130-Unit Alternative only)~~	--~~LTS~~

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
BIO-6: Loss of Wetlands and Other Waters of the United States and State of California	~~Potentially Significant~~	Potentially Significant	BIO-1~~3~~, BIO-2~~4~~, BIO-4~~5~~ HYD-1: Prepare and Implement a Stormwater Control Plan HYD-2: Prepare and Implement Operation and Maintenance Plan for Stormwater Control Measures HYD-3: Enter into Maintenance Agreement for Stormwater Control Measures HYD-4: Implement a Spill Prevention and Control Program HYD-5: Implement Measures to Maintain Surface Water or Groundwater Quality ~~BIO-9a: Create Ponds to Mitigate Permanent Loss of Pond Habitat (Proposed Project only)~~ BIO-5~~9b~~: Restore or Create Wetland and Pond Habitat to Mitigate Permanent Loss of Waters of the United States and State ~~(130-Unit Alternative only)~~	LTS
BIO-7: Loss of Protected Trees	~~Potentially Significant~~	Potentially Significant	BIO-~~10~~6: Compensate for Removal of Protected Trees	LTS
B. Impact on Wildlife				
BIO-8: Loss or Disturbance of California Red-Legged Frog Aquatic and Upland Habitat and Potential Loss of Adults, Larvae, or Eggs	~~Potentially Significant~~	Potentially Significant	BIO-2 through BIO-4 ~~BIO-3, BIO-5 through BIO-6~~ BIO-7~~11~~: Conduct Formal Site Assessment and Consult with U.S. Fish and Wildlife Service to Determine if Protocol-Level Surveys are Necessary OR Assume CRLF Presence BIO-8~~12~~: Restrict Filling of Ponds/Wetlands and Initial Ground-Disturbing Activities in CRLF Habitat to the Dry Season (May 1 to October 15) BIO-9~~13~~: Conduct a Preconstruction Survey for CRLF BIO-10~~14~~: Monitor Initial Ground-Disturbing Construction Activities within CRLF Habitat BIO-11~~15~~: Compensate for the Removal and Disturbance of CRLF Breeding Habitat	LTS

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
			~~Proposed Project Only~~ ~~BIO-7~~	
BIO-9: Loss or Disturbance of Southwestern Pond Turtle Aquatic Habitat and Potential Loss or Disturbance of Southwestern Pond Turtles	~~Potentially Significant~~	Potentially Significant	BIO-12~~16~~: Conduct a Preconstruction Survey for Southwestern Pond Turtles and Monitor Construction Activities within Suitable Aquatic Habitat	LTS
BIO-10: Potential Loss or Disturbance of Breeding or Wintering Western Burrowing Owls and Their Burrows	~~LTS~~	LTS	None Required	--
BIO-11: Potential Loss or Disturbance of Tricolored Blackbirds and Their Breeding Habitat	~~Potentially Significant~~	Potentially Significant	BIO-13~~17~~: Conduct Surveys for Nesting Tricolored Blackbirds BIO-14~~18~~: ~~Redesign Restoration Plan (Proposed Project) to Replace Lost Tricolored Blackbird Nesting Colony Habitat or~~ Incorporate Tricolored Blackbird Nesting Habitat into the Newly Developed Project ~~130-Unit~~Alternative Restoration Plan ~~(If Developed)~~	LTS
BIO-12: Potential Loss or Disturbance of Monterey Dusky-Footed Woodrat or Their Nests	~~Potentially Significant~~	Potentially Significant	BIO-15~~19~~: Conduct Surveys for Woodrat Middens and Relocate Woodrats and Middens Prior to Construction Activity	LTS
BIO-13: Potential Loss or Disturbance of Tree and Shrub Nesting Migratory Birds and Raptors	~~Potentially Significant~~	Potentially Significant	BIO-2~~5~~ BIO-16~~20~~: Remove Vegetation during the Nonbreeding Season and Avoid Disturbance of Nesting Migratory Birds and Raptors	LTS
BIO-14: Potential Loss or Disturbance of Pallid Bat and Non-Special–Status Bats Species	~~Potentially Significant~~	Potentially Significant	BIO-17~~21~~: Conduct a Survey for Suitable Roosting Habitat and Evidence of Roosting Bats and Avoid Disturbing Them	LTS

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
BIO-15: Temporary and Permanent Impact on Steelhead Trout and other Carmel River Fish	~~Potentially Significant~~	Potentially Significant	HYD-1, HYD-2, HYD-3, HYD-4 HYD-5: Implement Measures to Maintain Surface Water or Groundwater Quality HYD-6: Protect Eastern Slope of Excavated Basin BIO-18~~22~~: Rescue Steelhead, if Stranded in Site Basin during High-Flow Events ~~Proposed Project Only~~ ~~BIO-7~~	LTS
C. Impact on Wildlife Movement, Wildlife Corridors, and Nursery Sites				
BIO-16: Potential Adverse Impact on Wildlife Movement, Wildlife Corridors, and Nursery Sites	~~Potentially Significant~~	Potentially Significant	BIO-1 ~~4~~ through BIO-5~~6~~ ~~Proposed Project Only:~~ ~~BIO-7, BIO-9a [see above]~~ ~~130-Unit Alternative Only:~~ ~~BIO-9b~~[see above]	LTS
D. Impact Related to Adopted Conservation Plans and Local Policies/Ordinances for the Protection of Biological Resources				
BIO-17: Potential Conflict with Local Policies/ Ordinances	~~Potentially Significant~~	Potentially Significant	BIO-6 ~~10~~ [see above] ~~Proposed Project Only~~ ~~BIO-7 [see above]~~	LTS
BIO-18: Potential Adverse Impact on Wildlife due to Increased Presence of Dogs and Cats Associated with Residential Development		Potentially Significant	BIO-19: Install Signs Along and Within the Habitat Preserve about Restraining Dogs and Encouraging Cats to be Kept Inside	LTS
LTS = Less than Significant				

Environmental Setting

The project site is situated in the Carmel Valley, in northern Monterey County, California. The approximately 76 ~~81+-~~ acre site (**Figures 2-1 and 2-2**) is located on the existing West Course of the Rancho Cañada Golf Club, approximately 1.5 miles east of the Pacific Ocean and 1 mile west of Roach Canyon. The existing site, which lies adjacent to the Rancho Cañada East Course, is composed of traditional golf course design features, such as fairways, sand bunkers, water hazards, and landscaped rough areas. The Carmel River forms the southern boundary of the site; the remainder of the project site is bordered by existing development, including a substantial residential area on the site's western perimeter, and a church and school located to the north of the site.

~~Similarly to the Proposed Project, the 130-Unit Alternative encompasses the West Course. The non-contiguous northeastern area of the 130-Unit Alternative includes portions of the East Course. The portion of the East Course included in this alternative includes 4.3 acres for Lot 130. Existing maintenance facilities and structures on Lot 130 are immediately west of residential development.~~ The setting description is based on the *Initial Biological Assessment prepared for Rancho Cañada Village* (Rana Creek Habitat Restoration 2004), the *Biological Assessment for the Hatton Parcel* (Zander Associates 2005), the 2006 Restoration Plan (Zander Associates 2006), the *Biological Resource Review of Rancho Cañada Village* (Zander Associates 2014), and data obtained during site visits. Refer to *Methods for Analysis* below for more detail.

Common Vegetation and Wildlife Observed on the Project Site

The project area contains the following common vegetation types: golf turf and landscaping, Monterey pine (*Pinus radiata*) stand, coyote brush (*Baccharis pilularis*) scrub, coast live oak (*Quercus agrifolia*) stand, California bulrush wetland, and dry ponds. The distribution of these vegetation types is shown in **Figure 3.3-1**. General characteristics of each vegetation type are described below. **Table 3.3-2** summarizes the amount of each vegetation type found within the project area.

Table 3.3-2. Total Area of Vegetation by Community Type in the Project Area

Community Type	~~Area (acres) within the Proposed Project~~	Area (acres) within the ~~130-Unit Alternative~~Project Area
Golf Turf and Landscaping	~~56.7~~	56.9
Developed/Disturbed	~~0~~	0 ~~3.4~~
Non-Native Monterey Pine Stand	~~0.1~~	0.1
Coast Live Oak Woodland	~~0~~	0~~.8~~
Coyote Brush Scrub[1]	~~10.9~~	10.9
Wetland Vegetation[2]	~~0.3~~	0.3
Golf Course Ponds	~~1.4~~	1.4
Riparian Forest and Woodland	~~6.2~~	6.2
Total	**~~75.6~~**	**75.8 ~~80~~**

NOTE: Acreages in this table and used in the biological resources analysis are based on GIS calculations prepared by ICF. The total project site indicated in the GIS analysis is slightly different than that included in the applicant's site plan, but this discrepancy would not change any conclusions in the biological analysis.

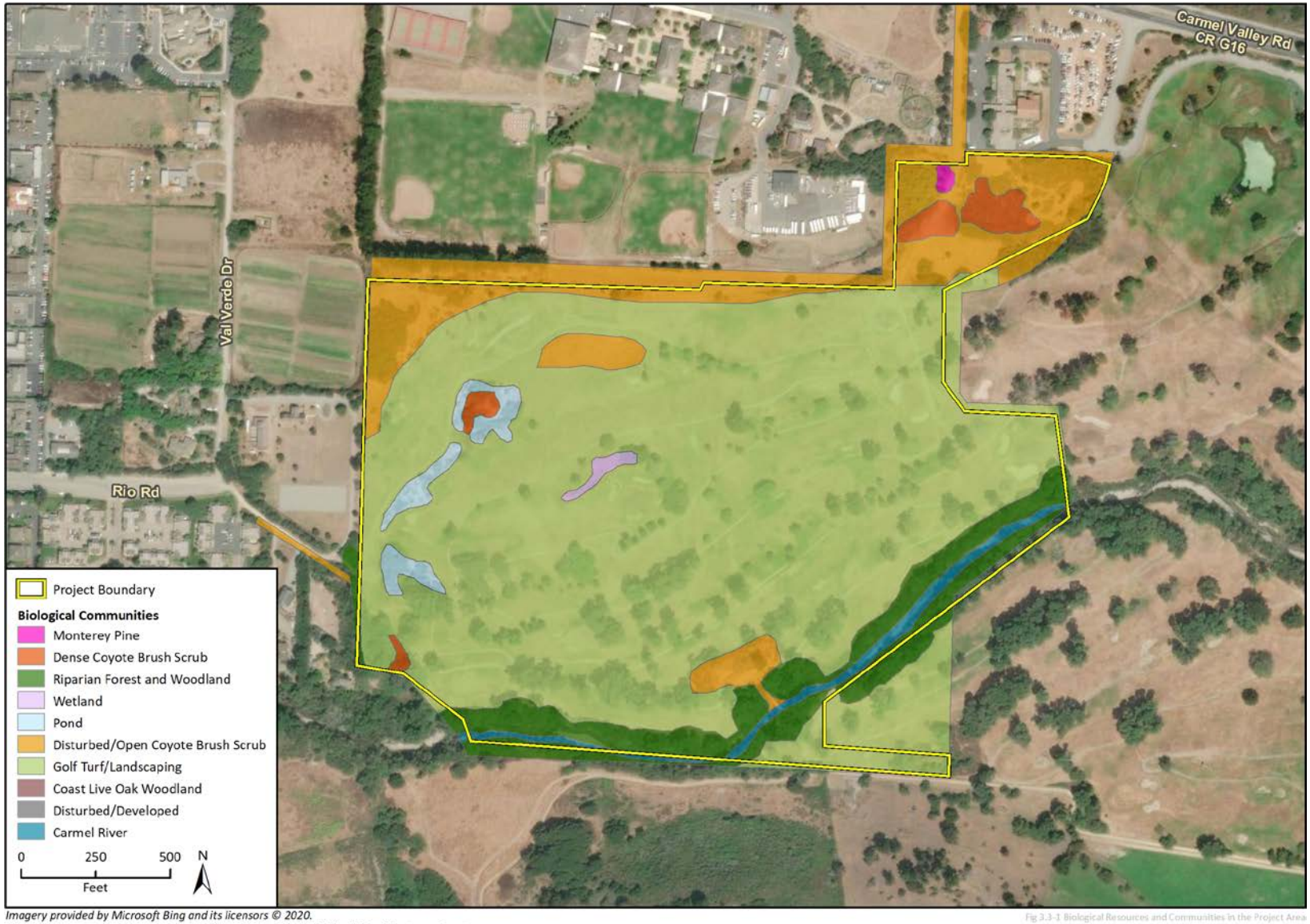
[1] Includes 9.4 acres for open/disturbed cover and 1.5 acres dense/intact cover.

[2] Wetland vegetation is comprised of one California bulrush wetland intermixed with a small patch of cattail.

Golf Turf and Landscaping

Golf turf and ornamental landscaping occupy the majority of the project area. These areas are dominated by non-native annual bluegrass (*Poa annua*) and non-native kikuyu grass (*Pennisetum clandestinum*). Several landscaped areas near the existing restrooms and ponds are dominated by common non-native ornamental plants, such as New Zealand flax (*Phormium* spp.), African daisy (*Ostiosporum* spp.), New Zealand hebe (*Hebe* spp.), and English ivy (*Hedera helix*).

Figure 3.3-1 Biological Resources and Communities in the Project Area



Imagery provided by Microsoft Bing and its licensors © 2020.
Biological data source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Several stands of trees are present within the golf turf area. Native species found on the course include riparian woodland species such as black cottonwood (*Populus blasamifera* ssp. *trichocarpa*), western sycamore (*Platanus racemosa*), and arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), and western red dogwood (*Cornus sericea* ssp. *occidentalis*). A 0.2-acre stand of western sycamore is also present in the northeast corner of the project area (this area is called the Hatton Parcel) (**Figure 3.3-1**). The understory of this stand consists of non-native weedy species, notably poison hemlock (*Conium maculatum*) and curly dock (*Rumex crispus*). Coast redwood (*Sequoia sempervirens*) and coast live oak trees are also present. Coast redwood stands are probably planted because they are naturally found at higher elevations in this area, and would be unlikely to occur adjacent to the Carmel River (Rana Creek Habitat Restoration 2004). ~~but the one coast live oak stand in Lot 130 may be remnant of habitat that would have been more pervasive in the project area prior to development of the golf course.~~ Other tree species present on the golf course include scattered Monterey pines, European white birch (*Betula pendula*), red alder (*Alnus rubra*), box elder (*Acer negundo*), red bottlebrush (*Callistemon citrinus*) and non-native pines (*Pinus* spp.), which appear to be planted.

Golf turf and landscaped areas have lower value for wildlife because of the greater amount of human disturbance and maintenance of vegetation in these areas. Wildlife species that use these areas are typically adapted to human disturbance. Wildlife species associated with urban/suburban areas include western scrub jay (*Aphelocoma californica*), northern mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), rock dove (*Columba livia*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), western fence lizard (*Sceloporus occidentalis*), and gopher snake (*Pituophis melanoleucus*) (Mayer and Laudenslayer 1988). Within the study area, the quality of the golf course as habitat for wildlife is improved due to the presence of large, mature trees, ponds, an adjacent creek with riparian vegetation, and patches of natural vegetation within the golf turf.

Monterey Pine Stands

Monterey pine stands are found on the golf course area and in a small 0.1-acre stand on the Hatton Parcel. The understory of the stand on the Hatton Parcel consists of open coyote brush scrub (see description below), while the understory of the stands on the golf course consist of non-native grasses common in the golf turf areas.

Native Monterey pine forest is considered a sensitive community by the California Department of Fish and Wildlife (California Department of Fish and Game 2010). Thus, a key consideration for impact analyses is whether or not a pine forest stand (or the individual Monterey pine trees within a stand) is native or not.

The stands on the golf course and in the Hatton Parcel are not considered undeveloped native stands based on review of prior studies of the historic native extent of Monterey pine forests (Huffman and Associates 1994; Jones & Stokes 1994), none of which indicated native Monterey pine forest in this part of Carmel Valley between Carmel Valley Road and the Carmel River.

Mapping of extant Monterey pine forest conducted in 1994 (Jones & Stokes 1994) reports that the study area and vicinity contain scattered Monterey pine with up to 20% canopy cover as an overstory in golf courses, urban parks, and other developed areas. Small and fragmented Monterey pine stands in golf courses and urban areas have greatly reduced conservation value relative to large

areas of Monterey pine forest. Their small size and the nature of the surrounding land use disrupt natural disturbance regimes, such as fire, and increase the influx of non-native invasive species.

While definitive proof of the origin of the Monterey pines on the golf course and the Hatton Parcel has not been found, the most reasonable interpretation of the information available is that the trees are not a remnant of a native stand and were planted at some point in the past. Thus, the genetic origin of the trees present today is unknown; they could be from native local stock or could be from non-native Monterey pine stock from outside the local area.

Because the Monterey pine stands are scattered and limited in size, habitat suitability for wildlife species in this vegetation community is similar to that described in the *Golf Turf and Landscaping* section above. Wildlife species that would occur in the golf turf and landscaped areas vegetation community would also occur in the Monterey pine stands within and adjacent to golf turf and landscaped areas.

Coyote Brush Scrub

Coyote brush scrub is primarily found along the northern edge and northeast corner (Hatton Parcel) of the project area (**Figure 3.3-1**). Two distinct types of coyote brush scrub are present in the project area: dense and open stands.

Dense, intact, coyote brush scrub is found only on the Hatton Parcel, and covers approximately 1.5-acres. In this area, coyote brush forms a dense stand, and is associated with poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), sticky monkeyflower (*Mimulus aurantiacus*), California rose (*Rosa californica*), California sage (*Artemisia californica*), and poison hemlock. Non-native grasses and forbs such as soft brome (*Bromus hordeaceus*) and bull thistle (*Cirsium vulgare*) are found in openings in this community. Native grasses and forbs, including beardless ryegrass (*Leymus triticoides*), blue wildrye (*Elymus glaucus*), and spreading rush (*Juncus patens*), are common in this community.

Open, disturbed, coyote brush scrub is found on most of the Hatton Parcel, along the northern edge of the project area, adjacent to the bridge over the Carmel River, along Rio Road west, and in small patches within the golf course in the project area (9.4 acres) (**Figure 3.3-1**). These stands consist of more widely scattered coyote brush individuals, and an herbaceous understory dominated by non-native weedy species, such as poison hemlock and summer mustard (*Hirshfeldia incana*). One area of open coyote brush scrub, in the northeast portion of the Hatton Parcel, has a substantial component of native grasses to the understory, including foothill needlegrass (*Nasella lepida*) and creeping wild-rye. Native sedge (*Carex* spp.) and rush (*Juncus* spp.) species are also present in this area, as are scattered coast live oak (*Quercus agrifolia*) trees.

The dense coyote brush scrub on the Hatton Parcel in the project area provides suitable breeding habitat and/or cover for several species of birds, including California thrasher (*Toxostoma redivivum*), spotted towhee (*Piplio maculatus*), wrentit (*Chamaea fasciata*), and golden-crowned sparrow (*Zonotrichia atricapilla*). The open areas of coyote brush scrub provide suitable breeding habitat and/or cover for northern mockingbird (*Mimus polyglottos*), Brewer's blackbird (*Euphagus cyanocephalus*), Anna's hummingbird (*Calypte anna*), and American robin (*Turdus migratorius*) (Zeiner et al. 1990a.) These more open areas are also suitable for western fence lizards and black-tailed jackrabbits (*Lepus californicus*), which use the area beneath coyote brush for cover (Zeiner et al. 1988, 1990b).

Wetland

A wetland is located in a depression near the center of the project area (**Figure 3.3-1**). This wetland area is approximately 0.3 acre in extent (see *California Bulrush Wetland* section below). In 2005 the wetland comprised a dense stand of cattails (*Typha* spp.); however, the survey conducted by ICF International in 2014 found that the majority of the pond was dominated by California bulrush (*Schoenoplectus californicus*) intermixed with smaller patches of cattails. Due to its vegetation composition, it is assumed that this wetland is permanently inundated.

Wetland vegetation that accompanies open water provides cover for amphibians and substrate for attaching eggs. Large areas of wetland vegetation can provide nesting substrate for some species of birds such as red-winged blackbird (*Agelaius phoeniceus*) and tri-colored blackbird (*A. tricolor*). This wetland provides cover for dispersing amphibians and when it contains open water for a sufficient duration, it provides suitable breeding habitat for amphibians. This wetland also appears large enough to support non-listed nesting birds.

Ponds

Three large golf course ponds are present in the project area (**Figure 3.3-1**). All three ponds are human-made, unlined, and serve as features of the golf course. Two ponds are located along the western edge of the project area (ponds 1 and 2) and a third pond (pond 3) is located just northeast of the two ponds. Prior to the October 6, 2005 site visit, the lining of ponds 1 and 2 had been punctured and the water had been naturally drained. These ponds only retain water when the actively replenished or from rainfall/runoff. Pond 1 had a 50-foot by 80-foot pooled area that was approximately 1 to 2-feet deep during the October 2005 site visit; however during the August 2014 site visit the pond was dry. Pond 2 was dry at the time of surveys in both 2005 and 2014. Neither pond currently supports emergent wetland vegetation. Pond 3 was only partially inundated during 2004 and 2005 during survey conducted by Rana Creek Habitat Restoration and ICF, respectively. Surveys conducted by both Zander Associates and ICF International in 2014 found no evidence of California bulrush vegetation or ponding. It is unlikely that these ponds would become inundated again due to the deteriorated pond linings and the colonization of the pond interiors by saplings of cottonwoods and willows, as well as upland grasses and shrubs, and non-native pampas grass (*Cortaderia jubata*) and poison hemlock (*Conium maculatum*) (Zander Associates 2014). Riparian vegetation grows sparsely along the banks of all three ponds, which could provide cover to amphibians.

Common Wildlife

In surveys conducted to date, the following common wildlife species have been observed on the project site (Rana Creek Habitat Restoration 2004.

- **Birds**—red-winged blackbird, mallard (*Anas platyrhynchos*), western scrub jay, great blue heron (*Ardea Herodias*), lesser scaup (*Aythya affinis*), Canada goose (*Branta Canadensis*), great horned owl (*Bubo virginianus*), bufflehead (*Bucephala albeola*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), California quail (*Callipepla californica*), Anna's hummingbird (*Calypte anna*), turkey vulture (*Cathartes aura*), wrentit (*Chamaea fasciata*), killdeer (*Charadrius vociferous*), northern flicker (*Colaptes auratus*), American crow (*Corvus brachyrhynchos*), Stellar's jay (*Cyanocitta stelleri*), yellow-rumped warbler (*Dendroica coronate*), snowy egret (*Egretta thula*), brewer's blackbird (*Euphagus cyanocephalus*), American coot

(*Fulica Americana*), dark-eyed junco (*Junco hyemalis*), western gull (*Larus occidentalis*), Nuttall's woodpecker (*Picoides nuttallii*), California towhee, spotted towhee, pied-billed-grebe (*Podilymbus podiceps*), chestnut-backed chickadee (*Poecile rufescens*), common bushtit (*Psaltriparus minimus*), black phoebe (*Sayornis nigricans*), white-breasted nuthatch (*Sitta carolinensis*), western meadowlark (*Sturnella neglecta*), American robin, mourning dove, and the golden-crowned sparrow (*Odocoileus hemionus columbianus*), and several non-native birds (European starling (*Sturnus vulgaris*), English sparrow (*Passer domesticus*), and rock dove (*Columba livia*).

- **Mammals**—coyote (*Canis latrans*), California vole (*Microtus californicus*), black-tailed deer (*Odocoileus hemionus columbianus*), California ground squirrel (*Otospermophilus beecheyi*), raccoon (*Procyon lotor*), western gray squirrel (*Sciurus griseus*), and Botta's pocket gopher (*Thomomys bottae*).
- **Reptiles/Amphibians**—Western fence lizard, American bullfrog (non-native) (*Rana catesbeiana*), western toad (*Anaxyrus boreas*), and Pacific treefrog (*Pseudacris regilla*).

It is likely that other common wildlife species such as a variety of bird species, raccoon (*Procyon lotor*), opossum (*Didelphimorphia*), skunk and others are also present in the project site.

Sensitive Natural Communities

Three sensitive natural communities, riparian forest and woodland, California bulrush (*Scirpus californicus*) wetland and coast live oak woodland, were identified in the project area.

Riparian Forest and Woodland on the Project Site

Riparian forest and woodland is found in three portions of the project area. The largest area of riparian woodland is located along the Carmel River. A band of riparian forest approximately 20-feet in width is present along Intermittent Drainage 1, which flows north-south along the western edge of the project area from a culvert in the vicinity of the proposed Rio Road extension and into the Carmel River. In addition, a narrow band (approximately 15-feet wide) of riparian forest is present along Intermittent Drainage 2, which flows from a culvert near the main entrance to the golf course and a church, adjacent to the "Play or Pray" sign. A patch of arroyo willow riparian forest is located adjacent to this drainage at the base of the south-facing slope.

Riparian woodland along the Carmel River is characterized by a mix of riparian tree species including arroyo willow, black cottonwood, and western red dogwood. Understory plant include creeping snowberry (*Symphoricarpos mollis*), horsetails (*Equisetum arvense*) and poison oak as well as and non-native species, notably Cape ivy (*Senecio mikanioides*).

Riparian woodland along the western edge of the project area is dominated by arroyo willow and red willow in the overstory. Black cottonwood is also present. The understory consists of native species such as stinging nettles, soft rush (*Juncus effusus*), and California blackberry, as well as non-native species such as nasturtium (*Tropaeolum majus*) and poison hemlock.

Riparian woodland near the main entrance to Rancho Cañada Village site is dominated by arroyo willow in the overstory. Understory species include natives such as California bulrush (*Scirpus californicus*), soft rush, and tall flatsedge (*Cyperus eragrostis*), as well as non-natives such as French broom (*Genista monspessulana*), fennel (*Foeniculum vulgare*), and pampas grass (*Cortaderia jubata*).

Several types of riparian forest and woodland are considered sensitive by DFW (California Department of Fish and Game 2010). Sensitive riparian forest and woodland types present in the project area include arroyo willow thickets and black cottonwood forest.

Because the vegetation is diverse and well developed, riparian forest provides high value habitat for wildlife, including several special-status species. Riparian forest habitat provides food, water, and migration and dispersal corridors, as well as escape, nesting, and thermal cover for many wildlife species (Mayer and Laudenslayer 1988). Invertebrates, amphibians, and aquatic reptiles live in the riparian forest and associated aquatic habitat. Raptors, herons, egrets, and other birds nest in the upper canopy. A variety of songbirds use the shrub canopy as do cavity-nesting birds, such as Nuttall's woodpecker (*Picoides nuttallii*) and oak titmouse (*Baeolophus inornatus*); occupy dying trees and snags (Zeiner et al. 1990a). Several mammals including raccoons, Virginia opossum, and striped skunks are common in riparian habitats (Zeiner et al. 1990b).

Riparian Vegetation along the Carmel River

Riparian vegetation along the Carmel River has been affected by a number of important natural and human-induced events.

The most important natural events that have affected riparian vegetation include floods and droughts. Major floods cause bank erosion and loss of riparian vegetation, but perhaps more importantly, they may also affect channel form and depth.

Droughts have probably had a substantial effect on riparian vegetation; however, the effect of droughts cannot be separated fully from human activities. To what extent the drawdown was the result of pumping or of the natural effect of drought cannot be determined. However, an analysis of simulated unimpaired flows for 1977 using the Monterey Peninsula Water Management District's (MPWMD's) Carmel Valley Simulation Model (CVSIM) model shows that the river would have been dry at the U.S. Geological Survey (USGS) "Near Carmel" gauge site (river mile [RM] 3.6) without the presence of dams and pumping wells.

The major human-induced changes that have affected the riparian vegetation include encroachment on the riparian vegetation as the result of farming, housing development, and golf course construction. In addition, installation of bank protection has reduced lateral movement of the river. The dams have relatively small reservoirs that have relatively little effect on flood peaks. Diversions and groundwater pumping have caused the once perennial river to become characteristically dry in late summer. However, reservoir releases also periodically cause increased flows in reaches below the dams that otherwise would be dry. The dams also trap sediment, which has led to downstream channel incision (Curry and Kondolf 1983). Groundwater pumping by Cal-Am and others has been identified as a major impact on riparian vegetation (McNeish 1986, 1989).

Groeneveld and Griepentrog 1985 have demonstrated that groundwater pumping has led to local riparian vegetation mortality. This mortality has been associated with local bank erosion.

California Bulrush Wetland

The California bulrush wetland is located near the northwest portion of the project area. Vegetation in this wetland consists of a dense stand of California bulrush with smaller patches of cattails interspersed. California bulrush wetland is considered a sensitive natural community by DFW (California Department of Fish and Game 2010).

As described in more detail above (see *Wetland* section above) this wetland functions as a wildlife habitat. It provides suitable breeding habitat and cover for amphibians and may support nesting birds including tricolored blackbird. It is assumed that this wetland is permanently inundated.

Coast Live Oak Woodland

Coast live oak woodland is located near the project site to the east ~~the northeastern boundary of Lot 130~~ (**Figure 3.3-1**). The woodland comprises a small, approximately 0.8-acre, open stand of trees, but is not within the project site ~~extends beyond the Project boundary~~. Vegetation in this area is comprised of coast live oak trees, with occasional black acacia saplings, arroyo willow and Fremont cottonwood trees. The woodland contains a very sparse understory comprised mainly of leaf litter, with occasional toyon (*Heteromeles arbutifolia*) and poison oak (*Toxicodendron diversilobium*) shrubs.

Because the coast live oak woodland is limited in size, habitat suitability for wildlife species is limited, but could support nesting migratory birds, such as northern mockingbird, California towhee (*Melozone crissalis*), Brewer's blackbird, Western scrub jay, American robin, white-tailed kite, as well as Monterey dusky-footed woodrat. Coast live oak woodland also provides cover for dispersing wildlife, but because of its spare understory is unlikely to provide enough cover for amphibians. It is assumed this habitat is used as part of a dispersal corridor between the RCGC and the habitat north of Carmel Valley Road.

Carmel Middle School Hilton-Bialek Biological Sciences Project

The Carmel Middle School (CMS) operates an environmental education project called the Hilton-Bialek Biological Sciences Project on land on the east side of the school and also uses land on the Stemple Parcel and on land (the Hatton Parcel) used by the Rancho Cañada Golf Club. The lands used by the environmental education project are also referred to as the "Hilton-Bialek Habitat."

The land used for the biological sciences project on the school property includes an area northwest of the Hatton Parcel (see **Figure 3.3-1**) that contains annual grassland, a small (<0.05 acre) perennial pond/wetland (with supplied water), an organic garden, a small area of scrub, an amphitheater, classrooms, and a greenhouse, among other facilities. This profile of the school property area is based on **Figure 3.3-1** and observance from the adjacent area, but the habitats on the school were not specifically inventoried for this impact analysis.

The land used for the biological sciences project on the Hatton Parcel (which is within the project area) and the vegetation cover for this area is shown on **Figure 3.3-1**. According to the director of the biological sciences project (Hohenberger pers. comm.), the school has an informal arrangement with the owner of these off-school parcels to conduct environmental education activities in these areas. A labeled trail system is present in the Stemple Parcel and the Hatton Parcel, and there are bird boxes present within these off-school areas that have been placed in association with the biological sciences project.

As part of the environmental education project, bird counts have been periodically conducted in the biological sciences project area (presumably including both lands on and off the school property). According to a June 2007 bird list (Carmel Middle School 2007 included in **Appendix C**) provided by the director of the biological sciences project, approximately 176 different species of birds have been recorded by the project, including 11 species which were noted as being recorded in the adjacent Rancho Cañada Golf Club (apparently in association with the Carmel River). According to

this list, direct evidence of breeding of 31 bird species and indirect evidence of breeding of an additional 31 bird species was observed. None of the identified 31 bird species with direct evidence of breeding fill the definition of a "Special-Status Species" described below. One of the 31 bird species identified with indirect evidence of breeding does fit the Special-Status Species definition: the grasshopper sparrow (*Ammodramus savannarum*) is identified as a species of special concern by the DFW when nesting. Of the other 144 bird species identified without direct or indirect evidence of breeding, 19 bird species fit the Special-Status Species definition in relation to nesting or wintering (15 species when nesting, 3 species only when rookeries or nesting colonies are present, and 1 species only when wintering).

Special-Status Species

Special-status species are plants and animals that are legally protected under the California Endangered Species Act (CESA) the federal Endangered Species Act (ESA), or other regulations, as well as species considered sufficiently rare by the scientific community to qualify for such listing. Special-status species are defined as follows.

- Species listed or proposed for listing as threatened or endangered under the ESA (Title 50, Code of Federal Regulations [CFR], Section 17.12 for listed plants, 50 CFR 17.11 for listed animals, and various notices in the *Federal Register* [FR] for proposed species).
- Species that are candidates for possible future listing as threatened or endangered under ESA (72 FR 69034, December 6, 2007).
- Species that are listed or proposed for listing by the State of California as threatened or endangered under CESA (Title 14, California Code of Regulations [CCR], Section 670.5).
- Plants listed as rare under the California Native Plant Protection Act of 1977 (California Fish and Game Code, Section 1900 et seq.).
- Plants considered by CNPS to be "rare, threatened, or endangered in California and elsewhere" (List 1B, 2, and 3) (List 4 species were included and evaluated in the impact analysis to determine whether they should be considered special-status species for the purposes of this Second Revised ~~Recirculated~~ Draft EIR).
- Species that meet the definition of *rare* or *endangered* under the State CEQA Guidelines (Section 15380).
- Animals fully protected in California (California Fish and Game Code, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).
- Animal species of special concern to DFW (California Department of Fish and Game 2007; Remsen 1978 [birds]; Williams 1986 [mammals]; and Jennings and Hayes 1994 [amphibians and reptiles]).

A description of special-status plants, wildlife, and fish species that have the potential to occur in the project area is provided below.

Special-Status Plants

A review of the CNDDB database did not reveal any documented records of special-status plants in the project area; however, based on all the sources reviewed during the pre-field investigation, 52

special-status plant species are known to occur in the region (**Table 3.3-3**). Of these 52 species, 32 species do not have suitable habitat in the project area (e.g., chaparral habitat). The remaining 20 species that could potentially occur in the project area, occupy dense coyote brush scrub ~~and coast live oak woodland habitat~~, which is ~~are~~ restricted to the project area ~~and Lot 130, respectively~~.

Of the 19 species with potential to be present in the project area, 17 have the potential to occur in the project area. Botanical surveys were conducted by Dale Hameister and Erin Avery on March 17, 2004 or May 31, 2005 and 16 of the 17 species would have been apparent (as these surveys were conducted during the blooming period for these species). The one remaining species, fragrant fritillary (*Fritillaria liliacea*) was not in bloom at the time of the 2004 and 2005 botanical surveys. A seasonally timed third survey was conducted for the fragrant fritillary (*Fritillaria liliacea*) during its published blooming period of February through April in 2006. During this survey, conducted by Erin Avery on April 26, 2006, the fragrant fritillary was not found to occur in the upland portion of the Hatton Parcel, in intact coyote scrub habitat, where it would likely have been present.

~~Of the species with potential to be present in the project area, 5 have the potential to occur on coast live oak woodland habitat in Lot 130 in the 130 Unit Alternative site. A botanical survey was conducted by ICF botanist Torrey Edell on August 20, 2014, and 3 species (*Arctostaphylos* spp.) would have been apparent. The remaining two species, jolon clarkia (*Clarkia jolonensis*) and fragrant fritillary, were not in their blooming period at the time of the 2014 botanical survey.~~

Two species that were not in bloom during botanical surveys conducted for the Proposed Project and ~~the 130 Unit Alternative~~ are described in greater detail below. Additionally, Monterey pine (*Pinus radiata*), which is a 1B.1 special-status plant species is present in the project site ~~Proposed Project and 130 Unit Alternative, with the exception of Lot 130~~.

Jolon Clarkia

Jolon clarkia is an annual herb that blooms between April and July. It would not have been in bloom at the time of the ICF biological surveys of the Project site ~~130 Unit Alternative area~~ on August 20, 2014. A total of 21 occurrences of this species have been recorded in the Monterey Bay area, the most recent of which was last observed in 1995. The only documented occurrence of the vicinity of the project area was near Carmel Bay, approximately 1.5 miles west of Carmel Valley. The occurrence at this location was last seen in 1903, but is presumed to be extant (California Department of Fish and Wildlife 2014). This species is considered to have a potential to occur on the project area.

Fragrant Fritillary

Fragrant fritillary is a bulb that blooms between February and April. It would not have been in bloom at the time of ICF's survey of the project site ~~130 Unit Alternative area~~ on August 20, 2014. The only documented occurrence of this species in the project site ~~area~~ is attributed to several collections from the Monterey, Carmel, and Pebble Beach area. The occurrence at this location was last seen in 1940 and is presumed to be possibly extirpated (California Department of Fish and Wildlife 2014). This species has the potential to occur in the vicinity of the project site to the east ~~in the coast live oak woodland habitat in Lot 130~~. As described under *Special-Status Plants* above a survey for this species was already conducted in suitable habitat within the Proposed Project area and this species was not documented.

Table 3.3-3. Special-Status Plant Species Identified as Potentially Occurring in the Project Vicinity

Common and Scientific Name	Legal Status[1] Federal/State /CNPS	Habitat Requirements	Habitat Present/ Absent	Likelihood to occur within Project Area[2]
Species With Habitat Present in the Project Area				
Hickman's onion *Allium hickmanii*	–/–/1B.2	Closed-cone coniferous forest, maritime chaparral, coastal prairie, coastal scrub, valley and foothill grassland, generally +/- 150 feet	Present	None. Coastal scrub habitat is present in Hatton Parcel, but species was not identified during May 31, 2005 survey. Remaining coastal scrub areas are unlikely to provide habitat because they are open and dominated by ruderal species.
Hooker's manzanita *Arctostaphylos hookeri* ssp. *hookeri*	–/–/1B.2	Closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub on sandy substrate	Present	None. Manzanitas were not observed in the project area.
Monterey manzanita *Arctostaphylos montereyensis*	–/–/1B.2	Chaparral, cismontane woodland, coastal scrub, sandy soils	Present	None. Manzanitas were not observed in the project area.
Sandmat manzanita *Arctostaphylos pumila*	–/–/1B.2	Openings in closed-cone coniferous forest, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub, in sandy areas	Present	None. Manzanitas were not observed in the project area.
Pink Johnny-nip *Castilleja ambigua* var. *insalutata*	–/–/1B.1	Coastal prairie, coastal scrub	Present	None. Coastal scrub habitat is present in Hatton Parcel, but species was not identified during May 31, 2005 survey. Remaining coastal scrub areas are unlikely to provide habitat because they are open and dominated by ruderal species.
Monterey spineflower *Chorizanthe pungens* var. *pungens*	T/–/1B.2	Maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland, sandy soils	Present	None. Coastal scrub habitat is present in Hatton Parcel, but species was not identified during May 31, 2005 survey. Remaining coastal scrub areas are unlikely to provide habitat because they are open and dominated by ruderal species.

Common and Scientific Name	Legal Status[1] Federal/State /CNPS	Habitat Requirements	Habitat Present/ Absent	Likelihood to occur within Project Area[2]
Jolon clarkia *Clarkia jolonensis*	–/–/1B.2	Cismontane woodland	Present	Low. Cismontane woodland habitat is present nearby to the east of the project site ~~in the northeastern corner of Lot 130~~. This area is unlikely to provide habitat because of the presence of invasive species and very sparse understory.
San Francisco collinsia *Collinsia multicolor*	–/–/1B.2	Closed-cone coniferous forest, coastal scrub	Present	None. Species was not identified during March 2004 or May 2005 surveys.
Hutchinson's larkspur *Delphinium hutchinsoniae*	–/–/1B.2	Broad-leaved upland forest, chaparral, coastal prairie, coastal scrub, usually on west-facing slopes.	Present	None. Species was not identified during March 2004 or May 2005 surveys.
Eastwood's goldenbush *Ericameria fasciculata*	–/–/1B.1	Sandy soils and openings in closed-cone coniferous forest, maritime chaparral, coastal dunes, coastal scrub	Present	None. Species was not identified during March 2004 or May 2005 surveys.
Coast wallflower *Erysimum ammophilum*	–/–/1B.2	Sandy soils and openings in maritime chaparral, coastal dunes, and coastal scrub	Present	None. Coastal scrub habitat is present in Hatton Parcel, but species was not identified during May 31, 2005 survey. Remaining coastal scrub areas are unlikely to provide habitat because they are open and dominated by ruderal species.
Fragrant fritillary *Fritillaria liliacea*	–/–/1B.2	Adobe soils of interior foothills, cismontane woodland, coastal prairie, coastal scrub, annual grassland, often on serpentinite, below 1,350 feet	Present	Low. The species was not identified during the April 26, 2006 survey of the Proposed Project area. ~~, but surveys have not occurred during the blooming period in the non-overlapping 130-Unit Alternative area. Therefore, the cismontane woodland habitat, in the northeastern corner of Lot 130 provides low-quality habitat.~~

Common and Scientific Name	Legal Status[1] Federal/State /CNPS	Habitat Requirements	Habitat Present/ Absent	Likelihood to occur within Project Area[2]
Sand gilia *Gilia tenuiflora* ssp. *arenaria*	E/T/1B.2	Sandy soils in maritime chaparral, cismontane woodland, coastal dunes, coastal scrub. In bare, wind-sheltered areas, often near the dune summit or in hind dunes	Present	None. Coastal scrub habitat is present in Hatton Parcel, but species was not identified during May 31, 2005 survey. Remaining coastal scrub areas are unlikely to provide habitat because they are open and dominated by ruderal species.
San Francisco gumplant *Grindelia hirsutula* var. *maritima*	–/–/1B.2	Coastal bluff scrub, coastal scrub, sandy soils on serpentine grassland	Present	None. Species was not identified during March 2004 or May 2005 surveys.
Kellogg's horkelia *Horkelia cuneata* ssp. *sericea*	–/–/1B.1	Openings in closed-cone coniferous forest, coastal scrub, maritime chaparral, on sandy or gravelly soils	Present	None. Coastal scrub habitat is present in Hatton Parcel, but species was not identified during May 31, 2005 survey. Remaining coastal scrub areas are unlikely to provide habitat because they are open and dominated by ruderal species.
Marsh microseris *Microseris paludosa*	–/–/1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland, below 1,500 feet	Present	None. Coastal scrub habitat is present in Hatton Parcel, but species was not identified during May 31, 2005 survey. Remaining coastal scrub areas are unlikely to provide habitat because they are open and dominated by ruderal species. ~~Cismontane woodland habitat is present in the northeastern corner of Lot 130, but species was not identified during August 20, 2014 survey.~~
Northern curly-leaved monardella *Monardella sinuate* ssp. *nigrescens*	–/–/1B.2	Coastal dunes, coastal scrub	Present	None. Coastal scrub habitat is present in Hatton Parcel, but species was not identified during May 31, 2005 survey. Remaining coastal scrub areas are unlikely to provide habitat because they are open and dominated by ruderal species.

Common and Scientific Name	Legal Status[1] Federal/State /CNPS	Habitat Requirements	Habitat Present/ Absent	Likelihood to occur within Project Area[2]
Monterey pine (native stands) *Pinus radiata*	–/–/1B.1	Closed-cone coniferous forest, cismontane woodland	Present.	Low. 0.2 acre of Monterey Pine forest identified in the Hatton Parcel, but this stand is likely to be introduced. ~~Monterey pine stands are not present on Lot 130.~~
Maple-leaved checkerbloom *Sidalcea malachroides*	–/–/4.2	Coastal scrub, perennial grassland, Redwood forest, Douglas-fir forest, in open, often disturbed areas, 5–2,300 feet	Present	None. May be present in coastal scrub outside of Hatton Parcel.
Santa Cruz microseris *Stebbinsoseris decipiens*	–/–/1B.2	Open areas in broad-leaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, and coastal scrub, sometimes serpentinite	Present	None. Coastal scrub habitat is present in Hatton Parcel, but species was not identified during May 31, 2005 survey. Remaining coastal scrub areas are unlikely to provide habitat because they are open and dominated by ruderal species.
Species Without Habitat Present in the Project Area				
Little Sur manzanita *Arctostaphylos edmundsii*	–/–/1B.2	Coastal bluff scrub, chaparral on sandy substrate	Absent	None
Pajaro manzanita *Arctostaphylos pajaroensis*	–/–/1B.1	Chaparral, in sandy areas	Absent	None
Twisted horsehair lichen Bryoria spiralifera	–/–/1B.1	Grows on conifers in Northern Coast coniferous forest	Absent	None
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*	–/–/1B.2	Annual grassland, on lower slopes, flats, and swales, sometimes on alkaline or saline soils, below 700 feet	Absent	None
Coastal dunes milk-vetch *Astragalus tener* var. *titi*	E/E/1B.1	Coastal bluff scrub, coastal dunes	Absent	None
Robust spineflower *Chorizanthe robusta* var. *robusta*	E/–/1B.1	Coastal bluff scrub, coastal dunes openings in cismontane woodland, on sandy soil	Absent	None
Seaside bird's-beak *Cordylanthus rigidus* ssp. *littoralis*	–/E/1B.1	Sandy soils of stabilized dunes in maritime chaparral and closed-cone coniferous forest.	Absent	None
Branching beach aster *Corethrogyne leucophylla*	–/–/3.2	Closed-cone coniferous forest, coastal dunes	Absent	None
Gowen cypress *Cupressus goveniana* ssp. *goveniana*	T/–/1B.2	Closed-cone coniferous forest	Absent	None

Common and Scientific Name	Legal Status[1] Federal/State /CNPS	Habitat Requirements	Habitat Present/ Absent	Likelihood to occur within Project Area[2]
Monterey cypress *Cupressus macrocarpa*	–/–/1B.2	Closed-cone coniferous forest	Absent	None
Hospital canyon larkspur *Delphinium californicum* ssp. *interius*	–/–/1B.2	Openings in chaparral, mesic areas in cismontane woodland, and costal scrub	Absent	None.
Pinnacles buckwheat *Eriogonum nortonii*	–/–/1B.3	Sandy soils in chaparral, valley and foothill grassland, often on recent burns	Absent	None.
Menzies's wallflower *Erysimum menziesii* ssp. *menziesii*	E/E/1B.1	Localized on coastal dunes, on coastal strand areas in coastal scrub below 115 feet, blooms Mar–Jun	Absent	None
Santa Lucia bedstraw *Galium clementis*	–/–/1B.3	Lower and upper montane coniferous forest on granitic or serpentinite, rocky substrates	Absent	None
Contra Costa goldfields *Lasthenia conjugens*	E/–/1B.1	Alkaline or saline vernal pools and swales, below 700 feet	Absent	None
Beach layia *Layia carnosa*	E/E/1B.1	Coastal dunes. Hugely reduced in range along California's North Coast dunes.	Absent	None
Coast yellow leptosiphon *Leptosiphon croceus*	–/–/1B.1	Coastal bluff scrub, coastal prairie	Absent	None
Tidestrom's lupine *Lupinus tidestromii*	E/E/1B.1	Coastal dunes	Absent	None
Carmel Valley bush mallow *Malacothamnus palmeri* var. *involucratus*	–/–/1B.2	Chaparral, oak woodland, talus hilltops and slopes, 100–2,200 feet	Absent	None
Santa Lucia bush mallow *Malacothamnus palmeri* var. *palmeri*	–/–/1B.2	Rocky places in chaparral	Absent	None
Carmel Valley cliff-aster *Malacothrix saxatilis* var. *arachnoidea*	–/–/1B.2	Rocky areas in chaparral	Absent	None
Mt. Diablo cottonweed *Micropus amphibolus*	–/–/3.2	Bare grassy rocky slopes in broad-leaved upland forest, cismontane woodland, valley and foothill grassland	Absent	None
San Antonio Hills monardella *Monardella antonina* ssp. *antonina*	–/–/3.2	Chaparral, oak woodland, open rocky slopes, 1,500–4,000'	Absent	None

Common and Scientific Name	Legal Status[1] Federal/State /CNPS	Habitat Requirements	Habitat Present/ Absent	Likelihood to occur within Project Area[2]
Woodland woolythreads *Monolopia gracilens*	–/–/1B.2	Openings in broadleaf upland forest, chaparral, cismontane woodland, North Coast coniferous forest, and valley and foothill grasslands, on serpentine soils.	Absent	None.
Yadon's rein orchid *Piperia yadonii*	E/–/1B.1	Coastal bluff scrub, closed-cone coniferous forest, maritime chaparral, on sandy soils	Absent	None
Hooked popcorn-flower *Plagiobothrys uncinatus*	–/–/1B.2	Chaparral, cismontane woodland, valley and foothill grassland, on sandstone outcrops and canyon sides.	Absent	None.
Hickman's cinquefoil *Potentilla hickmanii*	E/E/1B.1	Freshwater marshes, seeps, and small streams in open areas in coastal bluff scrub or coniferous forest	Absent	None
Pine rose *Rosa pinetorum*	–/–/1B.2	Closed-cone coniferous forest	Absent	None
California screw-moss *Tortula californica*	–/–/1B.2	Chenopod scrub, valley and foothill grassland/sandy soil	Absent	None
Santa Cruz clover *Trifolium buckwestiorum*	–/–/1B.1	Moist grassy areas on margins of broad-leaved upland forest, cismontane woodland, and coastal prairie, sometimes in disturbed areas, 200–1,800 feet	Absent	None
Pacific Grove clover *Trifolium polyodon*	–/R/1B.1	Closed-cone coniferous forest, coastal prairie, meadows and seeps	Absent	None
Monterey clover *Trifolium trichocalyx*	E/E/1B.1	Closed-cone coniferous forest	Absent	None

1
2

Notes for Table 3.3-3

Notes:

[1] Status explanations:

Federal

E = listed as endangered under the federal Endangered Species Act.
T = listed as threatened under the federal Endangered Species Act.
– = no listing.

State

E = listed as endangered under the California Endangered Species Act.
T = listed as threatened under the California Endangered Species Act.
R = listed as rare under the California Native Plant Protection Act. This category is no longer used for newly listed plants, but some plants previously listed as rare retain this designation.
– = no listing.

California Native Plant Society (CNPS) – California Rare Plant Ranking System

1A = List 1A species: presumed extirpated in California and either rare or extinct elsewhere.
1B = List 1B species: rare, threatened, or endangered in California and elsewhere.
2A = List 2A species: presumed extirpated in California, but more common elsewhere
2B = List 2B species: rare, threatened, or endangered in California but more common elsewhere.
3 = List 3 species: plants about which more information is needed to determine their status.
4 = List 4 species: plants of limited distribution.
– = no listing.

Threat Code extensions

.1 = Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
.2 = Fairly threatened in California (20-80% of occurrences threatened; moderate degree and immediacy of threat)
.3 = Not very threatened in California (less than 20% of occurrences threatened or no current threats known)

[2] Definitions of levels of occurrence likelihood:

High: Known occurrence of plant in region from the California Natural Diversity Database (CNDDB), or other documents in the vicinity of the project; or presence of suitable habitat conditions and suitable microhabitat conditions.

Moderate: Known occurrence of plant in region from the CNDDB, or other documents in the vicinity of the project; or presence of suitable habitat conditions but suitable microhabitat conditions are not present.

Low: Plant not known to occur in the region from the CNDDB, or other documents in the vicinity of the project; or habitat conditions of poor quality.

None: Plant not known to occur in the region from the CNDDB, or other documents in the vicinity of the project; or suitable habitat not present in any condition.

Monterey Pine

Monterey pine trees have a California Rare Plant Rank of 1B.1 (California Department of Fish and Wildlife 2014), but the species is not listed as rare, threatened, or endangered by the state or federal government. Monterey pine trees have been planted on the golf course as landscaping. As discussed under the Monterey Pine Stands Section above, these Monterey pine trees are not remnants of past native stands and thus in this context, are considered non-native vegetation.

Special-Status Wildlife and Fish

Based on a review of species information from state and federal agencies and existing information related to the project area as described above under the *Approach and Methodology* section, 38 special-status wildlife and fish species were identified as having the potential to occur in the project vicinity (**Table 3.3-4**). Of these 38 species, 23 were eliminated from further consideration because suitable habitat for these species is not present within the project area and/or the project area is located outside of the species' known range. The project area contains habitat for the following 15 special-status wildlife and fish species, as shown in **Table 3.3-4**.

Each of the special-status wildlife species with potential to occur on site is discussed below. Special-status fish species are discussed separately below.

California Red-legged Frog

The CRLF is listed as threatened under the federal ESA and is a California species of special concern. The project area appears to be immediately north and west of the currently designated revised critical habitat unit MNT-2 for CRLF (75 *Federal Register* [FR] 12816–12959, March 17, 2010). The frog is known from isolated locations in the Sierra Nevada, northern Coast, and northern Transverse Ranges. It is relatively common in the San Francisco Bay area and along the central coast. CRLF is believed to be extirpated from the floor of the Central Valley. (FWS 2002)

CRLF use a variety of habitat types, which include various aquatic systems, riparian, and upland habitats (FWS 2002). However, these frogs may complete their entire life cycle in a pond or other aquatic site that is suitable for all life stages. CRLF inhabit marshes; streams; lakes; ponds; and other, usually permanent, sources of water that have dense riparian vegetation (Stebbins 2003).

As adults, CRLF are highly aquatic when active but depend less on permanent water bodies than do other frog species (Brode and Bury 1984). Adults may take refuge during dry periods in rodent holes or leaf litter in riparian habitats (FWS 2002) or in large cracks in the bottom of dried ponds (Alvarez 2004). Although red-legged frogs typically remain near streams or ponds, marked and radio-tagged frogs have been observed to move more than 2 miles through upland habitat. These movements are typically made during wet weather and at night. (FWS 2002)

CRLF have been reported from several relatively isolated, although widely distributed locations, along the Carmel River. This Carmel River population has been identified by the U.S. Fish and Wildlife Service (FWS) as a core population, targeted for development and implementation of a management plan. (FWS 2002).

1 **Table 3.3-4. Special-Status Wildlife and Fish Species with Potential to Occur in the Project Vicinity**

Common and Scientific Name	Status[1] Federal/State	California Distribution	Habitats	Occurrence in Project Area
Species with Suitable Habitat in Project Area				
California red-legged frog *Rana draytoni*	T/SSC	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County	Permanent and semipermanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation. May estivate in rodent burrows or cracks during dry periods	Carmel River provides suitable habitat; the California bulrush wetland may provide suitable breeding habitat depending on length of inundation. Anecdotal reference to CRLF sightings in Intermittent Drainage 2 and in a pond on the adjacent CMS biological project site (Hohenberger 2008).
Southwestern pond turtle *Clemmys marmorata pallida*	–/SSC	Occurs along the central coast of California east to the Sierra Nevada and along the southern California coast inland to the Mojave and Sonora Deserts; range overlaps with that of the northwestern pond turtle throughout the Delta and in the Central Valley	Occupies aquatic habitats, such as ponds, marshes, or streams, with rocky or muddy bottoms in woodlands, grasslands, and open forests. Also requires aquatic vegetation for cover and food. Nests in upland adjacent to aquatic habitat.	Ponds 1, 2, and 3 may provide suitable breeding habitat depending on length of inundation
Cooper's hawk *Accipiter cooperi*	–/SSC	Found in all parts of California except high altitudes in the Sierra Nevada; winters in the Central Valley, south-eastern desert regions, and the plains east of the Cascade Range; permanent resident throughout the lower 48 states.	Nests in riparian forests and dense canopy oak woodlands; forages in open woodlands.	May nest in or adjacent to project area. Reported non-nesting sighting in CMS Bird list (Carmel Middle School 2007).

Common and Scientific Name	Status[1] Federal/State	California Distribution	Habitats	Occurrence in Project Area
Sharp-shinned hawk (nesting) *Accipiter striatus*	–/SSC	Permanent resident in the Sierra Nevada, Cascade, Klamath, and north Coast Ranges, as well as along the coast in Marin, San Francisco, San Mateo, Santa Cruz, and Monterey Counties; winters over the rest of the state except at high elevations; breeds and winters throughout North America.	Found in riparian forests, conifer forests, and oak woodlands.	May nest in or adjacent to project area. Reported non-nesting sighting in CMS Bird list (Carmel Middle School 2007).
Olive-sided flycatcher *Contopus cooperi*	–/SSC	Summer resident and migrant in California. Found in most parts of California except the Central Valley from the Oregon border south along the coast and near-coastal mountains south to San Diego, and on higher portions of the Transverse, Peninsular, and Cascade mountains ranges and the Modoc Plateau.	Breeds in montane and northern coniferous forests, at forest edges and openings, such as meadows and ponds.	May nest in or adjacent to project area. Reported non-nesting sighting in CMS Bird list (Carmel Middle School 2007).
White-tailed kite *Elanus leucurus*	–/FP	Lowland areas west of Sierra Nevada from the head of the Sacramento Valley south, including coastal valleys and foothills to western San Diego County at the Mexico border	Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging	May nest in or adjacent to project area. Reported non-nesting sighting in CMS Bird list (Carmel Middle School 2007).
Western burrowing owl *Athene cunicularia hypugea*	–/SSC	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas. Rare along south coast	Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows	Could occur along edges of golf course; no ground squirrel burrows observed
Purple martin *Progne subis*	–/SSC	Coastal mountains south to San Luis Obispo County, west slope of the Sierra Nevada, and northern Sierra and Cascade ranges. Absent from the Central Valley except in Sacramento. Isolated, local populations in southern California	Nests in abandoned woodpecker holes in oaks, cottonwoods, and other deciduous trees in a variety of wooded and riparian habitats. Also nests in vertical drainage holes under elevated freeways and highway bridges	May nest in or adjacent to project area

Common and Scientific Name	Status[1] Federal/State	California Distribution	Habitats	Occurrence in Project Area
Yellow warbler *Dendroica petechia brewsteri* (nesting)	–/SSC	Nests over all of California except the Central Valley, the Mojave Desert region, and high altitudes along the eastern side of the Sierra Nevada. Winters along the Colorado River and in parts of Imperial and Riverside Counties. Two small permanent populations in San Diego and Santa Barbara Counties	Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral; may also use oaks, conifers, and urban areas near stream courses	May nest in or adjacent to project area. Reported non-nesting sighting in CMS Bird list (Carmel Middle School 2007).
Tricolored blackbird *Agelaius tricolor*	–/E[2], SSC	Permanent resident in the Central Valley from Butte County to Kern County. Breeds at scattered coastal locations from Marin County south to San Diego County; and at scattered locations in Lake, Sonoma, and Solano Counties. Rare nester in Siskiyou, Modoc, and Lassen Counties	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grain fields. Habitat must be large enough to support 50 pairs. Probably requires water at or near the nesting colony	Suitable habitat present in the California bulrush wetland. Reported non-nesting sighting in CMS Bird list (Carmel Middle School 2007).
Loggerhead shrike (nesting) *Lanius ludovicianus*	–/SSC	Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches	Resident and winter visitor in lowlands and foothills throughout California. Rare on coastal slope north of Mendocino County, occurring only in winter	Reported in CMS Bird List (Carmel Middle School 2007). May forage, but low likelihood to nest on site.
Grasshopper sparrow *Ammodranus savannarum*	–/SSC	Breeds from eastern Washington and southern British Columbia, east across portions of Canada and U.S. to Maine, and south to southern California, New Mexico, southern Texas, southeastern Arizona, and portions of northern Mexico and southeastern United States. Winters from southern U.S. to Costa Rica.	Found in prairies, old fields, open grasslands, cultivated fields, and savannas	Reported in CMS Bird List as having indirect of nesting (Carmel Middle School 2007). Nests in grassland which is limited on project site but present in adjacent areas.

Common and Scientific Name	Status[1] Federal/State	California Distribution	Habitats	Occurrence in Project Area
Pallid bat *Antrozous pallidus*	–/SSC	Occurs throughout California except the high Sierra from Shasta to Kern County and the northwest coast, primarily at lower and mid elevations	Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. Relies heavily on trees for roosts	May roost within large trees or forage in the project area
Monterey dusky-footed woodrat *Neotoma fuscipes luciana*	–/SSC	Occurs throughout Monterey and northern San Luis Obispo Counties where appropriate habitat is available	Coast live oak woodland and chaparral habitats with moderate canopy cover and moderate to dense understory and abundant deadwood for nest construction	Suitable habitat present along the Carmel River and intermittent drainages; woodrat nest observed along Intermittent Drainage 1
South Central California Coast Steelhead *Oncorhynchus mykiss*	T/–	The distinct population segment is located in coastal streams from Aptos Creek (Santa Cruz County) to Grover Beach in San Luis Obispo	Coastal streams	Suitable migratory and rearing habitat located in Carmel River. Spawning habitat upstream.
Species with No Suitable Habitat Present in the Project Area				
California tiger salamander *Ambystoma californiense*	T/T	Central Valley, including Sierra Nevada foothills, up to approximately 1,000 feet, and coastal region from Butte County south to northeastern San Luis Obispo County.	Small ponds, lakes, or vernal pools in grasslands and oak woodlands for larvae; rodent burrows, rock crevices, or fallen logs for cover for adults and for summer dormancy	Suitable habitat not present
Longhorn fairy shrimp *Branchinecta longiantenna*	E/–	Eastern margin of central Coast Ranges from Contra Costa County to San Luis Obispo County; disjunct population in Madera County	Small, clear pools in sandstone rock outcrops of clear to moderately turbid clay- or grass-bottomed pools	Suitable habitat not present
Conservancy fairy shrimp *Branchinecta conservatio*	E/–	Disjunct occurrences in Solano, Merced, Tehama, Ventura, Butte, and Glenn Counties	Large, deep vernal pools in annual grasslands	Suitable habitat not present

Common and Scientific Name	Status[1] Federal/State	California Distribution	Habitats	Occurrence in Project Area
Vernal pool fairy shrimp *Branchinecta lynchi*	T/–	Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. Isolated populations also in Riverside County	Common in vernal pools; also found in sandstone rock outcrop pools	Suitable habitat not present
Smith's blue butterfly *Euphilotes enoptes smithi*	E/–	Localized populations along the immediate coast and in coastal canyons of Monterey County; single populations reported in Santa Cruz and San Mateo Counties	Coastal dunes and hillsides that support seacliff buckwheat (*Eriogonum parvifolium*) or coast buck-wheat (*Eriogonum latifolium*); these plants used as a nectar source for adults and host plant for larvae	Suitable habitat not present
Tidewater goby *Eucyclogobius newberryi*	E/SSC	The tidewater goby, found only in California, historically occurred in at least 87 California coastal lagoons from San Diego County to Humboldt County.	Restricted to coastal brackish shallow lagoons and lower stream reaches where the water is fairly still but not stagnant.	Suitable habitat not present
Santa Cruz long-toed salamander *Ambystoma macrodactylum croceum*	E/E, FP	Three metapopulations and breeding sites in coastal areas of southern Santa Cruz County and northern Monterey County	Lifetime spent mostly underground in willow groves, coastal scrub, coast live oak, or riparian habitats; migrates to breeding ponds in early to late winter, and juveniles disperse from the pond in September	Project area is outside of species known range
Arroyo southwestern toad *Bufo californicus*	E/SSC	Along the coast and foothills from San Luis Obispo County to San Diego County and inland to San Bernardino County	Prefers sandy arroyos and river bottoms with open riparian vegetation in inland valleys and foothills	Suitable habitat not present
Black legless lizard *Anniella pulchra nigra*	–/SSC	Monterey Bay region	Coastal dunes with native vegetation or chaparral, pine-oak woodland, or riparian areas with loose soil for burrowing	Suitable habitat not present

Common and Scientific Name	Status[1] Federal/State	California Distribution	Habitats	Occurrence in Project Area
California brown pelican (nesting colony and communal roosts) *Pelecanus occidentalis californicus*	D/D, FP	Along the entire California coast; rare to uncommon on the Salton Sea; breeds on the Channel Islands	Estuarine, marine, subtidal, and marine pelagic waters along the coast. Rests on water, inaccessible rocks, mudflats, sandy beaches, wharfs, and jetties.	Suitable habitat not present
California condor *Gymnogyps californianus*	E/E, FP	Historically, rugged mountain ranges surrounding the southern San Joaquin Valley; currently, most individuals are in captive populations, but a few birds have been released in the rugged portions of the Los Padres National Forest	Requires large blocks of open savanna, grasslands, and foothill chaparral with large trees, cliffs, and snags for roosting and nesting	Suitable habitat not present
Bald eagle *Haliaeetus leucocephalus*	D/E, FP	Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino Counties and in the Lake Tahoe Basin. Reintroduced into central coast. Winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierra Nevada, and east of the Sierra Nevada south of Mono County	In western North America, nests and roosts in coniferous forests within 1 mile of a lake, reservoir, stream, or the ocean	Suitable habitat not present. Reported non-nesting sighting in CMS Bird list (Carmel Middle School 2007).
California clapper rail *Rallus longirostris obsoletus*	E/E, FP	Marshes around the San Francisco Bay and east through the Delta to Suisun Marsh	Restricted to salt marshes and tidal sloughs; usually associated with heavy growth of pickle-weed; feeds on mollusks removed from the mud in sloughs	Suitable habitat not present
Western snowy plover (coastal populations) *Charadrius alexandrinus nivosus* (nesting)	T/SSC	Population defined as those birds that nest adjacent to or near tidal waters, including all nests along the mainland coast, peninsulas, offshore islands, and adjacent bays and estuaries. Twenty breeding sites are known in California from Del Norte to Diego County	Coastal beaches above the normal high tide limit in flat, open areas with sandy or saline substrates; vegetation and driftwood are usually sparse or absent	Suitable habitat not present

Common and Scientific Name	Status[1] Federal/State	California Distribution	Habitats	Occurrence in Project Area
California least tern (nesting colony) *Sterna antillarum browni*	E/E, FP	Nests on beaches along the San Francisco Bay and along the southern California coast from southern San Luis Obispo County south to San Diego County	Nests on sandy, upper ocean beaches, and occasionally uses mudflats; forages on adjacent surf line, estuaries, or the open ocean	Suitable habitat not present
Marbled murrelet *Brachyramphus marmoratus*	T/E	Nesting sites from the Oregon border to Eureka and between Santa Cruz and Half Moon Bay; winters in nearshore and offshore waters along the entire California coastline	Mature, coastal coniferous forests for nesting; nearby coastal water for foraging; nests in conifer stands greater than 150 years old and may be found up to 35 miles inland; winters on subtidal and pelagic waters often well offshore	Suitable habitat not present
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	PT/E	Nests along the upper Sacramento, lower Feather, south fork of the Kern, Amargosa, Santa Ana, and Colorado Rivers	Wide, dense riparian forests with a thick understory of willows for nesting; sites with a dominant cottonwood overstory are preferred for foraging; may avoid valley-oak riparian habitats where scrub jays are abundant	Suitable habitat not present
Least Bell's vireo *Vireo bellii pusillus*	E/E	Small populations remain in southern Inyo, southern San Bernardino, Riverside, San Diego, Orange, Los Angeles, Ventura, and Santa Barbara Counties	Riparian thickets either near water or in dry portions of river bottoms; nests along margins of bushes and forages low to the ground; may also be found using mesquite and arrow weed in desert canyons	Suitable habitat not present
Townsend's big-eared bat *Corynorhinu townsendii*	–/CT	Occurs throughout California.	Caves, mines, tunnels, building, or other human-made structures	Suitable habitat not present

Common and Scientific Name	Status[1] Federal/State	California Distribution	Habitats	Occurrence in Project Area
Black swift *Cypseloides niger* (nesting)	–/SSC	Breeds very locally in the Sierra Nevada and Cascade Range, the San Gabriel, San Bernardino, and San Jacinto mountains, and in coastal bluffs from San Mateo county south to near San Luis Obispo county	Nests in moist crevice or cave on sea cliffs above the surf, or on cliffs behind, or adjacent to, waterfalls in deep canyons	Suitable habitat not present
San Joaquin kit fox *Vulpes macrotis mutica*	E/T	Principally occurs in the San Joaquin Valley and adjacent open foothills to the west; recent records from 17 counties extending from Kern County north to Contra Costa County	Saltbush scrub, grassland, oak, savanna, and freshwater scrub	Project area is outside of species known range; no suitable habitat
Southern sea otter *Enhydra lutris nereis*	T/FP	Occurs approximately from the vicinity of Half Moon Bay south to Gaviota, California. Approximately 20 otters, including pups, are at San Nicolas Island as a result of translocation efforts to establish an experimental population	Coastal waters, typically within 1 km of shoreline. Often associated with kelp beds	Suitable habitat not present
American badger *Taxidea taxus*	–/SSC	Throughout California, except for the humid coastal forests of northwestern California in Del Norte and the northwestern Humboldt Counties	Requires sufficient food, friable soils, and relatively open uncultivated ground; preferred habitat includes grasslands, savannas, and mountain meadows near timberline	Suitable habitat not present

Common and Scientific Name	Status[1] Federal/State	California Distribution	Habitats	Occurrence in Project Area

[1] Status explanations:

Federal:

– = no status.
E = listed as "endangered" under the federal Endangered Species Act.
T = listed as "threatened" under the federal Endangered Species Act.
D = delisted (delisted species are monitored for 5 years).
PT = proposed "threatened" under federal Endangered Species Act.

State:

– = no status.
E = listed as "endangered" under the California Endangered Species Act.
T = listed as "threatened" under the California Endangered Species Act.
D = delisted
SSC = species of special concern in California.
FP = fully protected under the California Fish and Game Code.
CT = candidate for listing as "threatened" under the California Endangered Species Act.

[2] Tricolored blackbird was listed by DFW as endangered under CESA on a temporary basis on December 2014.

The FWS designated critical habitat for the CRLF from on March 17, 2010 (75 FR 12816–12959). Most of the Carmel River watershed was included in critical habitat unit MNT-2 and includes the western half of the West Course of the Rancho Cañada Golf Club. Only a few localities in California have been identified with more than 350 adults; one of these is Rancho San Carlos, a private ranch on the upper portion of the Carmel River Valley (FWS 2002).

One area within the project area provides potential breeding habitat for CRLF: the California bulrush wetland (**Figure 3.3-1**). Suitable habitat for CRLF is also present within the Carmel River. Based on surveys conducted in 2014, Ponds 1, 2, and 3 within the golf course, do not appear to pond water anymore and do not provide suitable aquatic habitat for CRLF. There are additional ponds within the golf course but outside of the project area, that may also provide suitable habitat for CRLF. Suitable aestivation habitat is present within the riparian vegetation surrounding the California bulrush wetland and ponds 1, 2, and 3. CRLF could traverse to and from breeding sites and aestivation habitat using the disturbed/open coyote brush scrub habitat throughout the golf course. Additionally, CRLF could travel along the Carmel River or Intermittent Drainage 1 channels. There are a total of 22 CNDDB (2014) records for CRLF occurrences within 5 miles of the project ~~area (**Figure 3.3-2**)~~.[1] No protocol-level surveys have been conducted for CRLF in the project area (Zander pers. comm.).There is anecdotal reference of CRLF being observed on and immediately adjacent to the project site (Hohenberger pers. comm.). According to the director of the Carmel Valley Middle School Biological Sciences Project, CRLF have been observed in the intermittent drainage (Intermittent Drainage 2 on **Figure 3.3-1**) on the northeast portion of the project site and in a small perennial pond (up to approximately 4 feet deep, with emergent vegetation, and supplied with water through a pipe) on the school property within the biological sciences project area. CRLF have been reported to have been seen in the school pond for the last several years. Reportedly, photographs were taken of at least one of the sightings of the CRLF. Information surrounding the documentation of these sightings was requested from the Biological Sciences Project, but has not yet been received (as of the date January 7, 2016). While the intermittent drainages were visited by ICF biologists during the site reconnaissance, the perennial pond on the school property was not, and thus the sighting of CRLF on the school pond was not verified as part of the analysis for this Second Revised ~~Recirculated~~ Draft EIR. Based on the description of the pond, it appears to have characteristics as suitable breeding habitat. Without surveys by professional biologists or other verification, it is unknown whether the frogs sited at the school pond (or in the intermittent drainage) are CRLF and whether or not CRLF may be breeding in the school pond. Lacking evidence to disprove their presence or activity, it is conservatively assumed that the sightings are CRLF and that CRLF are utilizing both locations and may be breeding in the school pond for the purpose of this impact analysis.

Southwestern Pond Turtle

Southwestern pond turtle is a state species of special concern. The southwestern pond turtle is one of two subspecies of the western pond turtle. The southwestern pond turtle occurs from the vicinity of Monterey south to northwestern Baja California (Jennings et al. 1992).

[1] Note: a figure depicting CNDDB occurrences has been removed from this Second Revised Draft EIR, consistent with current CDFW guidelines related to CNDDB spatial information.

Western pond turtle is thoroughly aquatic, preferring the quiet waters of ponds, lakes, marshes, rivers, streams, and irrigation ditches that have a rocky or muddy bottom and emergent vegetation (Stebbins 2003). The species occurs in a wide range of both permanent and intermittent aquatic environments (Jennings et al. 1992). Western pond turtles spend a considerable amount of time basking on rocks, logs, emergent vegetation, mud or sand banks, or human-generated debris. Western pond turtles move to upland areas adjacent to watercourses to deposit eggs and overwinter (Jennings and Hayes 1994). However, in the southern part of their range and along the central coast of California, western pond turtles do not overwinter and are active year-round (Jennings et al. 1992).

The Carmel River, Intermittent Drainages 1 and 2, and the California bulrush wetland provide suitable aquatic habitat for southwestern pond turtle. If ponds 1, 2, and 3 became sufficiently inundated, they could provide suitable aquatic habitat for pond turtles. Additional ponds within the golf course, but outside of the project area, also provide suitable habitat for pond turtles. The area adjacent to the Carmel River and the intermittent drainages may provide suitable habitat for egg deposition. There is one CNDDB (2014) record for southwestern pond turtle within 5 miles of the project area.

Western Burrowing Owl

The western burrowing owl is a California species of special concern and is protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code. Western burrowing owls occur in many areas throughout California excluding the northwest coastal forests and high mountains (Zeiner et al. 1990a). Western burrowing owls require habitat with three basic attributes: open, well-drained terrain; short, sparse vegetation; and underground burrows or burrow facsimiles. Burrowing owls occupy grasslands, deserts, sagebrush scrub, agricultural areas (including pastures and untilled margins of cropland), earthen levees and berms, coastal uplands, and urban vacant lots, as well as the margins of airports, golf courses, and roads (Haug et al. 1993). Burrowing owls rely on burrows excavated by fossorial (i.e., digging) mammals such as ground squirrels (*Spermophilus* ssp.) or prairie dogs (*Cynomys* ssp.) because burrows provide security for nesting and shelter from predators and weather (ICF International 2012). They can also use natural and unnatural cavities in rock outcroppings, concrete or asphalt, and human-made artificial habitat (Center for Biological Diversity et al. 2003) such as cavities in piles of rubble.

Because of high maintenance of the golf turf, this area is unlikely to contain burrows for cover or nesting. However, the perimeter of the golf course may contain suitable burrows. An extensive search for burrows was not conducted during the field survey; however, mice burrows were observed in the weedy grassland/coyote brush area between the golf course and CMS (See Impact BIO-10 for additional discussion on burrowing owl). If burrowing owls occurred on the margin of the project area or on adjacent properties, they could forage in the project area. There is one CNDDB record for burrowing owl, approximately 4 miles north of the project area (California Department of Fish and Wildlife 2014) ~~(**Figure 3.3-2**)~~.

Purple Martin

Purple martin is a California species of special concern. Purple martins occur along coastal mountains from the California/Oregon border south to San Luis Obispo County, along the west slope of the Sierra Nevada, and in the northern Sierra and Cascade ranges at lower elevations. There are isolated, local populations in the Sacramento Valley and southern California. Purple martins can be

found in valley foothill and montane hardwood, valley foothill and montane hardwood-conifer, riparian, and conifer habitats. They nest within old woodpecker cavities and in human-made structures such as bridges or culverts. The breeding season is from April to August (Zeiner et al. 1990a).

Suitable nesting habitat for purple martin may be present within the Monterey pine forest and the riparian forest and woodland in and adjacent to the project area. There are no CNDDB (California Department of Fish and Wildlife 2014) records for nesting purple martins within 5 miles of the project area and no purple martins were observed during the field surveys (Rana Creek Habitat Restoration 2004).

Yellow Warbler

Yellow warbler is a California species of special concern. Yellow warblers nest throughout California except in the Central Valley, the Mojave Desert region, and high altitudes along the eastern side of the Sierra Nevada. Breeding habitat includes riparian woodlands, montane chaparral, and open ponderosa pine and mixed conifer habitats with extensive brushy understories. Nests are built 2 to 16 feet above ground in a deciduous sapling or shrub. Yellow warblers mainly eat insects and spiders (Zeiner et al. 1990a).

Suitable nesting habitat for yellow warbler is present within the riparian forest and woodland in and adjacent to the project area. There are no CNDDB (California Department of Fish and Wildlife 2014) records for nesting yellow warblers within 5 miles of the project area and no yellow warblers were observed during the field surveys (Rana Creek Habitat Restoration 2004). However, the CMS Biological Sciences Project 2007 bird list indicates that yellow warblers have been observed, but that no direct or indirect evidence of nesting has been observed (Carmel Middle School 2007).

Tricolored Blackbird

Tricolored blackbird is a California species of special concern and was recently (December 2014) listed as endangered under the CESA on a temporary emergency basis that can be renewed. The vast preponderance of the population occurs in central California, with additional populations in coastal and inland southern California locations, as well as scattered sites in Oregon, western Nevada, and western coastal Baja California (Beedy and Hamilton 1997; Beedy 1999; Hamilton 2000).

Tricolored blackbird breeding colony sites require open accessible water, a protected nesting substrate, including either flooded or thorny or spiny vegetation; and a suitable foraging space providing adequate insect prey within a few miles of the nesting colony (Hamilton et al. 1995; Beedy and Hamilton 1997; Beedy 1999). Historically, tricolored blackbird breeding colonies were nearly all located in freshwater marshes dominated by tules (*Scirpus* spp.) and cattails (*Typha* spp.) (Neff 1937). More recently, an increasing percentage of breeding colonies have been documented in Himalaya blackberries (*Rufus discolor*) (Beedy et al. 1991; Cook 1996, 1999), and in silage and grain fields (Hamilton et al. 1995; Beedy and Hamilton 1997; Hamilton 2000). Tricolored blackbird foraging habitats in all seasons include annual grasslands; wet and dry vernal pools and other seasonal wetlands; agricultural fields (such as large tracts of alfalfa with continuous mowing schedules and recently tilled fields); cattle feedlots; and dairies. Tricolored blackbirds also forage occasionally in riparian scrub habitats and along marsh borders. Weed-free row crops and intensively managed vineyards and orchards do not serve as regular foraging sites. (Beedy and Hamilton 1997; Beedy 1999). Most tricolored blackbirds forage within 3 miles of their colony sites (Orians 1961), but commute distances of up to 8 miles have been reported (Beedy 1999).

A small amount of potential breeding habitat is present in the project area within the California bulrush wetland (0.3 acre total). Other golf course ponds outside of the project area may also provide breeding habitat. If tricolored blackbirds nest on or near the golf course, they may occasionally forage within the project area. Potential foraging habitat appears to be present south and west of the project area, south of the Carmel River. There are no CNDDB (California Department of Fish and Wildlife 2014) records for tricolored blackbirds within 5 miles of the project area. However, tricolored blackbirds have been observed foraging at a nearby golf course in Carmel Valley (Beedy pers. comm.). The CMS Biological Sciences Project 2007 bird list also indicates that tricolored blackbirds have been observed, but that no direct or indirect evidence of nesting has been observed (Carmel Middle School 2007). Based on the small amount of breeding habitat within the project area, there is a low potential for tricolored blackbirds to breed on the site.

Raptors

Several raptors have a low potential to nest in the project site. Cooper's hawk, sharp-shinned hawk, and white-tailed kite are California species of special concern and the white-tailed kite is fully protected under the California Fish and Game Code. These species nest in riparian forests and oak woodlands and forage in grasslands and open woodlands.

Suitable nesting habitat for these species is present within the riparian forest and woodland and coast live oak woodland in and adjacent to the project area. There are no CNDDB (California Department of Fish and Wildlife 2014) nesting records for Cooper's hawk, sharp-shinned hawk, or white-tailed kite within 5 miles of the project area and these species were not observed during the field surveys for the Proposed Project~~ and 130-Unit Alternative~~. However, the CMS Biological Sciences Project 2007 bird list indicates that these species have been observed, but that no direct or indirect evidence of nesting has been observed (Carmel Middle School 2007).

Other Birds Noted on the CMS Bird List

Several additional special-status bird species have been observed in the project vicinity according to the CMS Biological Sciences Project.

Three species on this list (that are not already discussed above) that have some potential to nest on the project site include the loggerhead shrike and olive-sided flycatcher which could forage on the project site but have a low likelihood for nesting; and the grasshopper sparrow which occurs in dry, well-drained native and non-native grasslands (grassland areas are limited to small areas between scrub on the project site) and which has indirect evidence of nesting on the CMS habitat.

The CMS Bird List includes a number of other special-status bird species; however apart from the species mentioned above these other species are likely to be transients on the project site.

Pallid Bat and Non-Special–Status Bats

Pallid bat is found throughout most of California at low to middle elevations (6,000-feet). Pallid bats are found in a variety of habitats including desert, brushy terrain, coniferous forest, and non-coniferous woodlands. In Central and Northern California, the species is associated with oak, ponderosa pine, redwood, and giant sequoia habitats. Pallid bats forage among vegetation and above the ground surface, eating large ground-dwelling arthropods and large moths. Daytime roost sites include rock outcrops, mines, caves, hollow trees, buildings, and bridges. Night roosts are commonly under bridges but are also in cave and mines (The Wildlife Society 1996). Hibernation may occur

during late November through March. Pallid bats breed from October to February, parturititon from late April to July, and weaning in August (Sherwin, R. 1998) and one or two young per female are born in May or June (The Wildlife Society 1996).

Suitable roosting habitat for pallid bats and non-special–status bats may be present within larger trees located in the project area. Trees would typically be used as day roost sites. No night roosting sites were observed in the project area. Pallid, hoary, and other bat species could also forage in the project area. There are no CNDDB records for pallid bat or other bat species within 5 miles of the project area.

Monterey Dusky-Footed Woodrat

Monterey dusky-footed woodrat is a California species of special concern. Monterey dusky-footed woodrat is a subspecies of the dusky-footed woodrat (*Neotoma fuscipes*). The Monterey dusky-footed woodrat occurs throughout Monterey and northern San Luis Obispo Counties where appropriate habitat is available. Dusky-footed woodrats can be found in chaparral, streamside thickets, and deciduous or mixed woodland habitats (Burt and Grossenheider 1980). In forest habitats, they are generally found where there is a moderate canopy with a dense to moderate understory. Dusky-footed woodrats construct nests out of sticks, grass, leaves, and other debris and the availability of these nest-building items may limit abundance of woodrats (Zeiner et al. 1990b). The riparian forest and woodland and the coast live oak woodland in the project area provide suitable habitat for Monterey dusky-footed woodrats. A woodrat nest was observed along Intermittent Drainage 1 in the project area. No woodrat nests were observed in the coast live oak woodland in 2014. There are no CNDDB (California Department of Fish and Wildlife 2014) records within 5 miles of the project area.

Non-Special–Status Migratory Birds, including Raptors

Several non-special–status migratory birds, including raptors, could nest in and adjacent to the study area based on the presence of suitable nesting habitat (riparian forest and woodland, Monterey pine stands, coyote brush scrub, and cattail and bulrush wetland). The breeding season for most birds is generally from March 1 to August 30. The occupied nests and eggs of these birds are protected by federal and state laws, including the MBTA and California Fish and Game Code Sections 3503 and 3503.5. DFW is responsible for overseeing compliance with the codes and makes recommendations on nesting bird and raptor protection.

A focused nest survey was not conducted during the October 2005 or August 2014 field survey. Several migratory birds and raptors, including red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), great horned owl (*Bubo virginianus*), Anna's hummingbird, Nuttall's woodpecker, and wrentit were observed during surveys during fall 2003 and spring 2004, and could breed in the project area. These generally common species are locally and regionally abundant.

The CMS 2007 bird list identifies a number of migratory birds and raptors as having been observed by the biological sciences project in the vicinity and indicates direct and indirect evidence of nesting by some of the migratory birds and five of the raptors (red-shouldered hawk, red-tailed hawk, American kestrel [*Falco sparverius*], great horned owl, and barn owl [*Tyto alba*]) (Carmel Middle School 2007).

Steelhead

The South-Central California Coast Distinct Population Segment (DPS) of steelhead is currently listed as threatened under the federal ESA (FR 71: 834). This DPS includes all naturally spawned populations of steelhead in California streams from Aptos Creek to south of Grover City. The Carmel River is designated critical habitat (FR 70: 52488).

Steelhead trout begin migrating up coastal and inland streams from November through early May to spawn in freshwater streams. Juvenile steelhead spend up to 3 years rearing in freshwater. They migrate to the ocean where they feed for up to 3 years, after which they return to their natal streams to breed.

Steelhead are anadromous (sea-run) rainbow trout that spawn in freshwater, spend the first year (or years) of life in freshwater, and then migrate to the ocean where they continue to grow and mature before returning to spawn.

Following upstream migration, the female establishes a territory and digs a redd (gravel nest) with her tail, usually in areas where there is sufficient subsurface flow to sustain eggs and alevins (yolk-sac fry) through the incubation period (usually the lower ends of pools or heads of riffles). She then lays the eggs in the redd where they are fertilized by one or more males. Eggs buried in redds hatch in 3 to 4 weeks (at 10 to 15 Celsius) and fry emerge from the gravel 2 to 3 weeks later. The fry initially live in quiet waters close to shore and soon establish feeding territories that they defend against other juveniles. As they grow during spring and summer, juvenile steelhead move to faster, deeper water in riffles, runs, and pools. They typically maintain positions near swift currents that carry drifting aquatic and terrestrial insects on which they feed. Some juveniles may move downstream to the lower reaches of streams or lagoons during the summer and fall to complete their freshwater rearing phase.

After 1 year of stream residence, most juveniles become smolts (juveniles adapted to seawater) and migrate downstream to the ocean in late winter and spring. Some juveniles remain in fresh water 1 to 2 more years before they enter the ocean. Because juvenile steelhead rear for a year or more in freshwater, juveniles of different age groups are usually present year-round in California coastal streams.

Most steelhead spend 1 to 3 years in the ocean before returning to spawn. Some adults return to the ocean after spawning (kelts) and return to spawn again. Occasionally, juvenile steelhead mature in freshwater and spawn without migrating to the ocean. This occurs most frequently during droughts when juveniles are trapped in the river and cannot migrate to the ocean.

The upstream migration of adults in the lower Carmel River primarily occurs from mid-December through mid-April in response to flows of sufficient magnitude and duration to stimulate movement of adults, permit passage of adults past critical riffles in the lower river, and keep the river mouth open between storms. Although suitable migration conditions may occur earlier, adults typically do not begin arriving at San Clemente Dam until late December or January. Depending on migration opportunities later in the season, the migration of adults may continue into April.

The primary spawning season for steelhead in the Carmel River is February through March but spawning may continue through mid-April. Downstream of San Clemente Dam, the highest concentration of redds generally occurs upstream of the Narrows but redds have been observed as far downstream as RM 5.5. The Rancho Cañada Golf Club is located further downstream between RM 2 and RM 3.

In the Carmel River, most steelhead fry emerge from the gravel in April through June and rear for at least 1 year in the river before migrating to the ocean as smolts. Juveniles may migrate downstream to lower reaches of the Carmel River in late spring or early summer of their first year of life (young-of-the-year or age 0+ juveniles) or in late fall and early winter of their first, second, or third years (as yearling and older juveniles). Juveniles of all age classes may migrate as far downstream as the lagoon in years when flows to the lagoon are sustained through the summer and fall. Substantial downstream movement of juveniles in late fall and early winter appears to be associated with the initial storms of the season that result in spill and increased flows downstream of San Clemente Dam.

Many juvenile steelhead in the Carmel River become smolts and enter the ocean in late winter and spring after 1 year in the river. A small number remains for 2 to 3 years before emigrating.

The steelhead run in the Carmel River at the time of the Spanish explorers was believed to be upwards of 12,000 fish (California State Water Resources Control Board 1995). The river was overfished during the mid-to-late 1800s, and the runs subsequently declined. Snider (1983) reported annual runs of 1,200 adult steelhead at the San Clemente Dam fishway during the mid-1970s. During droughts in 1976 through 1977 and the late 1980s, no steelhead passed San Clemente Dam. The Lagoon never opened during the 4 years from 1987 to 1990. Density of rearing juvenile steelhead reached very low levels by 1989 but have increased in subsequent years. After lows of zero returning adult steelhead in 1989 through 1990, one fish in 1991, and 15 in 1992, to 1,151 adults reported in 2000. Viable steelhead populations in the Carmel River depend on sufficient attraction flows, passage flows for adults and smolts, suitable spawning and egg-incubation conditions, and good rearing conditions. The most recent counts of adult steelhead (2011 through 2012) show a significant decrease in abundance for the Carmel River; 470 adults were counted at the San Clemente Dam and 175 adults were counted at the Los Padres Dam, which reflect the effects of the most recent drought years 2007 through 2009 (National Marine Fisheries Service 2013).

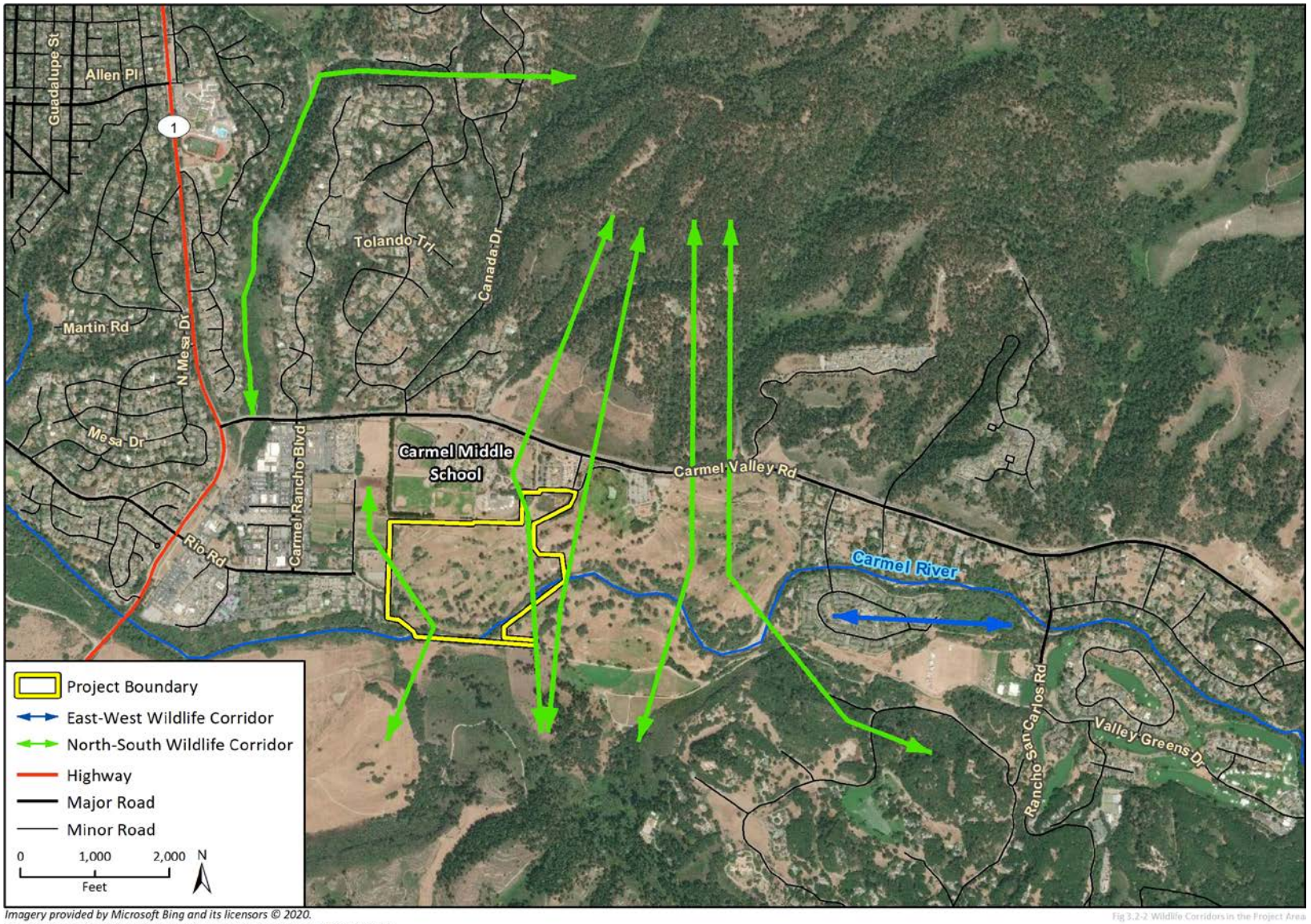
Other Carmel River Fish Species

The fish community in the Carmel River is diverse relative to other Central Coast streams. Twenty species have been identified within the river and lagoon, including 12 native and 8 introduced species. Sculpin (*Leptocottus armatus*), brown trout (*Salmo trutta*), hitch (*Lavinia exilicauda*), stickleback (*Gasterosteus aculeatus*), and steelhead are the most abundant species. Species composition in the lower river and lagoon may change as a function of the connectivity of the mouth of the river with the ocean (California Public Utilities Commission 2000).

Wildlife Movement Corridors

Wildlife movement relevant to the project area can be best described in terms of east-west wildlife movement along the Carmel River and north-south movement from the undeveloped area south of the Carmel River to the undeveloped are to the north of Carmel Valley Road. Wildlife movement corridors are shown on **Figure 3.3-2~~3~~**.

1 **Figure 3.3-2 Wildlife Corridors in the Project Area**



2

East-West Wildlife Movement along the Carmel River

In the project area, the Carmel River provides an east-west movement corridor for a variety of aquatic and terrestrial species along the valley floor. Given the presence of residential and other development on the valley floor, the river is the only east-west unimpeded corridor for movement along the valley floor throughout the entire mouth of the valley area.

East-west wildlife movement is also possible through the Rancho Cañada Golf Club both north and south of the Carmel River.

North of the river, east-west movement becomes impeded west of the project site due to residential and commercial development and east of the project site due to residential development starting just west of Via Mallorca.

South of the river, east-west movement is unimpeded west of the project area as the land south of the river is used for agricultural (Odello property) and open space (Palo Corona Regional Park) uses. East of the project area, east-west movement is partially impeded by residential development south of the river, but there is opportunity for east-west movement through the undeveloped hillsides south of the valley.

East-west movement is also possible outside the project area through the undeveloped areas on the hillsides south of the Carmel River and north of Carmel Valley Road.

North-South Wildlife Movement from South of the Carmel River to North Carmel Valley Road

North-south wildlife movement at the mouth of Carmel Valley from south of the Carmel River to undeveloped areas north of Carmel Valley Road is already somewhat impaired at present due to the presence of residential and commercial development, roadways (in particular Carmel Valley Road), as well as other uses such as the developed parts of the CMS, the adjacent church, and the buildings, roads, and parking lot at the Rancho Cañada Golf Course.

However, near the mouth of Carmel Valley, there are a number of north-south wildlife movement corridors between State Route 1 (SR 1) and just west of Via Mallorca. While wildlife can and do move through areas of residential, commercial, and institutional development, there are greater impediments to wildlife movement and thus a lesser effectiveness of these other areas to provide effective wildlife connections. The focus of this discussion is thus on areas that are relatively undisturbed and their potential for use by wildlife.

- **Hatton Canyon** – Prior to development in the area, Hatton Canyon provided a wildlife movement corridor to and from the Carmel River. At present, the connection of Hatton Canyon to the Carmel River and areas south is substantially impeded by commercial development and SR 1 and thus only provides effective wildlife movement opportunity north of Carmel Valley Road.
- **Val Verde Drive** – Wildlife can presently move from undeveloped areas south of the Carmel River, across the Rancho Cañada Golf Course to agricultural and undeveloped parcels along Val Verde Drive. Although wildlife may move from the parcels along Val Verde Drive north across Carmel Valley Road, the area immediately north of the road is a residential development, which reduces the value of this corridor.

- **Through CMS Habitat Area** – Wildlife can presently move from undeveloped areas south of the Carmel River, across the Rancho Cañada Golf Course, through the Hatton and Stemple Parcels to the CMS habitat area on the school property and northward across Carmel Valley Road to undeveloped areas north of the road. The narrowest part (~300 feet) of this corridor is between the amphitheater for the environmental education program and the parking lot for the community church.
- **Between Rio Road (East) and Rancho Cañada Golf Course Clubhouse** – Wildlife can presently move from undeveloped areas south of the Carmel River, across the Rancho Cañada Golf Club between Rio Road (East) and the clubhouse, across the clubhouse access road, and across Carmel Valley Road to undeveloped areas north of the road. The narrowest part (~700 feet) of the corridor is between Rio Road (east) and the clubhouse parking lot.
- **Between Rancho Cañada Club House and residences west of Via Mallorca** – Wildlife can presently move from undeveloped areas south of the Carmel River, across the Rancho Cañada Golf Club between the clubhouse and the residences west of Via Mallorca, and across Carmel Valley Road to undeveloped areas north of the road. The narrowest part (~1,600 feet) of the corridor is between the clubhouse and the residences west of Via Mallorca.

Regulatory Setting

This section discusses the federal, state, and local policies and regulations that are relevant to the analysis of biological resources in the project area for the Proposed Project ~~and the 130-Unit Alternative~~ being considered by Monterey County.

Federal Policies and Regulations

Endangered Species Act

The federal ESA protects fish and wildlife species, and their habitats that have been identified by FWS or National Oceanic and Atmospheric Administration (NOAA) Fisheries as threatened or endangered. *Endangered* refers to species, subspecies, or distinct population segments that are in danger of extinction through all or a significant portion of their range; *threatened* refers to species, subspecies, or distinct population segments that are likely to become endangered in the near future.

The ESA is administered by FWS and NOAA Fisheries. In general, NOAA Fisheries is responsible for protection of ESA-listed marine species and anadromous fishes, whereas listed, proposed, and candidate wildlife and plant species and commercial fish species are under FWS jurisdiction. *Take* of listed species can be authorized through either the Section 7 consultation process for actions by federal agencies or the Section 10 permit process for actions by nonfederal agencies. Federal agency actions include activities that involve one or more of the following characteristics.

- Located on federal land.
- Conducted by a federal agency.
- Funded by a federal agency.
- Authorized by a federal agency (including issuance of federal permits and licenses).

Under Section 7, the federal agency conducting, funding, or permitting an action (the federal lead agency) must consult FWS or NOAA Fisheries, as appropriate, to ensure that the proposed action will not jeopardize endangered or threatened species or destroy or adversely modify designated critical habitat. If a Proposed Project "may affect" a listed species or designated critical habitat, the lead agency is required to prepare a biological assessment (BA) evaluating the nature and severity of the expected effect. In response, FWS issues a biological opinion (BO) with a determination that the proposed action either:

- May jeopardize the continued existence of one or more listed species (jeopardy finding) or result in the destruction or adverse modification of critical habitat (adverse modification finding), or
- Will not jeopardize the continued existence of any listed species (no jeopardy finding) or result in adverse modification of critical habitat (no adverse modification finding).

The BO issued by FWS may stipulate discretionary "reasonable and prudent" conservation measures. If a project would not jeopardize a listed species, FWS issues an incidental take statement to authorize the proposed activity.

In cases where a nonfederal entity is undertaking an action that does not require federal authorization, the take of listed species must be permitted by FWS through the Section 10 process. If a proposed project would result in the incidental take of a listed species, the project applicant must first obtain a Section 10(a)(1)(B) incidental take permit (ITP). Incidental take under Section 10 is defined as take of federally listed fish and wildlife species "that is incidental to, but not the purposes of, otherwise lawful activities." To receive an ITP, the nonfederal entity is required to prepare a habitat conservation plan (HCP). The HCP must include conservation measures that avoid, minimize, and mitigate the project's impact on listed species and their habitat.

Migratory Bird Treaty Act

The MBTA (16 U.S. Government Code [USC] 703) enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703; 50 CFR 10, 21). Most actions that result in taking or in permanent or temporary possession of a protected species constitute violations of the MBTA. Examples of permitted actions that do not violate the MBTA are the possession of a hunting license to pursue specific game birds, legitimate research activities, display in zoological gardens, bird-banding, and other similar activities. FWS is responsible for overseeing compliance with the MBTA, and the U.S. Department of Agriculture's Animal Damage Control Officer makes recommendations on related animal protection issues.

Clean Water Act

The federal Clean Water Act (CWA) was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the United States. The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The following discussion gives background information as relevant to biological resources; additional discussion of the CWA is provided in Chapter 3.2, *Hydrology and Water Quality*.

Waters of the United States are areas subject to federal jurisdiction pursuant to Section 404 of the CWA. Waters of the United States are typically divided into two types: *wetlands* and *other waters of the United States*.

Wetlands are "areas that are inundated or saturated by surface or groundwater 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" (33 CFR 328.3[b]; 40 CFR 230.3). To be considered subject to federal jurisdiction, a wetland must normally support hydrophytic vegetation, hydric soils, and wetland hydrology (Environmental Laboratory 1987).

Other waters of the United States are seasonal or perennial water bodies, including lakes, stream channels, drainages, ponds, and other surface water features, that exhibit an ordinary high water mark but lack positive indicators for the three wetland parameters (33 CFR 328.4).

Permits for Fill Placement in Waters and Wetlands (Section 404)

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the United States.

Applicants must obtain a permit from the U.S. Army Corps of Engineers (USACE) for all discharges of dredged or fill material into waters of the United States, including wetlands, before proceeding with a proposed activity. USACE may issue either an individual permit evaluated on a case-by-case basis or a general permit evaluated at a program level for a series of related activities. General permits are preauthorized and are issued to cover multiple instances of similar activities expected to cause only minimal adverse environmental effects. Nationwide permits (NWPs) are a type of general permit issued to cover particular fill activities. Each NWP specifies particular conditions that must be met for the NWP to apply to a particular project. Waters of the United States in the project area are under the jurisdiction of the USACE San Francisco District.

Compliance with CWA Section 404 requires compliance with several other environmental laws and regulations. USACE cannot issue an individual permit or verify the use of a general permit until the requirements of NEPA, federal ESA, and National Historic Preservation Act have been met. In addition, USACE cannot issue or verify any permit until a water quality certification or a waiver of certification has been issued pursuant to CWA Section 401.

Water Quality Certification (Section 401)

Under CWA Section 401, applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the United States must obtain certification from the state in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate. Therefore, all projects that have a federal component and may affect state water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act requires consultation by federal agencies with FWS when the waters of any stream or other body of water are proposed, authorized, permitted, or licensed to be

impounded, diverted, or otherwise controlled or modified under a federal permit or license (16 USC 661–667[e]).

Most FWS comments on applications for permits under CWA Section 404 are conveyed to USACE through the consultation process required by this coordination act. This act may apply to the Proposed Project ~~and 130-Unit Alternative~~ through USACE relevant to permitting for the project.

The FWS provides advisory comments and recommends mitigation measures to avoid impacts on wetlands or to modify activities that may directly affect wetlands. Mitigation recommended by FWS may include restoring or creating habitat to avoid a net loss of wetland functions and values. Although consultation with FWS is required, USACE is not required to implement FWS recommendations.

Federal Executive Order 13112—Invasive Species

Executive Order (EO) 13112 (February 3, 1999) directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. The order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species.

FWS and the USACE may issue permits for the Proposed Project and would be responsible for ensuring that permitted activities comply with EO 13112 and do not contribute to the spread of invasive species.

State Policies and Regulations

California Endangered Species Act

California implemented CESA in 1984. It prohibits the take of endangered and threatened species; however, habitat destruction is not included in the state's definition of take. CESA Section 2090 requires state agencies to comply with endangered species protection and recovery, and to promote conservation of these species. DFW administers CESA and authorizes take through Section 2081 agreements (except for species designated as fully protected).

For rare plant species, CESA defers to the California Native Plant Protection Act of 1977, which prohibits importing, taking, or selling rare and endangered plants. State-listed plants are protected mainly in cases in which state agencies are involved in projects under CEQA. In such cases, plants that are listed as rare under the California Native Plant Protection Act are not protected under CESA but can be protected under CEQA.

California Native Plant Protection Act

California Native Plant Protection Act of 1977 prohibits importing rare and endangered plants into California, taking rare and endangered plants (in certain circumstances), and selling rare and endangered plants. State-listed plants are protected mainly in cases where state agencies are involved in projects under CEQA. The California Native Plant Protection Act does not prohibit take of rare and endangered plants incident to possession or sale of real estate (California Fish and Game Code Section 1908); consequently, it does not prohibit removal of a rare or endangered plant in the

course of development of land, but rather only in the context or removal of the plant for the purposes of sale. Owners of land with known rare or endangered species are required to notify DFW of plans to change land use a minimum of 10 days prior to the change to allow DFW time to salvage the plants. However, if DFW fails to respond within these 10 days, then the landowner may proceed with the land use change (California Fish and Game Code Section 1913[c]).

California Fish and Game Code

Fully Protected Species

The California Fish and Game Code provides protection from take for a variety of species, referred to as *fully protected species*. Section 3511 lists fully protected birds, Section 3515 lists fully protected fish, Section 4700 lists fully protected mammals, and Section 5050 lists fully protected amphibians and reptiles. California Fish and Game Code Section 86, defines take as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Except for take related to scientific research, all take of fully protected species is prohibited. There is one fully protected species—white-tailed kite—which has the potential to occur in the project area.

Streambed Alteration Agreements (Section 1600 et seq.)

DFW has jurisdictional authority over wetland resources associated with rivers, streams, and lakes under California Fish and Game Code (Section 1600 et seq). DFW has the authority to regulate all work under the jurisdiction of California that would substantially divert, obstruct, or change the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed.

In practice, DFW marks its jurisdictional limit at the top of the stream or lake bank or the outer edge of the riparian vegetation, where present, and sometimes extends its jurisdiction to the edge of the 100-year floodplain. Because riparian habitats do not always support wetland hydrology or hydric soils, wetland boundaries, as defined by CWA Section 404, sometimes include only portions of the riparian habitat adjacent to a river, stream, or lake. Therefore, jurisdictional boundaries under Section 1600 may encompass a greater area than those regulated under CWA Section 404.

DFW enters into a Streambed Alteration Agreement (SAA) with an applicant and can request conditions to ensure that no net loss of wetland values or acreage will be incurred. The streambed or lakebed alteration agreement is not a permit but, rather, a mutual agreement between DFW and the applicant.

Sections 3503 and 3503.5

Section 3503 of the California Fish and Game Code prohibits the killing of birds or the destruction of bird nests. Section 3503.5 prohibits the killing of raptor species and the destruction of raptor nests.

Porter-Cologne Water Quality Control Act

California Water Code Section 13260 requires "any person discharging waste, or proposing to discharge waste, in any region that could affect the *waters of the state* to file a report of discharge (an application for waste discharge requirements)." Under the Porter-Cologne Water Quality Control Act definition, the term *waters of the state* is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." Although all waters of the United States

that are within the borders of California are also waters of the state, the converse is not true (i.e., in California, waters of the United States represent a subset of waters of the state). Thus, California retains authority to regulate discharges of waste into any water of the state, regardless of whether USACE has concurrent jurisdiction under Section 404.

Local Policies and Regulations

This section summarizes relevant policies from the 2010 *Monterey County General Plan* (2010 General Plan) and the 2013 Carmel Valley Master Plan (2013 CVMP). This section also presents the prior relevant policies in the 1982 General Plan and the 1986 CVMP for informational purposes only.

Current County Plans and Policies

The current applicable and relevant plans and policies are summarized below.

2010 Monterey County General Plan

The 2010 General Plan sets forth the policies applicable to the protection, preservation and conservation of biological resources in the county. The following policies are applicable to biological resources (Monterey County 2010).

Policy OS-5.25: Occupied nests of statutorily protected migratory birds and raptors shall not be disturbed during the breeding season (generally February 1 to September 15). The county shall

A. Consult, or require the developer to consult, with a qualified biologist prior to any site preparation or construction work in order to:

   1. determine whether work is proposed during nesting season for migratory birds or raptors,
   2. determine whether site vegetation is suitable to nesting migratory birds or raptors,
   3. identify any regulatory requirements for setbacks or other avoidance measures for migratory birds and raptors which could nest on the site, and
   4. establish project-specific requirements for setbacks, lock-out periods, or other methods of avoidance of disruption of nesting birds.

B. Require the development to follow the recommendations of the biologist. This measure may be implemented in one of two ways:

   1. preconstruction surveys may be conducted to identify active nests and, if found, adequate buffers shall be provided to avoid active nest disruption until after the young have fledged; or
   2. vegetation removal may be conducted during the non-breeding season (generally September 16 to January 31); however, removal of vegetation along waterways shall require approval of all appropriate local, state, and federal agencies.

This policy shall not apply in the case of an emergency fire event requiring tree removal. This policy shall apply for tree removal that addresses fire safety planning, since removal can be scheduled to reduce impacts to migratory birds and raptors.

2013 Carmel Valley Master Plan

The following 2013 CVMP policies are relevant to biological resources (Monterey County 2013).

Policy CV-1.3: Open space uses shall be located between development areas in order to clearly define them and maintain a distinction between the more rural and more suburban area so the valley. Small and large open space areas should be created with preference given to those that add open space to existing open space areas.

Policy CV-3.7: Areas of biological significance shall be identified and preserved as open space. These include, but are not limited to:

a. The redwood community of Robinson Canyon;

b. The riparian community and redwood community of Garzas Creek;

c. All wetlands, including marshes seeps, and springs (restricted occurrence, sensitivity, outstanding wildlife value).

d. Natïve bunchgrass stands and natural meadows (restricted occurrence and sensitivity).

e. Cliffs, rock outcrops, and unusual geologic substrates (restricted occurrence.)

f. Ridgelines and wildlife migration routes (wildlife value).

When a parcel cannot be developed because of this policy, a low-density, clustered development (but no subdivision) may be approved on those portion of the land not biologically significant or on a portion of the land adjoining existing development so that the development will not diminish the visual quality of such parcels or upset the natural functioning of the ecosystem in which the parcel is located

Policy CV-3.8: Development shall be sited to protect riparian vegetation, minimize erosion, and preserve the visual aspects of the Carmel River. In places where the riparian vegetation no longer exists, it should be planted to a width of 150 feet from the river bank, or the face of adjacent buffs, whichever is less. Density may be transferred from this area to other areas within a lot.

Policy CV-3.9: Willow cover along the banks and bed of the Carmel River shall be maintained in a natural state for erosion control. Construction levees, altering the course of the river, or dredging the river shall only be allowed by permit from the Monterey Peninsula Water Management District or Monterey County.

Policy CV-3.10: Predominant landscaping and erosion control material shall consist of plants native to the valley that are similar in habitat, form and water requirements. The following guidelines shall apply for landscape and erosion control plans;

a. Existing native vegetation should be maintained as much as possible throughout the valley.

b. Valley oaks should be incorporated on floodplain terraces.

c. Weedy species such as pampas grass and genista shall not be planted in the Valley

d. Eradication plans for weedy species shall be incorporated.

e. The chaparral community shall be maintained in its natural state to the maximum extent feasible in order to preserve soil stability and wildlife habitat and also be consistent with fire safety standards.

Policy CV-3.11: The County shall discourage the removal of healthy native oak and madrone and redwood trees in the Carmel Valley Master Plan Area. A permit shall be required for the removal of any of these trees with a diameter in excess of six inches, measured two feet above ground level. Where feasible, trees removed will be replaced by nursery-grown trees of the same species and not less than one gallon in size. A minimum fine, equivalent to the retail value of the wood removed, shall be imposed for each violation. In the case of emergency caused by the

hazardous or dangerous condition of a tree and requiring immediate action for the safety of life or property, a tree may be removed without the above permit, provided the County is notified of the action within ten working days. Exemptions to the above permit requirements shall include tree removal by public utilities, as specified in the California Public Utility Commission's General Order 95, and by governmental agencies.

Policy CV-3.12: Open space area should include a diversity of habitats with special protection give to areas where on habitat grades into another (these ecotones are ecologically important zones) and areas used by wildlife for access routes to water or feeding grounds.

Policy CV-3.15: Public and private agencies such as the Big Sure Land Truest, the Monterey Peninsula Regional Park District, and others may acquire development rights and/or accept easements and dedications for significant areas of biological, agriculture, or other open space land.

Policy CV-4.1: In order to reduce potential erosion or rapid runoff:

a. The amount of land cleared at any one time shall be limited to the area that can be developed during on construction season.

b. Motorized vehicles shall be prohibited on the banks or in the bed of the Carmel River, except by permit from the Water Management District or Monterey County.

c. Native vegetative cover must be maintained on areas that have the following combination of soils and slope:

1. Santa Lucia shaly clay loam, 30-50% slope
2. Santa Lucia-Reliz Association, 30-75% slope
3. Cieneba fine gravelly sandy loam, 30-70% slope
4. San Andreas fine sandy loam, 30-75% slope
5. Sheridan coarse sandy loam, 30-75% slope
6. Junipero-Sur complex, 50-85% slope

Tree Protection

The County has an ordinance for the protection of trees within its jurisdiction. Tree protection within the County varies in accordance with different areas and master plans, which provide specific policies relative to the protection of specific types of trees. Within the 2013 Carmel Valley Master Plan (2013 CVMP) area, a protected tree is defined as any oak, madrone, or redwood tree having a trunk diameter equal to or greater than 6-inches in diameter at 2-feet above ground.

In addition, policies governing the removal of landmark oak trees are applied on a countywide basis and are subject to approval by the Director of Planning and Building Inspection. The County defines landmark oak trees as "those trees which are twenty-four (24) inches or more in diameter when measured two feet above the ground, or trees which are visually significant, historically significant, or exemplary of their species" (16.60.030).

As a condition of permit approval, any applicant seeking to remove a protected tree from a property within County jurisdiction is required to relocate or replace each removed protected tree at a one-to-one ratio. Removal of more than three protected trees from a single lot over a one-year period requires submission of a Forest Management Plan and approval of a Use Permit by the Monterey County Planning Commission. The Forest Management Plan is to be prepared at the applicant's expense by a qualified professional forester (16.60.040).

Several tree removal activities are exempted from the provisions of the County tree ordinance. These include certain commercial timber operations; any governmental or utilities-related tree removal that occurs within public rights-of-way; and any construction-related tree removal that is included in an approved subdivision, Use Permit, or similar discretionary permit (16.60.040).

Wildlife Habitat

The County has numerous policies in place to protect sensitive wildlife habitat from development. The 2010 General Plan requires careful planning near areas with limited plant communities, areas with particular value for wildlife, and areas with high value for wildlife reproduction. Within the 2013 CVMP area, development in or adjacent to areas of biological significance is strictly controlled but may be allowed under certain conditions provided impact on the resources are minimized. In addition to the redwood community of Robinson Canyon and the riparian community and redwood community of Garzas Creek, the 2013 CVMP identifies the following as areas of biological significance: wetlands, including marshes, seeps, and springs; native bunchgrass and natural meadows; cliffs, rock outcrops and unusual geologic substrates; and rridgelines and wildlife migration routes.

The 2010 General Plan habitat guidelines are implemented through the Monterey County Zoning Ordinance. For all proposed development within a known sensitive habitat or within 100-feet of the habitat, the zoning ordinance requires a biological survey performed by a qualified biologist. Development within the habitat or the 100-foot buffer, including vegetation removal, excavation, grading, filling, and road construction is prohibited except for resource dependent uses. Only development with adequate mitigations or no significant or cumulative impact on long-term maintenance of habitat may occur.

When proposed development within the 2013 CVMP area is either in or adjacent to a rare or endangered plant community, the County requires the Project Applicant to provide a botanical report prepared by a qualified botanist. The report is to include a description of the habitat to be affected by the project, an assessment of the project's potential for affecting rare and endangered species, and suggestions for mitigation of project impact(s). In any cases where a rare or endangered species is found onsite, development cannot proceed until an ITP or exclusion is obtained and the DFW is notified, pursuant to California Fish and Game Code Chapter 10 Section 1913c.

Floodplain Management

The County's floodplain management policies protect riparian habitat and streams by prohibiting the building of structures within the floodway. The 2010 General Plan prohibits all new discretionary development including filling, grading, and construction within 200-feet of riverbanks or within the 100-year floodway except as permitted by ordinance.

Prior County Plans and Policies

1982 Monterey County General Plan

Below are the 1982 General Plan policies for biological resources applicable to the project. As discussed in Chapter 1, *Introduction*, this discussion is provided for informational purposes.

Policy 7.11: Development shall be carefully planned in, or adjacent to, areas containing limited or threatened plant communities, and shall provide for the conservation and maintenance of plant communities

Policy 7.1.2 The County shall encourage the protection of limited or threatened plant communities through dedications of permanent conservation easements and other appropriate means.

Policy 9.1.1: Development shall be carefully planned in areas known to have particular value for wildlife and, where allowed, shall be located so that the reasonable value of the habitat is maintained.

Policy 9.1.2: Development shall be carefully planned in areas having high value for fish and wildlife reproduction.

1986 Carmel Valley Master Plan

Policy 7.1.1.1: Areas of biological significance shall be identified and preserved as open space. These include but are not limited to, the redwood community of Robinson Canyon and the riparian community and redwood community of Garzas Creek. When a parcel cannot be developed because of this policy, a low-density, clustered development may be approved. However, the development shall occupy those portions of the land not biologically significant or on a portion of the land adjoining existing vertical forms, either on-site or off-site and either natural or man-made, so that the development will not diminish the visual quality of such parcels or upset the natural functioning of the ecosystem in which the parcel is located. If this policy precludes development of a parcel because of biological significance, a low level of development (but no subdivision) may be allowed provided impacts on the resource are minimized.

Additional such areas includes

- All wetlands, including marshes, seeps and springs (restricted occurrence, sensitivity, outstanding wildlife value).
- Native bunchgrass stands and natural meadows (restricted occurrence and sensitivity).
- Cliffs, rock outcrops and unusual geologic substrates (restricted occurrence).
- Ridgelines and wildlife migration routes (wildlife value).

Policy 7.1.1.2: Areas of critical habitat for rare and endangered species as identified by either federal or state law and areas of biological significance should be identified and preserved as open space.

Policy 7.1.3: Development shall be sited to protect riparian vegetation, minimize erosion, and preserve the visual aspects of the river. Therefore, development shall not occur within the riparian corridor. In places where the riparian vegetation no longer exists, it should be planted to a width of 150 feet from the river bank, or the face of adjacent bluffs, whichever is less. Density may be transferred from this area to other areas within a parcel.

Policy 7.1.4: River bed and bank management by private property owners shall preserve the natural state of the Carmel River by maintaining willow cover along the banks for erosion control, not building levees, not further altering the course of the river, and not allowing individuals to dredge the river except by permit from the Monterey Peninsula Water Management District or Monterey County.

Policy 7.15: A monitoring program shall be implemented to document changes in the vegetation of the Carmel River riparian corridor and to determine the most relevant factors involved. This shall be funded by the users of the riparian corridor, particularly those involved in water

extraction, streambed alterations and developments which encroach upon the corridor. The monitoring program shall produce an annual report to the Board of Supervisors through a Joint Power Agreement with the agency or agencies conducting the monitoring. Upon two consecutive years of declining vigor in any reach of the river as defined by the Monterey Water Management District, the Board of Supervisors shall immediately hold public hearings to consider limitation of further development and/or a Carmel Valley Master Plan amendment to reverse the causes of declining riparian vegetation vigor determined by evidence in the record to be derived from implementation of the Carmel Valley Master Plan or development designated therein.

Policy 7.16: Motorized vehicles shall be prohibited on the banks or in the bed of the Carmel River, except by permit from the Water Management District or Monterey County.

Policy 7.2.1.1: In order to preserve soil stability and wildlife habitat, the chaparral community shall be maintained in its natural state to the maximum extent feasible consistent with fire safety standards.

Policy 7.2.1.2: In new development, the potential for impact on rare and endangered species shall be assessed by County staff and appropriate mitigation of identified impacts shall be required in accord with policies 11.1.1.1 and 11.1.1.2. Existing vegetation shall be protected and only plants similar in habit, form and water requirements to native vegetation common to the valley shall be used as the predominant additional or replacement landscaping material. The existing native vegetation should be maintained as much as possible throughout the valley.

Policy 7.2.2.5: The County shall discourage the removal of healthy, native oak and madrone and redwood trees in the Carmel Valley Master Plan Area. A permit shall be required for the removal of any of these trees with a trunk diameter in excess of six inches, measured two feet above ground level. Where feasible, trees removed will be replaced by nursery-grown trees of the same species and not less than one gallon in size. A minimum fine, equivalent to the retail value of the wood removed, shall be imposed for each violation. In the case of emergency caused by the hazardous or dangerous condition of a tree and requiring immediate action for the safety of life or property, a tree may be removed without the above permit, provided the County is notified of the action within ten working days. Exemptions to the above permit requirement shall include tree removal by public utilities, as specified in the California Public Utility Commission's General Order 95, and by governmental agencies.

Policy 7.2.2.6: Valley oaks should be used in landscape planting plans on flood plain terraces.

Policy 9.1.2.2: Open space areas should include a diversity of habitats with special protection given areas where one habitat grades into another (these ecotones are ecologically important zones) and areas used by wildlife for access routes to water or feeding grounds.

Policy 11.1.1.1: Whenever a development proposal is received and is in or adjacent to a rare or endangered plant community, as identified in policy 11.1.1.2, the County shall require the applicant to provide a botanical report prepared by a botanist from the County list of approved consultants. The report shall include a description of the habitat to be affected by the project including area, species, rare and endangered status, if applicable, and suggestions for mitigation of project impacts. In any cases where a rare or endangered species as defined by either State or Federal legislation is found on-site, no development shall proceed until an Incidental Taking Permit or exclusion is obtained in accordance with Federal Endangered Species Act and the State Department of Fish and Game is notified of the existence of the rare and endangered species (whether on Federal list, State list or both) pursuant to Fish and Game Code Chapter 10 Section 1913c.

Policy 11.1.1.2: The County Planning Department shall maintain records of the known locations of all rare and endangered plant species. Reports shall be on file and locations shall be noted on

the resources base maps. These maps shall be updated continuously as project applicant reports are received, and from time to time as other agencies such as Fish and Game or the California Native Plant Society may make additional location reports available.

Impact Analysis

Methods for Analysis

The discussion of impacts is based on the *Initial Biological Assessment prepared for Rancho Cañada Village* (Rana Creek Habitat Restoration 2004), the *Biological Assessment for the Hatton Parcel* (Zander Associates 2005), the 2006 Restoration Plan (Zander Associates 2006) (**Appendix C**), the *Biological Resource Review of Rancho Cañada Village* (Zander Associates 2014), and information obtained from a reconnaissance field visit and research conducted by ICF International.

An ICF biologist reviewed information from state and federal agencies and existing information related to the Proposed Project ~~and 130-Unit Alternative~~. Information from the following sources was also reviewed and used to evaluate whether special-status species or other sensitive biological resources (e.g., wetlands) could occur in the project area.

- Initial Biological Assessment for the Hatton Parcel (Zander Associates 2005).
- Comments on Biological Resources Section of the Rancho Cañada Village Draft EIR (Zander Associates 2008).
- A records search of the California Natural Diversity Database (CNDDB) for the Monterey, Seaside, Mt. Carmel, and Soberanes Point U.S. Geological Survey (USGS) 7.5-minute quadrangles (California Department of Fish and Wildlife 2014).
- The California Native Plant Society's (CNPS's) Inventory of Rare and Endangered Plants of California records for the four quadrangles listed above (California Native Plant Society 2014).
- The list of Listed, Proposed, and Candidate Species which may occur in Monterey County (U.S. Fish and Wildlife Service 2014).

For the purpose of this analysis, the *project area* is defined as the area where construction and restoration activities (for the habitat preserve) would occur~~, and includes both the Proposed Project and 130-Unit Alternative~~ (**Figure 3.3-1**). The biologist conducted a brief reconnaissance level survey of the project area on October 6, 2005 and August 20, 2014. The field survey focused on identifying and evaluating biological communities in the project area and determining their suitability for special-status plant and wildlife species. An ICF biologist traversed the project area on foot and in golf carts. All areas supporting natural vegetation (i.e., not golf turf and landscaping) were surveyed on foot except for the wetland near the center of the project area, which was not surveyed. A Rana Creek Habitat Restoration biologist also conducted biological surveys between October 30, 2003 and March 17, 2004 and Zander and Associates conducted a biological survey on April 9, 2014; information from these surveys was also used in this report.

Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, 2010 General Plan policies, 2013 CVMP plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

A. Impact on Vegetation

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service (potential impacts are addressed under Impacts BIO-1 through BIO-5).
- Have a substantial adverse effect on wetlands through direct removal, filling, hydrological interruption, or other means (potential impacts are addressed under Impact BIO-6).

B. Impact on Wildlife

- Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by DFW or FWS (potential impacts are addressed under Impacts BIO-8 through 15).
- Interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (potential impacts are addressed under Impacts BIO-13 through 16).
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (potential impacts are addressed under Impacts BIO-7 and BIO-17).
- Conflict with the provisions of an adopted habitat conservation plan, natural communities conservation plan, or other approved local, regional, or state habitat conservation plan (potential impacts are addressed under Impact BIO-17).

According to standard professional standards, the Proposed Project ~~and 130-Unit Alternative~~ would likely cause a significant impact if it ~~they~~ resulted in:

- Documented resource scarcity and sensitivity, both locally and regionally.
- Decreased local and regional distribution of common and sensitive biological resources.
- Long-term degradation of a sensitive plant community because of substantial alteration of land forms or site conditions (e.g., alteration of wetland hydrology).
- Substantial loss of a plant community and associated wildlife habitat.
- Fragmentation or isolation of wildlife habitats, especially riparian and wetland communities.
- Substantial disturbance of wildlife because of human activities.
- Disruption of natural wildlife movement corridors.
- Substantial reduction in local population size attributable to direct mortality or habitat loss, lowered reproductive success, or habitat fragmentation of:

- Species qualifying as rare and endangered under CEQA.
- Species that are state or federally listed as threatened or endangered.
- Portions of local populations that are candidates for state or federal listing and state species of concern.

- Substantial reduction or elimination of species diversity or abundance.

Impacts and Mitigation Measures

A. Impact on Vegetation

The Proposed Project ~~and 130-Unit Alternative~~ would result in impacts on vegetation. **Table 3.3-5** provides a summary of the area of impact on each vegetation type within the project area.

Table 3.3-5. Total Area of Impact on Vegetation by Community Type in the Proposed Project ~~and 130-Unit Alternative Sites~~

Community Type	~~Proposed Project Impact (acres)~~	~~Proposed Project Area to be Restored (acres)~~	~~130-Unit Alternative~~ Project Impact (acres)	~~130-Unit Alternative Area to be Restored[1] (acres)~~
Golf Turf and Landscaping	~~49.7~~	NA	49.8	~~NA~~
Developed/Disturbed	~~0~~	~~NA~~	0 ~~3.4~~	~~NA~~
Coast Live Oak Woodland	~~0~~	~~0~~	0 ~~0.8~~	~~0~~
Wetland Vegetation	~~0.3~~	~~1.2~~	0.3	~~0~~
Ponds	~~1.4~~	~~1.4~~	1.4	~~0~~
Coyote Brush Scrub	~~10.4~~	~~0~~	10.4	~~0~~
Non-Native Monterey Pine Stand	~~0.1~~	~~0~~	0.1	~~0~~
Riparian Forest/Woodland	~~0.06~~	~~15.1~~	0.06	~~0~~
Native Grassland	~~0~~	~~8.3~~	0	~~0~~
Total	**~~61.96~~**	**~~26~~**	**62.1 ~~66.3~~**	**~~--~~**

[1] A restoration plan for the Project~~130-Unit Alternative~~ would be developed upon approval of the Project ~~130-Unit Alternative~~.

Impact BIO-1: Loss of Coyote Brush Scrub Habitat (less than significant)

~~Proposed Project~~

Up to 10.4-acres of coyote brush scrub habitat would be permanently removed from the Proposed Project site ~~area~~. Approximately 8.9-acres of this total consists of open coyote brush scrub with an understory dominated by non-native ruderal species, while approximately 1.5-acres consists of dense coyote brush scrub.

The loss of this area of coyote scrub habitat would be *less than significant* because this habitat type is not a sensitive natural community, and because similar habitat of equivalent or greater value is abundant in the region. Furthermore, loss of this area of coyote brush scrub is not expected to contribute to the destruction or deterioration of an individual, population, or habitat for special-status species. Impacts would be *less than significant*. No mitigation is required.

~~**130-Unit Alternative**~~

~~The 130-Unit Alternative would affect the same 10.4 acres of coyote brush scrub habitat described for the Proposed Project above. The 0.04 acre sliver on Lot 130 would not be effected. Therefore, the analysis discussed for the Proposed Project remains the same under this 130-Unit Alternative and the impact would be *less than significant*. No mitigation is required.~~

Impact BIO-2: Loss of Non-Native Monterey Pine Stands (less than significant)

~~**Proposed Project**~~

As described in the *Monterey Pine Stands* section above, review of the available information leads to a conclusion that the Monterey pine stands within the project area are, in all likelihood, not native remnant stands, were planted at some point in the past, and are of uncertain genetic origin.

Up to 0.1 acre of Monterey pine stands could be permanently removed from the project ~~Proposed Project~~ site. The Monterey pine stand is in the Hatton Parcel with an understory of open coyote brush scrub.

As the Monterey pine stands within the project area are unlikely to be native and the individual Monterey pine trees are likely planted, their removal due to the Project would be a *less-than-significant* impact. No mitigation is required.

~~**130-Unit Alternative**~~

~~As described in the *Monterey Pine Stands* section above, one Monterey Pine stand occurs on the golf course. The 130-Unit Alternative would affect the same 0.1 acre of Monterey pine forest described for the Proposed Project above, therefore the analysis discussed for the Proposed Project remains the same under this 130-Unit Alternative and the impact would be *less than significant*. No mitigation is required.~~

Impact BIO-3: Loss or Disturbance of Special-Status Plant Occurrences (~~Proposed Project – less than significant~~; ~~130-Unit Alternative – less than significant with mitigation~~)

~~**Proposed Project**~~

Monterey pine is the only special-status plant species identified in floristic botanical surveys conducted for this Project (See *Special-Status Plants* discussion above). However, as described under Impact BIO-2, because these trees are planted non-natives, removal of them from the project site would be a *less-than-significant* impact. No mitigation is required.

~~**130-Unit Alternative**~~

~~As described above under *Special-Status Plants* section, two species, fragrant fritillary (*Fritillaria liliacea*), jolon clarkia (*Clarkia jolonensis*), could be present in the coast live oak woodland habitat in Lot 130. These species were not in their blooming period at the time of the 2014 botanical survey. If these species are present, impacts on coast live oak woodland habitat could result in loss of individuals of these species, which would be a *significant* impact; however , implementation of **Mitigation Measures BIO-1**, **BIO-2**, and **BIO-3** would reduce this impact to a *less-than-significant* level.~~

Additionally Monterey pine trees are present in the 130-Unit Alternative project area, but, as described for the Proposed Project, impacts on those trees would be a *less-than-significant* impact because they are planted, non-natives. No mitigation is required.

Mitigation Measure BIO-1: Conduct a Floristic Survey of Coast Live Oak Woodland Habitat in Lot 130 during the Blooming Period for Potential Special-Status Plant Species

Prior to construction on Lot 130, the Applicant or successor(s) in interest responsible for development on Lot 130 will retain a qualified botanist to conduct a survey of the coast live oak woodland habitat in Lot 130 for jolon clarkia and fragrant fritillary. The survey will occur during the overlapping blooming period for these species (April). If special-status plant occurrences are identified in the course of these surveys, the perimeters of the occurrences will be mapped using a global positioning system (GPS) with submeter accuracy, and staked to facilitate avoidance. The botanist will prepare a report describing the results of these surveys. The report will be submitted to the Applicant or successor(s) in interest and the County RMA-Planning. **Mitigation Measure BIO-2** will be implemented if any occurrences of special-status plants are documented during these surveys.

Mitigation Measure BIO-2: Measures to Avoid or Minimize Impacts on Special-Status Plant Species Populations Relative to Lot 130

The Applicant or successor(s) in interest responsible for development on Lot 130 will implement the following measures to avoid or minimize impacts on special-status plant species if any occurrences are documented in the surveys prescribed in **Mitigation Measure BIO-1**. This measure is applicable only to Lot 130 included in the 130-Unit Alternative.

The Applicant, or successor(s) in interest shall present the findings of the special-status plant survey to the County RMA-Planning. If special-status plants are found on Lot 130 that would be affected by the residential design, prior to construction, the Applicant or successor(s) in interest will modify the Lot 130 residential design to avoid direct and indirect impacts on special-status plant species, if feasible. If the Applicant or successor(s) in interest identified that avoidance or minimization is not feasible, they shall identify the reasons why in writing to the County who shall make the final determination of feasibility prior to issuance of any building permit for Lot 130.

Special-status plant species near the 130-Unit Alternative site will be protected from temporary construction disturbance. Prior to construction, the Applicant or successor(s) in interest or their contractor will install environmentally sensitive area fencing (orange construction barrier fencing) around special-status plant species populations. The environmentally sensitive area fencing will be installed at least 20 feet from the edge of the population where feasible. The location of the fencing will be marked in the field with stakes and flagging and shown on the construction drawings. The construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area.

If impacts are unavoidable, the Applicant or successor(s) in interest will coordinate with DFW and Monterey County to determine a compensation plan to replace the loss of special-status plants. If necessary, the Applicant or successor(s) in interest will develop and implement a compensation plan in coordination with and with the approval of DFW and Monterey County. The compensation plan will preserve an offsite area containing the affected special-status plant

~~or plants. The compensation area will contain an equal or greater amount of plants and/or acreage (as determined in consultation with DFW) as that lost due to the Project. The amount of preserved area will include adjacent areas if necessary in order to preserve the special-status plant population in perpetuity. The Applicant or successor(s) in interest will be responsible for acquisition of a mitigation site in fee or in conservation easement, to maintain the mitigation site for the benefit of the special-status plant population in perpetuity, and to fund maintenance of the mitigation site through the establishment of an endowment. Annual monitoring of the mitigation site will be conducted for 5 years to assess vegetative density, population size, natural recruitment, and plant health and vigor to assure that an equal amount of plants or plant acreage is being sustained through the implemented site maintenance. The site will be evaluated at the end of the 5-year monitoring period to determine whether the mitigation has met the success criteria of preserving a population the same size/and or area as that lost due to development of the site and whether adjustments in site maintenance are necessary.~~

~~**Mitigation Measure BIO-3: Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel**~~

~~Before any work occurs in the project area, a qualified biologist will conduct mandatory contractor/worker awareness training for construction personnel. The awareness training will be provided to all construction personnel to brief them on the need to minimize impacts on riparian woodland (see **Mitigation Measure BIO-7**, below). If new construction personnel are added to the Project, the contractor will ensure that the personnel receive the mandatory training before starting work. The Applicant or successor(s) in interest will be responsible for implementing this measure. Documentation of this measure, such as a training attendance sheet signed by construction personnel, will be kept on file by the applicant to demonstrate to the County that the measure has been implemented. This measure is not required for construction on individual residential lots after vegetation clearance and initial grading.~~

Impact BIO-4: Loss of Riparian Forest and Woodland Habitat (less than significant with mitigation)

~~**Proposed Project**~~

Only 0.06 acre of riparian forest and woodland habitat of the existing 6.2 acres would be permanently removed from the Proposed Project site to facilitate Project development. Construction would remove riparian forest along Intermittent Drainages 1 and 2 in association with the extension of Rio Road to the east and west and in association with the installation of new storm drain lines to the Carmel River. Removed riparian trees would include 91 mature cottonwoods, 37 arroyo willows, and 3 western sycamores. **Table 3.3-6** summarizes the proposed tree removal and replacement.

In addition, riparian woodland downstream of the Rio Road west extension may be degraded due to the diversion of flows currently entering this drainage from a culvert upstream. Construction of the Proposed Project would involve routing these flows through a new storm drain line emptying through a culvert into the Carmel River. The drainage would still receive local surface flows from the north and west. These flows may be adequate to support the riparian overstory. However, it is likely that understory riparian vegetation would be replaced by vegetation adapted to less wet conditions. In the worst-case, the riparian understory could be changed but the overstory riparian vegetation would not. While a significant impact, the potential loss of understory riparian vegetation would be

~~more than~~ compensated through the development and implementation of a restoration plan ~~proposed 2006 Restoration Plan~~.

Table 3.3-6. Tree Removal and Replacement

Tree Species	Trees Removed	Trees Planted in the Habitat Reserve
Cottonwood	91	200
Sycamore	3	150
Arroyo Willow	37	300
Box Elder	4	130
Coast Live Oak	4	16
Red Alder	0	130
Dogwood	0	180
Elderberry	0	180
Other Planted Trees	296	
Total	**435**	**1,286**

Source: Zander Associates 2006

~~The 2006 Restoration Plan (Zander Associates 2006) (**Appendix C**) is considered part of the Project for this analysis. The 2006 Restoration Plan is summarized in Chapter 2, *Project Description*. The 2006 Restoration Plan would preserve 5.9 acres of existing riparian forest/ woodland adjacent to the Carmel River and restore 15.1 acres of riparian forest/woodland in the habitat preserve. The 2006 Restoration Plan calls for restoration of 6.8 acres of riparian scrub through planting riparian scrub species such as mugwort, mulefat, and California figwort and riparian groundcover. The 2006 Restoration Plan calls for restoring 8.4 acres of riparian woodland through planting of 1,286riparian woodland trees including box elder, red alder, dogwood, western sycamore, black cottonwood, Arroyo willow, and elderberry as well as riparian understory plants including mugwort, coyote brush, horsetail, Yerba Buena, and California hedge nettle and riparian groundcover.~~

~~The 2006 Restoration Plan describes the methods to implement the restoration including soil preparation, propagation, plant installation, initial irrigation, monitoring, weed management, maintenance of erosion control, irrigation maintenance, and wetland maintenance. Ten-year success criteria and 5-year interim performance criteria are identified to determine restoration success. Contingency planning and action is required by the plan if the success criteria are not met.~~

~~The 2006 Restoration Plan would result in an increase of riparian forest and woodland along the Carmel River, which would be of benefit to the local ecosystem and the species dependent on this natural community. When the 2006 Restoration Plan meets its success criteria, the impact of the Project on this community would be mitigated to a less-than-significant level; in fact, given that the Project would increase the overall amount of riparian forest and woodland, this would be a *beneficial* impact of the Project.~~

Mitigation Measure BIO-1 ~~4~~ is recommended to ensure that a restoration plan ~~the proposed 2006 Restoration Plan~~ is developed, fully implemented, monitored, funded, and that contingency planning would be realized.

While overall impacts on riparian forest and woodland would be beneficial in time, there would be an impact on this natural community related to the Proposed Project timing. As described in Chapter

2, *Project Description*, the Project Applicant proposes to build the first three phases of the residential development first and then in the fourth phase create the habitat preserve. With this timing, the Project would result in removal of approximately 0.06 acre of riparian forest/woodland during early phases of the Project for infrastructure construction (roads and drainage). Because replacement of these areas could be delayed for years, depending on Project progress and housing market conditions, in order to ensure that the Project does not result in a delay in replacing the lost habitat, **Mitigation Measure BIO-2 ~~5~~** is recommended to reduce this interim impact to a *less-than-significant* level.

Temporary construction impacts on riparian vegetation due to inadvertent contact with construction would also be *significant* but can be reduced to a *less-than-significant* level through the implementation of **Mitigation Measures BIO-3** and **BIO-4~~BIO-3~~ and ~~BIO-6~~**.

As described in Chapter 3.2, *Hydrology and Water Quality*, due to an increase in velocities in the Carmel River over a short section (~100 to 200 feet, increase from existing condition of 5.5 to 7.5 ft/second to 11 to 13.6 ft/second in the 10-year storm event) of the river on the eastern end of the Project reach, local scouring of the river channel may occur. Extensive channel adjustment (degradation or erosion) is not expected because of the limited extents of increased velocities. The channel is expected to adjust to the change in velocities, eventually reaching a new equilibrium. Hydraulic modelling of the Project (Balance Hydrologic 2014b) did not indicate substantial increases in channel or overbank velocities, and thus, mitigation is not required to address this impact. ~~Local bank erosion could occur during this period. If this occurs, there could be loss of riparian vegetation along the eroded bank. Further, the Project includes three new storm drain outfalls that would be placed along the bank of the Carmel River. These new outfalls, depending on design, could also result in additional scour (or sedimentation), that could alter bank conditions and riparian vegetation in the areas around the outfalls. Loss of riparian vegetation and bank erosion along the Carmel River would be a *significant* impact, given its role in providing shade and habitat for steelhead, California-red-legged frog, and riparian bird species. This impact will be reduced to a *less-than-significant* level with **Mitigation Measure BIO-7.**~~

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative would permanently remove up to 0.06-acre of riparian forest and woodland habitat. Construction would remove riparian woodland and forest in all areas as described in the impact discussion for Proposed Project. See Table 3.3-6 for a summary of the proposed tree removal and replacement. Riparian woodland and forest habitat is not present on Lot 130. Permanent removal and temporary construction impacts from the 130-Unit Alternative would result in *significant* impacts; however, similar to the Proposed Project, Mitigation Measures BIO-3, BIO-4, BIO-5, and BIO-6 would reduce impacts on riparian forest and woodland habitat to a *less-than-significant* level. Hydraulic modelling of the 130-Unit Alternative (Balance Hydrologic 2014b) did not indicate substantial increases in channel or overbank velocities and thus Mitigation Measure BIO-7 is not required for this alternative.~~

Mitigation Measure BIO-1~~4~~: Provide Funding Assurances and Reporting Concerning Restoration Progress and Success

The Applicant or successor(s) in interest will prepare and ~~fully~~ implement a ~~the proposed 2006 Restoration Plan (upon approval of the Proposed Project) or newly developed and approved~~ restoration plan (upon approval of the Project ~~130-Unit Alternative~~) (as directed ~~modified~~ by

mitigation requirements in this document), provide funding assurances to the County to guarantee the completion of the proposed restoration prior to issuance of the first building permit for the site (to ensure completion of the restoration regardless of the completion of the residential development), provide annual monitoring of restoration progress to the County until the 10-year success criteria are met, and provide contingency funding guarantees to implement contingency plans in the event the ~~2006~~ Restoration Plan is not effective.

Mitigation Measure BIO-2~~5~~: Restore Riparian Forest/Woodland Concurrent with Impact to Compensate for the Permanent Loss of Riparian Forest Habitat

The Applicant or successor(s) in interest will compensate for the permanent loss of approximately 0.06 acre of riparian forest/woodland habitat associated with the Rio Road east and west extensions through onsite restoration/creation of forested riparian habitat in accordance with the ~~proposed 2006 Restoration Plan (Proposed Project) or~~ newly developed and approved restoration plan for the Project~~130-Unit Alternative~~[2] during Phase 1 of construction. The restoration will commence during Phase 1 and will be done on a minimum 3:1 ratio (for a total of 0.18 acre of restoration) so as to compensate for the temporary reduction in habitat while the restored habitat vegetation grows to maturity. Habitat restoration will be consistent with the ~~proposed 2006 Restoration Plan (Proposed Project) or new 130-Unit Alternative~~ restoration plan.

Replacement of riparian trees (i.e., willows, cottonwoods, and western sycamores) will be done concurrent with any removals and will be done at a ratio greater than 1:1 (as shown in Table 3.3-6) (Zander 2006) so as to compensate for the temporary reduction in habitat value while the replanted trees mature. In addition, given the difficulty to replicate mature cottonwoods in a floodplain, a minimum of 25% of the existing mature cottonwoods to be removed will be moved and transplanted in the restoration area during Phase 1 of the Project to provide for mature vegetation cover in the restoration area in the interim period between Project impact and full implementation of the ~~2006 Restoration Plan (Proposed Project) or new 130-Unit Alternative~~ restoration plan.

Mitigation Measure BIO-3~~6~~: Minimize Disturbance of Riparian Forest and Woodland

Riparian forest and woodland outside of the construction footprint will be protected from disturbance. Prior to construction, the Applicant or successor(s) in interest will secure the services of a qualified botanist who will erect environmentally sensitive area fencing (orange construction barrier fencing) around riparian forest and woodland areas near the construction area, to identify and protect these sensitive resources. The location of the fencing will be marked in the field with stakes and flagging and shown on the construction drawings. The construction specifications will contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area. The Applicant or successor(s) in interest will demonstrate to the County RMA-Planning prior to construction that a qualified biologist has identified and fenced environmentally sensitive areas.

[2] As discussed in Chapter 2, *Project Description*, a restoration plan for the Project~~130-Unit Alternative~~ would be developed upon Project approval ~~of the 130-Unit Alternative~~.

Mitigation Measure BIO-4: Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel

Before any work occurs in the project area, a qualified biologist will conduct mandatory contractor/worker awareness training for construction personnel. The awareness training will be provided to all construction personnel to brief them on the need to minimize impacts on riparian woodland (see **Mitigation Measure BIO-1, BIO-2,** and **BIO-3**, above). If new construction personnel are added to the Project, the contractor will ensure that the personnel receive the mandatory training before starting work. The Applicant or successor(s) in interest will be responsible for implementing this measure. Documentation of this measure, such as a training attendance sheet signed by construction personnel, will be kept on file by the applicant to demonstrate to the County that the measure has been implemented. This measure is not required for construction on individual residential lots after vegetation clearance and initial grading.

~~**Mitigation Measure BIO-7: Monitor Bank Erosion in Project Reach and Restore Riparian Vegetation and River Bank, as Necessary**~~

~~The Applicant or successor(s) in interest will monitor the portion of the Carmel River adjacent to the Project for potential bank erosion and will monitor potential sedimentation and erosion around the new storm drain outfalls. The Applicant or successor(s) in interest will complete a baseline survey of the river bank and riparian vegetation conditions prior to construction and provide to the County. Monitoring will be at a minimum on an annual basis following the wet season and reporting will be submitted to the County annually. Where bank erosion occurs and/or riparian vegetation is identified as lost compared to baseline conditions, the applicant will obtain all required regulatory permits to restore disturbed banks and riparian vegetation. A remedial plan will be submitted to the County within 90 days of identification of bank erosion and riparian vegetation loss for review and approval. Riparian plantings and bank erosion repair will be completed before the next winter season after the identification of bank erosion and riparian vegetation loss. Remedial action will not decrease the amount of natural riverbank or the amount of riparian vegetation along the Project reach (i.e., additional restoration is necessary to compensate for structural bank stabilization, which should be avoided wherever feasible in favor of biotechnical means of bank stabilization).~~

Impact BIO-5: Loss of Coast Live Oak Woodland (~~Proposed Project – no impact; 130-Unit Alternative – less than significant with mitigation~~)

~~**Proposed Project**~~

The project ~~Proposed Project~~ site does not support any coast live oak woodland; therefore there would be *no impact.* No mitigation is required.

~~**130-Unit Alternative**~~

~~Construction of residential development associated with Lot 130 as part of the 130-Unit Alternative could result in the loss of up to 0.8 acres of coast live oak woodland habitat in Lot 130. All coast live oak woodland habitat in the alternative site area is located on the existing golf course in Lot 130 and comprises a very sparse understory dominated black acacia saplings, toyon, and poison oak. This would represent a substantial adverse effect on a sensitive biological community that provides habitat for a variety of plants and wildlife.~~

~~The creation of additional coast live oak woodland habitat would be necessary to fully compensate for habitat impacts. As discussed above, the coast live oak woodland provides habitat for nesting birds and special-status species, including white-tailed kite and Monterey dusky-footed woodrat.~~

~~This impact would be *potentially significant,* but would be reduced to a *less-than-significant* level with implementation of **Mitigation Measure BIO-8**.~~

~~**Mitigation Measure BIO-8: Create Coast Live Oak Woodland Habitat to Mitigate Permanent Loss of Coast Live Oak Woodland Habitat**~~

~~Upon approval of the 130-Unit Alternative and in accordance with its restoration plan (which will be developed upon project approval), the Applicant or successor(s) in interest will compensate for the permanent loss of coast live oak woodland habitat associated with the construction of Lot 130 through onsite and/or offsite creation of oak woodland at a compensation ratio greater than 1:1, which will be determined in consultation with the regulatory agencies.~~

~~Options for the restoration of suitable oak woodland habitat include:~~

- ~~**Onsite Habitat Preserve –** The 130-Unit Alternative's proposed restoration plan could be modified to include suitable coast live oak woodland habitat within the habitat preserve.~~
- ~~**Onsite in Remnant Golf Course –** Because the impacts are to a small, isolated patch of coast live oak woodland habitat with disturbed, spare understory, it would be appropriate to create new oak woodland habitat on the retained portions of the golf course south of the Carmel River as compensation for the Project effect.~~
- ~~**Palo Corona Regional Park** – There are suitable locations in the nearby Palo Corona Regional Park for creation of coast live oak woodland habitat with adjacent suitable upland habitat. Because the site is already controlled by the Regional Park District, the Applicant or successor(s) in interest would be responsible to construct the creation of the coast live oak woodland habitat and to fund the management of the habitat in perpetuity.~~

~~The Applicant or successor(s) in interest will submit and receive approval of a formal proposal from the County for creation, management, and preservation of coast live oak woodland habitat in compliance with this measure prior to issuance of any building permit for Lot 130. The Applicant or successor(s) in interest will obtain all necessary regulatory and landowner approvals to implement this measure prior to construction.~~

Impact BIO-6: Loss of Wetlands and Other Waters of the United States and State (less than significant with mitigation)

~~**Proposed Project**~~

Construction of roads and houses associated with the Proposed Project would result in the loss of one California bulrush marsh and three ponds in the project area. The wetland and ponds are considered potential waters of the United States.

The Proposed Project would result in a loss of 1.4 acres of ponds and 0.3 acre of wetland habitat. This would represent a substantial adverse effect on a sensitive biological community (California bulrush marsh) and common biological communities (ponds) that provide habitat for a variety of plants and wildlife.

~~The proposed 2006 Restoration Plan (Zander Associates 2006) proposes 1.2 acres of restored seasonal wetland, but does not include any proposed restoration of ponds. As discussed above, the California bulrush wetland provides aquatic habitat for a number of special-status species including CRLF, and southwestern pond turtle.~~

In addition, construction activities and residential development could result in temporary and long-term increased inputs of fine sediment and toxic materials to the Carmel River, Intermittent Drainages 1 and 2, and the restored riparian woodland and created wetlands in the proposed habitat preserve. Inputs of sediment and toxic materials, such as oil and grease, could result in the mortality of riparian and wetland plants and wildlife. Sediment inputs could also alter the profiles of the drainages, reducing riparian area. Increased runoff resulting from added impervious surfaces in the project area could result in the alteration of drainage hydrology. Altered hydrology could result in higher peak flows and a shorter period of flow in streams or inundation in wetlands. Shortening the period of flow in drainages could degrade the habitat value of these areas by reducing the dominance of riparian plants. Increasing peak flows in streams would reduce the stability of these channels. Increased peak flows would increase erosion and bank slumping, reducing the habitat value of these streams by choking the streambed and floodplain with fine sediment and reducing the stability of the bank and floodplain where riparian vegetation occurs.

This impact would be *potentially significant,* but would be reduced to a *less-than-significant* level by implementation of **Mitigation Measures BIO-1~~3~~**, **BIO-2~~4~~**, **BIO-4~~5~~**, and **BIO-5 ~~9a~~** as well as **Mitigation Measures HYD-1** through **HYD-5** (water quality measures, described in Chapter 3.2, *Hydrology and Water Quality*).

~~130-Unit Alternative~~

~~The 130-Unit Alternative would not affect any additional wetlands or other waters of the United States, therefore the impact analysis discussed for the Proposed Project remains the same under 130-Unit Alternative and the impact is *potentially significant*. Unlike the Proposed Project, the 130-Unit Alternative does not propose a restoration plan. However, implementation of **Mitigation Measure BIO-3, BIO-4, BIO-5, and BIO-9b** and **Mitigation Measures HYD-1** through **HYD-5** would reduce the impact to a *less-than-significant* level.~~

~~Mitigation Measure BIO-9a: Create Ponds to Mitigate Permanent Loss of Pond Habitat~~

~~In order to ensure that implementation of the Proposed Project results in no net loss of wetland habitat functions and values, prior to construction the Applicant or successor(s) in interest will compensate for the loss of pond habitat through onsite and/or offsite creation of pond habitat. The size and location(s) of the area(s) to be restored/created will be based on appropriate mitigation ratios derived in consultation with the regulatory agencies. The Applicant or successor(s) in interest will replace lost pond habitat on a minimum 1: 1 compensation ratio (or greater if determined necessary by the Regional Water Board, USACE, or FWS).~~

~~Options for the restoration of suitable ponding habitat are the same as described above for **Mitigation Measure BIO-8**. If onsite pond creation on the remnant golf course is preferred, it would be appropriate because the Project impacts are to golf course ponds with a mix of adjacent golf course fairway and disturbed coyote brush scrub.~~

~~The Applicant or successor(s) in interest will submit and receive approval of a formal proposal to the County for creation, management, and preservation of pond(s) in compliance with this~~

~~measure prior to issuance of any building permit for this Project. The Applicant or successor(s) in interest will obtain all necessary regulatory and landowner approvals to implement this measure prior to construction.~~

Mitigation Measure BIO-~~5~~9b: Restore or Create Wetland and Pond Habitat to Mitigate Permanent Loss of Waters of the United States and State

In order to ensure that implementation of the Project ~~130-Unit Alternative~~ results in no net loss of wetland habitat functions and values, prior to construction the Applicant or successor(s) in interest will compensate for the loss of pond and wetland habitat through onsite and/or offsite creation of both pond and wetland habitat. A restoration plan for the Project ~~130-Unit Alternative~~ will be developed upon project approval to compensate for the loss of wetlands and waters of the United States and state. The size and location(s) of the area(s) to be restored/created will be based on appropriate mitigation ratios derived in consultation with the regulatory agencies. Mitigation ratios will be at least 1:1. Options for the restoration locations include:

- **Onsite Habitat Preserve** – The proposed restoration plan could be modified to include suitable wetland and pond habitat within the habitat preserve.
- **Onsite in Remnant Golf Course** – Create new wetland and pond habitat on the retained portions of the golf course south of the Carmel River as compensation for the Project effect.
- **Palo Corona Regional Park** – There are suitable locations in the nearby Palo Corona Regional Park for creation of wetland and pond habitat. Because the site is already controlled by the Regional Park District, the Applicant or successor(s) in interest would be responsible to construct the creation of the wetland and pond habitat and to fund the management of the habitat in perpetuity. ~~are the same as described above for **Mitigation Measure BIO-8**.~~

If onsite pond creation on the remnant golf course is preferred, it would be appropriate because the Project impacts are to golf course ponds with a mix of adjacent golf course fairway and disturbed coyote brush scrub.

The Applicant or successor(s) in interest will submit and receive approval of a formal proposal to the County for creation, management, and preservation of pond(s) in compliance with this measure prior to issuance of any building permit for this Project. The Applicant or successor(s) in interest will obtain all necessary regulatory permits and landowner approvals to implement this measure prior to construction.

Impact BIO-7: Loss of Protected Trees (less than significant with mitigation)

~~**Proposed Project**~~

Construction activities associated with the Proposed Project could result in the disturbance or loss of individual protected trees, defined in the CVMP policies (2013 CVMP) as oak, madrone, or redwood trees 6 inches or more in diameter 2 feet above ground level. Protected trees could be removed or affected during staging, trimming for equipment access, and other construction-related activities. The loss of trees would conflict with the 2013 CVMP policies. Prior project plans ~~Current Project design maps~~ indicate that construction of the Proposed Project could result in disturbance or loss of 4 coast live oak trees and 20 redwoods which fall under the definition of protected trees in Monterey County. The proposed 2006 Restoration Plan (Zander Associates 2006) identifies that the

Project Applicant would replant 16 coast live oaks, but does not specifically mention replanting of redwood trees.

~~As noted above, restoration is planned to occur as the fourth phase of the Project implementation and thus there would be a time lag between tree removal and replanting.~~

This impact would be *potentially significant*, but would be reduced to a *less-than-significant* level by implementation of **Mitigation Measure BIO-6~~10~~**.

~~130-Unit Alternative~~

~~Similar to the Proposed Project, construction of the 130-Unit Alternative could damage or remove protected trees, which would be a *potentially significant* impact. However, with implementation of **Mitigation Measure BIO-10**, protected trees would be replaced at a minimum 1:1 ratio (Zander 2006). Implementation of this measure would reduce this impact to a *less-than-significant* level.~~

Mitigation Measure BIO-6~~10~~: Compensate for Removal of Protected Trees

The Applicant or successor(s) in interest will replace protected trees at a minimum ratio of 1:1 in an upland areas and planting will be concurrent with tree removal. Any trees planted as remediation for failed plantings will be planted as stipulated here for original plantings, and will be monitored for a period of 5 years following installation. The Applicant or successor(s) in interest will also obtain a Use permit for tree removal as required by the 2013 CVMP and the County Zoning Ordinance (Title 21).

B. Impact on Wildlife

Impact BIO-8: Loss or Disturbance of California Red-Legged Frog Aquatic and Upland Habitat (including Movement Corridors) and Potential Loss of Adults, Larvae, or Eggs (less than significant with mitigation)

~~Proposed Project~~

Construction of the Proposed Project would result in the filling of the California bulrush wetland, which provide potential breeding habitat for CRLF (totaling 0.35 acre of wetland breeding habitat). The Proposed Project would also result in the removal of 1.4 acres of aestivation/dispersal habitat from the development of ponds 1, 2, and 3, which no longer pond water. Construction activities in suitable habitat could result in the mortality of adults, larvae, or eggs. The Project would also create a substantial impediment to CRLF movement between the Carmel River, across the golf course, and the small (<0.05 acre) pond/wetland in the CMS Biological Sciences Habitat area where CRLF have been anecdotally reported. If CRLF are using the school pond/wetland, the Project would block movement to and from the pond due to the presence of Rio Road and residential development.

Project construction would also remove up to 10.9 acres of additional potential aestivation/upland habitat which consists of disturbed/open coyote brush scrub habitat (CRLF have been anecdotally reported in Intermittent Drainage 2). Some of the coyote brush scrub and riparian drainage areas on the project site may be too steep to be suitable for aestivation, but these areas still provide forage and cover adjacent to suitable aquatic habitat in the ponds. Further, it is possible (but speculative) that CRLF aestivation may also be occurring in the annual grassland area (approximately 5 acres) within the CMS Biological Sciences Project Area (north of the organic garden) and creation of a barrier to movement from the Carmel River could limit the use of this upland area as well.

~~The proposed 2006 Restoration Plan (Zander Associates 2008) would restore 8.3 acres of native grassland and 15.1 acres of riparian scrub and woodland for a total of 23.4 acres of upland habitat suitable for aestivation, foraging, and movement along the Carmel River. Thus, the Proposed Project would replace the upland habitat removed from the site due to residential and road development on a greater than 1:1 basis (23.4 acres created vs. 14 acres removed). Taking into account the potential additional indirect loss of approximately 5 acres of aestivation habitat within the CMS Biological Sciences Habitat, the Project would still provide greater than 1:1 replacement and the new upland would be more contiguous and in greater proximity to the Carmel River and undeveloped habitat areas in Palo Corona Regional Park to the south of the river.~~

Given the potential for CRLF to be present on the project site, construction activities associated with the Proposed Project could directly affect individual CRLF if present during construction due to the movement of construction equipment and indirectly affect adjacent aquatic habitat due to potential erosion/sedimentation and release of petroleum and hazardous materials used during construction.

After construction, indirect impacts on CRLF aquatic habitat would include increased runoff and potential increase of urban contaminants flowing into the river could result in changes to the quality of aquatic habitat (as described under Impact BIO-4) for the CRLF within the Carmel River. These changes could result in the loss of or diminish the quality of breeding habitat for the CRLF.

While a new detention pond would be created, the detention pond is designed for infiltration to benefit aquifer recharge (which ultimately benefits the Carmel river and associated CRLF habitat), the pond will not be designed or managed to retain ponding for breeding habitat but would provide aevistation/movement habitat.

~~Although the proposed 2006 Restoration Plan would result in an increase in upland habitat for the CRLF along the Carmel River and would replace lost wetland habitat, the plan does not call for replacement of suitable breeding habitat for CRLF to mitigate for the direct removal of the bulrush wetland on the site and the indirect effect on migration to the CMS pond/wetland, and thus the Project would have a *significant* impact related to the loss of suitable breeding habitat for the CRLF. Further, given that the habitat restoration is only proposed to occur after development of the first three phases of residential development, there would also be a temporal loss of aquatic and upland habitat which is also considered a *significant* impact.~~

The potential for the loss of breeding habitat and the temporary loss of aquatic and upland habitat and potential substantial disturbance or mortality of CRLF, a federally threatened species, would be a *significant impact.* This impact would be minimized and reduced to a *less-than-significant* level by implementation of **Mitigation Measures ~~BIO-3~~** and **BIO-2 ~~5~~** through **BIO-4 ~~7~~** and **Mitigation Measures BIO-7 ~~11~~** through **BIO-11~~15~~**, described below.

~~130-Unit Alternative~~

~~The 130-Unit Alternative would not affect any additional CRLF aquatic habitat, but would affect areas that serve as upland/dispersal habitat. While a new detention pond would be created under this Alternative, the detention pond is designed for infiltration to benefit aquifer recharge (which ultimately benefits the Carmel River and associated CRLF habitat), the pond will not be designed or managed to retain ponding for breeding habitat. Potential direct and indirect impacts from the 130-Unit Alternative would be the same as those analyzed for the Proposed Project, and therefore, would be a *significant* impact. This impact would be minimized and reduced to a *less-than-significant* level~~

~~by implementation of **Mitigation Measures BIO-3 and BIO-5** through **BIO-6** and **Mitigation Measures BIO-11** through **BIO-15** described below.~~

Mitigation Measure BIO-7~~11~~: Conduct Formal Site Assessment and Consult with U.S. Fish and Wildlife Service to Determine if Protocol-Level Surveys are Necessary OR Assume CRLF Presence

Prior to construction, the Applicant or successor(s) in interest will retain qualified biologists to conduct a formal site assessment of the Proposed Project ~~or 130-Unit Alternative~~ site for CRLF according to FWS' *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (August 2005). The site assessment includes assessing the project area and a 1-mile area around the project area. The assessment will include the adjacent CMS pond/wetland and adjacent annual grassland area. The results of the site assessment will be submitted to the Ventura FWS field office, which will determine if protocol-level surveys are necessary. If these surveys are determined to be necessary, they will be conducted according to the guidelines and a report of the survey results will be submitted to FWS. Based on the results of the site assessment and surveys, FWS would provide guidance on how the CRLF should be addressed through the federal ESA Section 7 or Section 10 process. If CRLF are not found during protocol-level surveys and FWS concurs with this negative finding for both the project site and the adjacent CMS habitat, no further mitigation would be necessary; however, it is uncertain if FWS would concur with this finding, given that red-legged frogs are known to occur in the Carmel River and CRLF are anecdotally reported at the CMS habitat site.

Alternatively, if acceptable to FWS, the applicant can assume that CRLF are present and not do the surveys.

If CRLF are found, the FWS otherwise determines that the site is CRLF habitat, or it is assumed that CRLF are present, **Mitigation Measures BIO-8 ~~12~~** through **BIO-10 ~~14~~** will be implemented.

Mitigation Measure BIO-8~~12~~: Restrict Filling of Ponds/Wetlands and Initial Ground-Disturbing Activities in CRLF Habitat to the Dry Season (May 1 to October 15)

To minimize mortality of CRLF eggs, larvae, and adults, the Applicant or successor(s) in interest would condition its contractor to only perform construction activities that would result in fill of ponds 1, 2, and 3, and the California bulrush wetland during May 1 through October 15. During this time of year, CRLF would have left these areas to aestivate underground and would not be present. CRLF may still be present at ponds during this time of year; however, the number of individuals is likely to be lower than earlier in the season. Therefore, prior to filling, ponds will be surveyed for CRLF (see **Mitigation Measure BIO-10~~14~~**). To minimize disturbance of breeding and dispersing CRLF, initial construction activity (including grading) within and CRLF upland habitat (as defined above) will be conducted during the dry season between May 1 and October 15 or before the onset of the rainy season, whichever occurs first. If construction activities are necessary in upland habitat between October 16 and April 30, the Applicant or successor(s) in interest will notify the County and contact the FWS Ventura field office for approval to extend the work period.

Mitigation Measure BIO-9~~13~~: Conduct a Preconstruction Survey for CRLF

Prior to construction activities, the Applicant or successor(s) in interest will condition its contractor to obtain the services of a qualified FWS-approved biologist. The biologist will

conduct a preconstruction survey 2 weeks prior to the onset of work for CRLF. The name and credentials of the biologist will be submitted to FWS for approval at least 15 days prior to the commencement of work. The survey will include all suitable breeding, foraging, cover, and aestivation habitat in the construction area. Aestivation areas adjacent to the work area will be fenced and avoided. If potential aestivation burrows cannot be avoided, they will be excavated by hand prior to construction and the approved biologist will move individuals to natural burrow sites within 0.25 mile of the construction site in accordance with a Biological Opinion or Habitat Conservation Plan from FWS that has been obtained for the Project. If a CRLF is found within aquatic habitat, the biologist will contact FWS to determine if relocation of any life stages is appropriate. The biologist will document the results of the survey on construction survey log sheets, which will be kept on file at the County.

Mitigation Measure BIO-10~~14~~: Monitor Initial Ground-Disturbing Construction Activities within CRLF Habitat

The Applicant or successor(s) in interest will condition its contractor to obtain the services of a qualified FWS-approved biologist to monitor initial ground-disturbing construction activities within CRLF upland habitat. The biologist will look for CRLF during grading, excavation, and vegetation removal activities. If a CRLF is discovered, construction activities will cease until the frog has been removed from the construction area and released near aquatic habitat within 0.25 mile from the construction area. Any relocation of this species would require incidental take authorization through a Biological Opinion or Habitat Conservation Plan from the FWS.

Mitigation Measure BIO-11~~15~~: Compensate for the Removal and Disturbance of CRLF Breeding Habitat

The Applicant or successor(s) in interest will compensate for the permanent loss of suitable breeding habitat for CRLF by creating or preserving suitable aquatic habitat within a FWS-approved conservation area (and preserving adjacent upland habitat). The location and size of the compensation aquatic habitat area will be determined in consultation with FWS through the ESA Section 7 or Section 10 process, but under no circumstances should the compensation area be calculated on less than a 1:1 ratio (1 acre for each 1 acre lost) and potentially more if a greater ratio is determined by the FWS. The actual compensation ratio will be determined in consultation with FWS. The conservation area will be permanently restricted from development and will be managed for the benefit of CRLF with funding for the management guaranteed in perpetuity. A management plan for the conservation area will be developed by the Applicant or successor(s) in interest and approved by FWS and the County prior to construction.

Options for the restoration of suitable aquatic habitat include:

- Onsite Habitat Preserve – The ~~2006 Restoration Plan for the Proposed Project could be modified, or the~~ newly developed restoration plan for the Project ~~(upon approval of the 130-Unit Alternative)~~ could include, suitable breeding ponds for CRLF within the habitat preserve. The 2006 Restoration Plan proposal for provision of upland habitat would provide sufficient adjacent upland habitat to the created ponds that can be managed for the benefit of the CRLF.
- Onsite in Remnant Golf Course – Given that the project's effects are on a bulrush wetland with a mix of adjacent golf course fairway and disturbed coyote brush scrub and indirect effects due to a blocking access to a pond on the adjacent school property, it would be

appropriate to create a new pond or ponds as compensation for Project effects. The area south of the river is directly adjacent to the Palo Corona Regional Park and thus new pond(s) would have good connectivity to the river and to adjacent undeveloped upland habitat. In this scenario, the Applicant or successor(s) in interest would be responsible to create, manage, and preserve the new pond or ponds only. The location of the pond(s) relative to the adjacent upland habitat would need to be approved by FWS.

- Palo Corona Regional Park – There are suitable locations in the nearby Palo Corona Regional Park for creation of aquatic habitat with adjacent suitable upland habitat. Because the site is already controlled by the Regional Park District, the Project Applicant would be responsible to construct the new pond or ponds and to fund the management of the pond(s) in perpetuity, but not the management of adjacent upland habitat.

Given the timing concerns noted above, the applicant or successor(s) in interest will be required to create the new aquatic habitat concurrently with any disturbance to existing aquatic habitat and with any indirect effects to the potential CRLF aquatic habitat offsite at the CMS pond/wetland site. The compensation pond will be designed such that it does not provide suitable breeding habitat (i.e., perennial ponding) for bullfrogs, either through designing the pond to be seasonal or by including a drain in the pond design so that water can be drained in the late summer or fall to limit bullfrog reproduction.

The Applicant or successor(s) in interest will submit and receive approval of a formal proposal to the County for creation, management, and preservation of pond(s) in compliance with this measure prior to issuance of any building permit for this Project. The Applicant or successor(s) in interest will obtain all necessary regulatory and landowner approvals to implement this measure prior to construction

Impact BIO-9: Loss or Disturbance of Southwestern Pond Turtle Aquatic Habitat and Potential Loss or Disturbance of Southwestern Pond Turtles (less than significant with mitigation)

~~**Proposed Project**~~

Construction of the Proposed Project would result in the filling of the California bulrush wetland which provides potential aquatic habitat for southwestern pond turtle. If southwestern pond turtles are present in the wetland, filling of this area would result in the loss of aquatic habitat and the potential mortality of adult or juvenile turtles. Southwestern pond turtles may also use the CMS pond/wetland.

Construction activities (such as grading and movement of heavy equipment) adjacent to the Carmel River and along Intermittent Drainages 1 and 2 could result in injury or mortality of southwestern pond turtles or pond turtle nests containing eggs or young individuals if these areas are being used for egg deposition. Declines in populations of western pond turtles throughout the species range have been documented (Jennings and Hayes 1994). Loss of individuals within the project area could diminish the local population and lower reproductive potential, which could contribute to the further decline of this species. The loss of upland nesting sites or eggs would also decrease the local population.

Because the habitat preserve would be constructed adjacent to the Carmel River, the conversion of golf turf to natural habitat would replace and provide additional upland and nesting habitat along

the river for turtles, which would compensate for the loss of upland habitat. However, the Project would result in loss of pond habitat, ~~the 2006 Restoration Plan does not provide for replacement of the lost pond habitat,~~ which is a *significant* impact.

For these reasons, this impact would be *potentially significant*, but would be reduced to a *less-than-significant* level by implementation of **Mitigation Measure BIO-12~~16~~**.

~~130-Unit Alternative~~

~~The 130-Unit Alternative would not affect any additional southwestern pond turtle aquatic habitat, but similarly to the Proposed Project, it would affect the California bulrush wetland, which would be a *potentially significant* impact. This impact would be reduced to a *less-than-significant* level by implementation of **Mitigation Measure BIO-16**.~~

Mitigation Measure BIO-12~~16~~: Conduct a Preconstruction Survey for Southwestern Pond Turtles and Monitor Construction Activities within Suitable Aquatic Habitat

To avoid construction-related impacts on southwestern pond turtles, the Applicant or successor(s) in interest will retain a qualified wildlife biologist to conduct a preconstruction survey for southwestern pond turtles no more than 48 hours before the start of construction within suitable aquatic habitat (as discussed above) and upland habitat (along the Carmel River and Intermittent Drainages 1 and 2). The wildlife biologist will look for adult pond turtles, in addition to nests containing pond turtle hatchlings and eggs. If an adult southwestern pond turtle is located in the construction area, the biologist will move the turtle to a suitable aquatic site, outside the construction area. If an active pond turtle nest containing either pond turtle hatchlings or eggs is found, the Applicant or successor(s) in interest will consult DFW to determine and implement appropriate avoidance measures, which may include a "no-disturbance" buffer around the nest site until the hatchlings have moved to a nearby aquatic site.

In addition to the preconstruction survey, a qualified biological monitor will be present during initial construction activities within aquatic and upland habitat, as described above in **Mitigation Measure-BIO-10~~14~~**. If a southwestern pond turtle is observed within the construction area, the biological monitor will attempt to capture and move the turtle to a suitable aquatic site, outside the construction area.

Impact BIO-10: Potential Loss or Disturbance of Breeding or Wintering Western Burrowing Owls and Their Burrows (less than significant)

~~Proposed Project~~

The project ~~Proposed Project~~ site does not contain extensive areas suitable for ground squirrel burrows that could be utilized by burrowing owls. A general rule of thumb is that a breeding pair of owls requires approximately 6.5 acres of habitat (The California Burrowing Owl Consortium 1993). The open coyote bush scrub habitat in the Proposed Project area consists of small, fragmented patches. During the August 20, 2014 field survey, very few ground squirrel burrows were observed and surveys conducted by Rana Creek Habitat Restoration in 2003 and 2004, and Zander Associates in 2008 (Zander 2008) exhibited similar results; burrowing owls were not observed nor were any suitable burrows observed outside the golf course. There are no CNDDB records of burrowing owls within 5 miles of the project area. ~~In addition, the proposed 2006 Restoration Plan would create 8.3~~

~~acres of native grassland that would likely be colonized by ground squirrels.~~ Therefore this impact is considered *less than significant*. No mitigation is required.

~~130-Unit Alternative~~

~~Similar to the Proposed Project, the 130-Unit Alternative site does not contain extensive areas suitable for ground squirrel burrows. The open coyote bush scrub could be utilized by ground squirrels. The majority of this habitat is the same as described above for the Proposed Project, as well as a small sliver located in Lot 130 to the east side of the coast live oak woodland habitat (**Figure 3.3-1**). However, during the August 20, 2014 field survey, very few ground squirrel burrows were observed and there are no CNDDB records of burrowing owl within 5 miles of the project area. Therefore this impact is considered to be *less than significant*. No mitigation is required.~~

Impact BIO-11: Potential Loss or Disturbance of Tricolored Blackbirds and Their Breeding Habitat (less than significant with mitigation)

~~Proposed Project~~

Potential breeding habitat for tricolored blackbirds is present within the California bulrush wetland (0.3 acre) in the project ~~Proposed Project~~ site. As mentioned previously, the potential for tricolored blackbird to nest in these areas is low. However, if tricolored blackbirds were breeding in this area, filling of this wetland would result in the removal of breeding habitat and the potential loss of tricolored blackbird adults, young, or eggs. ~~The proposed 2006 Restoration Plan does not propose the creation of vegetation conditions suitable for tricolored blackbird (i.e., perennial emergent wetland).~~ Because the population of tricolored blackbirds has declined significantly from historic levels throughout its range (Beedy and Hamilton 1997), loss of individual tricolored blackbirds and their young or eggs and loss of nesting habitat would be *significant*, but would be reduced to a *less-than-significant* level by implementation of **Mitigation Measures BIO-13 ~~17~~** and **BIO-14~~18~~**. Implementation of these measures would also ensure compliance with the MBTA.

~~130-Unit Alternative~~

~~The 130-Unit Alternative would not affect any additional tricolored blackbird breeding habitat; however, similar to the Proposed Project, the 130-Unit Alternative would affect the California bulrush wetland which could support tricolored blackbird adults, young, and eggs, loss of which would be a *significant* impact. This impact would be reduced to a *less-than-significant* level by implementation of **Mitigation Measures BIO-17** and **BIO-18**.~~

Mitigation Measure BIO-13~~17~~: Conduct Surveys for Nesting Tricolored Blackbirds

The Applicant or successor(s) in interest will retain a qualified biologist to conduct two surveys for nesting tricolored blackbirds in the California bulrush wetland during the breeding season (late March through June). The biologist will survey suitable breeding habitat within the project area. The first survey will be conducted during the spring prior to construction, and if, as determined by the qualified biologist, suitable habitat remains on the project site, the second survey may be conducted while construction is in progress. If construction spans multiple years and suitable habitat remains, these ~~this~~ surveys are required on an annual basis. If no nesting tricolored blackbirds are found, no further action is necessary. If tricolored blackbirds are found to be nesting within the project area, the Applicant or successor(s) in interest will consult DFW to determine and implement appropriate avoidance measures, which may include a "no-

disturbance" buffer around the nest site until the breeding season has concluded. The applicant or successor(s) in interest will demonstrate to the County prior to construction that a qualified biologist has surveyed for tricolored blackbirds and report whether blackbirds were found and DFW has been contacted or if no blackbirds were found and no further action is required.

Mitigation Measure BIO-1~~4~~18: ~~Redesign Restoration Plan (Proposed Project) to Replace Lost Tricolored Blackbird Nesting Colony Habitat or~~ Incorporate Tricolored Blackbird Nesting Habitat into the Newly Developed ~~130-Unit Alternative~~ Restoration Plan (If Present).

The Applicant or successor(s) in interest will replace lost tricolored blackbird nesting habitat in coordination with DFW if a tricolored blackbird nesting colony is documented (per **Mitigation Measure BIO-12 ~~16~~** above) in the California bulrush wetland. This mitigation is not required if the nesting habitat would not be affected or if only individual nesting is documented in the project area.

Impact BIO-12: Potential Loss or Disturbance of Monterey Dusky-Footed Woodrat or Their Nests (less than significant with mitigation)

~~**Proposed Project**~~

Construction activities within riparian woodland and forest along the Carmel River and intermittent drainages could destroy Monterey dusky-footed woodrat middens (nests) and injure or kill individuals, and remove suitable habitat. Impacts on Intermittent Drainages 1 and 2 would occur during construction of the two proposed access roads to the proposed development. Because the proposed habitat preserve would be constructed adjacent to the Carmel River, the conversion of golf turf to natural habitat would replace and provide additional riparian habitat along the river for woodrats, which would compensate for the amount of riparian forest/woodland habitat removed by the Project.

Because of the limited range of this subspecies, it is considered rare. Only four occurrences have been recently documented in Monterey County (California Department of Fish and Wildlife 2014). Loss of individuals within the project area could diminish the local population and lower reproductive potential, which could result in a local decline of this subspecies. For these reasons, this impact would be *potentially significant*, but would be reduced to a *less-than-significant* level by implementation of **Mitigation Measure BIO-15~~19~~**.

~~**130-Unit Alternative**~~

~~The 130-Unit Alternative would affect the habitats described above for the Proposed Project as well as an additional 0.8 acres of coast live oak woodland in Lot 130. Loss of individuals from construction of the 130-Unit Alternative would be *potentially significant.* Implementation of **Mitigation Measure BIO-19** would reduce this impact to a *less-than-significant* level.~~

Mitigation Measure BIO-15~~19~~: Conduct Surveys for Woodrat Middens and Relocate Woodrats and Middens Prior to Construction Activity

The Applicant or successor(s) in interest will retain a qualified biologist to conduct a survey for woodrat middens in all suitable habitat in the Proposed Project area ~~or 130-Unit Alternative area~~ that will be affected by construction. This survey will be conducted in the non-breeding

season (between October 1 and December 31) prior to any clearing or grading activities in the project area. If no middens are found within this area, no further action is required.

Any active middens that will not be in areas of Project-related grading or vegetation removal will be avoided and protected with a minimum 25-foot buffer. Middens that cannot be avoided will be dismantled and relocated during the non-breeding season (between October 1 and December 31) prior to land clearing activities to allow animals to escape harm and to reestablish territories for the next breeding season. Dismantling will be done by hand, allowing any animals to escape either along existing woodrat trails or toward other available habitat. If a litter of young is found or suspected, nest material should be replaced, and the nest left alone for 2 to 3 weeks before a recheck to verify that young are capable of independent survival before proceeding with nest dismantling. The biologists will attempt to relocate any removed middens to the same area where woodrats are released.

Impact BIO-13: Potential Loss or Disturbance of Tree and Shrub Nesting Migratory Birds and Raptors (less than significant with mitigation)

~~**Proposed Project**~~

Coyote brush scrub, Monterey pine stands, and riparian forest in and adjacent to the project ~~Proposed Project~~ site provide suitable nesting habitat for special-status birds including white-tailed kite, purple martin, and yellow warbler. These habitats also provide suitable nesting habitat for non-special–status migratory birds, including red-shouldered hawk, red-tailed hawk, Nuttall's woodpecker, California thrasher, spotted towhee, wrentit, Anna's hummingbird, and red-winged black bird. Because the habitat preserve would be constructed adjacent to the Carmel River, the conversion of golf turf to natural habitat would replace shrubs and trees that would be lost during construction. Removed trees would be replaced at a 1:1 (and sensitive species greater than 1:1) as part of the 2006 Restoration Plan. However, the restoration is proposed to be completed after residential development and thus there would be a temporary *potentially significant* loss of nesting habitat. **Mitigation Measure BIO-2 ~~5~~** is recommended to reduce this temporary impact to a *less-than-significant* level.

If construction occurs during the breeding season (February 1 to September 15), construction activities (e.g., vegetation removal, grading, noise) that occur within the project area could result in nest abandonment and subsequent loss of eggs or developing young at active nests located in or near the project area. This impact would be *potentially significant* if the subsequent population declines affected the viability of the local population. This impact would also be in conflict with the 2010 General Plan update. Disturbance that results in nest abandonment and death of young or loss of reproductive potential at active nests would also violate California Fish and Game Code Sections 3503 (active bird nests) and the MBTA. Implementation of **Mitigation Measure BIO-16 ~~20~~** would reduce this impact to a *less-than-significant* level and avoid violating the MBTA and California Fish and Game Code.

~~**130-Unit Alternative**~~

~~The habitats described above for the Proposed Project, as well as the coast live oak woodland in Lot 130, provide suitable nesting habitat for special-status migratory birds. Loss of nests, eggs, or young would be *potentially significant*. Implementation of **Mitigation Measure BIO-20** would reduce this impact to a *less-than-significant* level.~~

Mitigation Measure BIO-1620: Remove Vegetation during the Nonbreeding Season and Avoid Disturbance of Nesting Migratory Birds and Raptors

During construction of the Proposed Project ~~or 130-Unit Alternative~~, the Applicant or successor(s) in interest will condition its contractor to ensure that construction contractors remove trees and shrubs only during the nonbreeding season for migratory birds (September 16 through January 30). In addition, removal of vegetation or filling of ponds or wetlands in the project area will also take place during the nonbreeding season to avoid impacts on nesting birds in these areas. To further minimize impacts, one of the following options will be implemented.

- If construction activities are scheduled to occur during the breeding season (February 1 through September 15), a qualified wildlife biologist will be retained by the Applicant or successor(s) in interest to conduct focused nesting surveys in and adjacent to the project area. The surveys will be conducted within 1 week prior to initiation of construction activities and at any time between February 1 and September 15. The area surveyed shall include all construction areas as well as areas within 300 feet outside the boundaries of the areas to be cleared or as otherwise determined by the biologist. If the Project is constructed in phases, a nest survey shall be required prior to implementation of each phase and when construction stops at a portion of the site where suitable nesting habitat remains for more than 15 days. Additionally, if construction spans multiple years, at least one nest survey shall be conducted at the beginning of each year of Project implementation between February and May.
- If no active nests are detected during surveys, then no additional mitigation is required. If surveys indicate that migratory bird or raptor nests are found in any areas that would be directly affected by construction activities, a no-disturbance buffer will be established around the site to avoid disturbance of the nest site until after the breeding season or after a wildlife biologist determines that the young have fledged (usually late-June to mid-July). The extent of these buffers will be determined by a wildlife biologist and will depend on the level of noise or construction disturbance, line of site between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. These factors will be analyzed in order to make an appropriate decision on buffer distances. The buffers will be maintained until the breeding season has ended or until a qualified biologist determines that the birds have fledged and are no longer reliant upon the nest or parental care for survival.
- If construction activities begin prior to the breeding season (i.e., if construction activity begins between September 16 and January 30), then construction can proceed until it is determined that an active migratory bird or raptor nest is subject to abandonment as a result of construction activities. Construction activities must be in full force, including at a minimum, grading of the site and development of infrastructure, in order for construction to continue (a minor activity that initiates construction but does not involve the full force of construction activities will not qualify as "pre-existing construction"). If any birds or raptors nest in the vicinity (300 feet for raptors and 50 feet for passerines) of the Project under this pre-existing construction condition, then it is assumed that they are or will habituate to the construction activities. Under this scenario, a nesting bird survey will still be conducted on or after February 1 to identify any active nests in the vicinity, and active sites will be monitored by a wildlife biologist periodically until after the breeding season or after the young have fledged (usually late-June to mid-July). If active nests are identified on or

immediately adjacent to the project site, then all non-essential construction activities (e.g., equipment storage, meetings) will be avoided in the immediate vicinity of the nest site; however, construction activities can proceed.

Impact BIO-14: Potential Loss or Disturbance of Pallid Bat and Non-Special–Status Bats Species (less than significant with mitigation)

~~**Proposed Project**~~

Removal of trees with cavities during Project construction could result in the mortality, injury, or disturbance of bats if they were roosting within these trees when they were removed. Because construction would not occur at night, the foraging activities of bats would not be disturbed. Alternative roosting sites (other trees) are available near the project area and bats may use these alternate sites if construction activities discourage them from using trees within the project area. However, there may be some permanent loss of suitable roosting habitat if trees with suitable cavities are removed. Because the habitat preserve would be constructed adjacent to the Carmel River, the conversion of golf turf to natural habitat would replace trees that would be lost during construction and over time, these may provide roosting habitat for bats. Loss of individual pallid bats within the project area could diminish the local population and lower reproductive potential, which could result in a local decline of this species. This impact would be *potentially significant*, but would be reduced to a *less-than-significant* level by implementation of **Mitigation Measure BIO-17~~21~~**.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, trees throughout the 130-Unit Alternative site, including Lot 130, provide roosting habitat for bat species. Loss of pallid bat individuals would be a *potentially significant* impact; however **Mitigation Measure BIO-21** would reduce the impact to a *less-than-significant* level.~~

Mitigation Measure BIO-17~~21~~: Conduct a Survey for Suitable Roosting Habitat and Evidence of Roosting Bats and Avoid Disturbing Them

During April to September before construction begins, the Applicant or successor(s) in interest will retain a qualified bat biologist who will survey trees that will be removed in the project area and identify any snags, hollow trees, or other trees with cavities that may provide suitable roosting habitat for pallid bats and non-special–status bats. This survey will be conducted before any tree removal occurs. If no suitable roosting trees are found, removal of trees may proceed (in accordance with **Mitigation Measure BIO-7~~11~~**). If snags, hollow trees, or other trees with suitable cavities are found, these will be examined for roosting bats. If bats are not found and there is no evidence of use by bats, removal of trees may proceed. If bats are found or evidence of use by bats is present, trees will not be removed until DFW is consulted for guidance on measures to take to avoid and minimize disturbance of the bats. Measures may include excluding bats from the tree prior to their hibernation period and before construction begins. Bat boxes will be installed within the habitat preserve to compensate for the temporal loss of roosting habitat. Bat boxes will be installed prior to the removal of any trees used by bats on a minimum 1:1 basis (1 bat box for each identified active bat location).

Impact BIO-15: Temporary and Permanent Impact on Steelhead Trout and other Carmel River Fish (less than significant with mitigation)

~~**Proposed Project**~~

The Proposed Project could result in five different potential impacts on steelhead and other fish in the Carmel River: construction-related impacts, stormwater runoff from residential development, changes in habitat due to changes in water use levels, changes in habitat due to changes in stream morphology, and potential fish stranding during high-flow events.

Construction Impact

Runoff from proposed construction activities could temporarily degrade water quality in Carmel River (see Chapter 3.2, *Hydrology and Water Quality*), which may adversely affect fish downstream from the site. These temporary disturbances would result in adverse effects on special-status fish species. This impact would be *potentially significant*, but would be reduced to a *less-than-significant* level by implementation of **Mitigation Measures HYD-1** through **HYD-5** (see Chapter 3.2, *Hydrology and Water Quality*).

Stormwater Runoff From Residential Development

As described in Chapter 3.2, *Hydrology and Water Quality*, the Project would result in increased residential stormwater runoff that may contain contaminants that could affect the water quality in the Carmel River. This would be a *significant* water quality impact and a *significant* biological impact on steelhead and other fish in the Carmel River. **Mitigation Measures HYD-1** through **HYD-5** see Chapter 3.2, *Hydrology and Water Quality*) would reduce this potential water quality and biological resource impact to a *less-than-significant* level.

It should be noted that the benefit of habitat conversion from active golf course use (with its associated herbicide and fertilizer use) to residential and park/habitat preserve uses should result in a net reduction in loading of herbicides and fertilizer into the Carmel River given the reduction in irrigated acreage from approximately 57 acres at present to fewer than 20 acres with the Project (3 acres of irrigated/maintained park, 3 acres of irrigated parkways, 4 acres of retained golf course, and perhaps as much as 5 to 10 acres within residential lots).

Changes in Water Use

As analyzed in Chapter 3.10, *Public Services, Utilities, and Recreation*, the Project is expected to reduce withdrawals from the Carmel River alluvial aquifer during wet, average, dry, and very dry years. Reduction in withdrawals from the Carmel River alluvial aquifer would mean that normal (i.e., non-storm event) flows in the lower part of the river would be greater with the Project than without. Increased flows could contribute to improved steelhead migratory access, larger areas of rearing habitat, improved riparian vegetation and/or improved water quality (dissolved oxygen, temperature, etc.) in the river and in the Carmel lagoon. This would be a *beneficial* impact on steelhead and other fish species in the Carmel River. No mitigation is required.

Stream Morphology

As analyzed in Chapter 3.2, *Hydrology and Water Quality*, filling of a portion of the 100-year floodplain for residential development would increase high-flow stream velocities in a small (100 to 200 foot) section of the Carmel River adjacent to the Proposed Project. As discussed above under

Impact BIO-4, this change could result in limited bank erosion and loss of riparian vegetation. This impact can be mitigated to a *less-than-significant* level through **Mitigation Measure HYD-1 through HYD-6 ~~BIO-7~~**.

Regarding steelhead migration upstream on the Carmel River, during normal flow conditions, flow velocities are not expected to increase in any substantial way that might affect migration or energy expended during migration. Of note, the Project would result in the lowering of withdrawals from the Carmel Valley aquifer, which would benefit flows for the Carmel River and would result in dedication of water for instream beneficial uses.

However, during high-flow events, as discussed in Chapter 3.2, *Hydrology and Water Quality*, flow velocities would increase at certain locations in the Project reach. However, it should be noted that high-flow events (such as 10-year flows) would constitute a very small portion of the upstream migration period for steelhead in any given year.

Swimming speeds for adult steelhead have been estimated as 0 to 5 feet per second (fps) for cruising (a speed that can be maintained for hours), sustained speeds of 5 to 14 fps (a speed that can be maintained for minutes), and darting speeds of 14 to 26 fps (a single burst, not sustainable) (Bjornn and Reiser 1991; Bell 1990). Maximum velocity that enables upstream migration of adult steelhead has been estimated as 8 fps (Bjornn and Reiser 1991).

There are 19 cross-sections in the HEC-RAS model along the Project reach. Based on the flood modeling done for the Project, under existing 10-year flow conditions channel velocities in the Project reach range from 3.5 fps to 10.9 fps and one cross-section (Station 52) has a flow that is greater than 8 fps. Assuming linear changes in flow between cross-sections, flows greater than 8 fps likely occur over a reach of about 180 feet in length under existing conditions. With the Project, 10-year flow channel velocities in the Project reach would range from 2.2 fps to 13.6 fps and two cross-sections (Stations 63 and Station 64) would have flows greater than 8 fps. Assuming linear change in flow between cross-sections, flows greater than 8 fps likely would occur over a reach of about 280 feet. Thus, the Project would increase the length that steelhead would have to exceed the maximum velocity that enables upstream migration for a distance of about 100 feet for flows under 10-year conditions. The increased velocities for the reach with flows greater than 8 fps are within the range of sustained speeds for adult steelhead, and thus migration would not be impeded, even under 10-year flow conditions. While steelhead would exert greater energy in the short reach with flows greater than 8 fps under 10-year flow conditions, distance-averaged velocity over the entire Project reach during 10-year flow conditions would actually slightly decrease from 5.8 fps to 5.5 fps indicating that steelhead should exert nearly the same effort as under existing 10-year flow conditions. Thus, this would be *a less-than-significant* impact for 10-year flow conditions. No mitigation is required.

It should be noted that 10-year flow conditions occur infrequently and for a limited duration, and thus the duration of this impact in any given year is limited.

For less than 10-year flow conditions, channel velocities would be far less than those for 10-year flow conditions for the vast majority of steelhead migration windows, and this is also considered a *less-than-significant* impact for less than 10-year flow conditions. No mitigation is required.

High-Water Flow Stranding Potential

The excavation of approximately 120,000 cubic yards of soil from the lower floodplain and creation of a basin within the park/habitat preserve area could strand fish during high-flow events.

The 10-year flow is 11,000 cubic feet per second. The water surface elevation (WSEL) for this 10-year flow at the upstream end of the basin would be 33.0 feet whereas the lip of the basin is 35 feet. At the middle of the basin, the 10-year WSEL would be 33.4 feet compared to the basin edge would be between 34 and 35 feet. At the downstream end of the basin, the 10-year WSEL would be 32.2 feet and the basin edge elevation would be between 29 and 30 feet. Thus, for a 10-year flow event, the basin would not overtop at the upper end or middle, but flow would enter from the lower end of the basin. The 10-year flow was the smallest flow analyzed, so it is unknown if the basin would fill from the lower end more frequently such as for a 5-year or 2-year event.

Since there is no outlet channel from the basin, it is possible that steelhead and other fish could be stranded in the basin during high-flow events at a more frequent interval than every 10 years. If steelhead were to become trapped in the new basin, this would be a *potentially significant* impact. Although this impact would be infrequent and thus would not be expected to result in stranding of large numbers of steelhead that might affect population levels, **Mitigation Measure BIO-18 ~~22~~** would minimize potential mortality of individual steelhead during high-flow events and thus this impact would be reduced to a *less-than-significant* level.

~~130-Unit Alternative~~

~~The 130-Unit Alternative would not affect any additional fish habitat, therefore the 130-Unit Alternative would result in similar impacts on steelhead trout and other Carmel River fish described above for the Proposed Project. The analysis of construction impacts, stormwater runoff from residential development, and stream morphology would remain the same for the 130-Unit Alternative as the Proposed Project and could be *significant* but would be reduced to *less-than-significant* levels with the implementation of **Mitigation Measures HYD-1** through **HYD-6**. Of note, the 130-Unit Alternative would result in the lowering of withdrawals from the Carmel Valley aquifer, which would benefit flows for the Carmel River and would result in dedication of water for instream beneficial uses. High-water flow stranding from construction of the new site basin would be a *significant* impact but would be reduced to a *less-than-significant* level with implementation of **Mitigation Measure BIO-22**.~~

Mitigation Measure BIO-18~~22~~: Rescue Steelhead, if Stranded in Site Basin During High-Flow Events

The Applicant or successor(s) in interest will apply to the NOAA Fisheries and to the DFW for permission to rescue steelhead if they become trapped in the new site basin. The Applicant or successor(s) in interest will be responsible for arranging the inspection of the basin after any storm event that results in temporary filling from the Carmel River. Steelhead will be rescued from the basin and either returned to the Carmel River immediately and/or be held at an appropriate facility (such as the MPWMD Sleepy Hollow facility) until it is safe to return them to the river. The Applicant or successor(s) in interest may choose to effect this mitigation through arrangement with organizations that are already involved with fish rescue on the Carmel River such as MPWMD and the Carmel River Steelhead Association.

The Applicant or successor(s) in interest will obtain all necessary approvals and make all implementation arrangements for steelhead rescue prior to the construction of the new site basin and will provide proof of such permits and arrangements to the County.

C. Impact on Wildlife Movement, Corridors, and Nursery Sites

Impact BIO-16: Potential Adverse Impact on Wildlife Movement, Wildlife Corridors, and Nursery Sites (less than significant with mitigation except as it relates to CRLF and southwestern pond turtle discussed above)

~~**Proposed Project**~~

The Project would not impede east-west wildlife movement along the Carmel River. The Project's newly developed ~~and with the implementation of the proposed 2006~~ Restoration Plan ~~(Zander Associates 2006)~~ would enhance the extent and quality of the adjacent riparian corridor along the Project frontage with the river.

However, construction of the residential development and associated roads would interfere with the movement of terrestrial wildlife movement along two corridors.

- North-south movement through the CMS habitat area.
- North-south movement to and from agricultural/undeveloped parcels along Val Verde Drive.

Wildlife movement corridors are shown on **Figure 3.3-3.**

Wildlife Movement to and Through the CMS Habitat Area

While it would not be physically impossible for terrestrial wildlife to move through the new residential area to reach the CMS habitat area, it is likely that the diversity of wildlife would be reduced within the remnant scrub and grassland areas within the CMS habitat project area due to impediments to wildlife movement from the Proposed Project. Avian species would not have a physical barrier to movement to the CMS site, but due to the removal of scrub and riparian habitat on the Hatton and Stemple Parcels which provides cover for a number of species, the diversity of avian species on the CMS site could also decline.

The CMS habitat area is no doubt important to the environmental education mission of the habitat project and the school and is used by a variety of species (as documented by the bird counts and other studies done by students) and the connection of the CMS habitat area to the Carmel River is important to both the environmental education mission and to the diversity of species found on the CMS site. However, under CEQA, this biological resource analysis is focused on the significance of the physical impact on biological resources. Consideration of the impact of the Project on adjacent land uses, including the CMS Biological Sciences Project and environmental education is addressed separately in Chapter 3.5, *Land Use*.

While wildlife movement would be diminished between the Carmel River and the CMS habitat site and this would diminish the environmental education opportunities on the school property itself, this is not considered a significant physical impact on wildlife movement corridors for the following reasons.

- The primary east-west wildlife movement corridor in the project area is the Carmel River. The Project, with implementation of the proposed 2006 Restoration Plan, would increase the amount and quality of the riparian habitat immediately adjacent to the Carmel River which would improve the value of the river as a wildlife corridor compared to existing conditions.
- North-south wildlife movement at the mouth of Carmel Valley from south of the Carmel River to undeveloped areas north of Carmel Valley is already somewhat impaired at present due to the

presence of residential and commercial development, roadways (in particular Carmel Valley Road), as well as institutional uses (such as CMS and the community church) and the CMS habitat area is located within that partially developed context.

- The CMS habitat area is relatively small, is used frequently by students for environmentally education activities (that introduce frequent human intrusion of noise and presence) and is surrounded by development (school, church, golf course, and Carmel Valley Road), and thus is not a pristine wildlife movement corridor at present. Further, the corridor is fairly narrow (~300 feet at the narrowest point), which means that wildlife movement throughout this area is always in close proximity to human disturbances.
- Even with loss of the wildlife movement corridor through the CMS habitat area, there would remain larger north-south movement corridors across the retained golf course between Rio Road (east) and the Rancho Cañada Golf Course parking lot (approximately 700 feet wide) and between the Rancho Cañada clubhouse and residential development to the east (approximately 1,600 feet wide). Wildlife using these corridors must also cross Carmel Valley Road which would be an impediment to less motile species, but the road has a similar effect along the entire length of the multi-lane section.

As described under the *California Red-Legged Frog* and *Southwestern Pond Turtle* sections, the Project is expected to potentially impede movement of special-status species (including CRLF and southwestern pond turtle), if they are present, from the Carmel River to the pond/wetland and adjacent areas on the CMS habitat area and this would be a *significant* impact. With the implementation of **Mitigation Measures BIO-1 ~~4~~** through **BIO-5~~7 and BIO-9a~~** which would create and restore habitat for these species, the impact would be reduced to a *less-than-significant* level.

Overall, when evaluating the effectiveness of the CMS corridor in providing north-south wildlife movement opportunity in this portion of Carmel Valley, the loss of this corridor, considered in isolation, would be *less than significant*.

Wildlife Movement to the Agricultural and Undeveloped Areas East of Val Verde Drive

While it would not be physically impossible for terrestrial wildlife to move through the new residential area to reach the agricultural and undeveloped areas along Val Verde Drive, wildlife movement would be impeded and thus it is likely that the diversity of wildlife would be reduced within these areas, especially terrestrial wildlife moving from the Carmel River to these areas.

The agricultural and undeveloped areas along Val Verde drive do not provide an effective wildlife corridor from the Carmel River to undeveloped areas north of Carmel Valley Road as the area immediately north of Carmel Valley Road relative to Val Verde Drive is a developed residential area and thus wildlife movement (while still possible) is somewhat impeded in the areas north of the road.

Although construction of the new residential development would impede wildlife movement to these areas, this would be a less- than-significant impact on wildlife movement and wildlife corridors for similar reasons as those cited above relevant to the CMS habitat area.

Project Impact on Nursery Sites

Wildlife nursery sites that would be affected by the Project include: the ponds/wetlands at the golf course and at CMS (which provide breeding habitat for CRLF, and other birds, reptiles, and

amphibians); scrub habitat (which provides nesting habitat for birds); trees (which provide nesting habitat for birds and bats); and riparian habitat (which provides nesting habitat for Monterey dusky-footed woodrats, birds, and other species).

These impacts are addressed in the discussion above concerning impacts on vegetation and special-status species and mitigation is identified for the significant impact associated with impacts on breeding habitat. The mitigation measures would reduce these impacts to a *less-than-significant* level.

~~**130-Unit Alternative**~~

~~Similarly to the Proposed Project, the 130-Unit Alternative would not impede wildlife movement beyond those impacts described above for the Proposed Project. Lot 130 is already developed. With the implementation of **Mitigation Measures BIO-4** through **BIO-6** and **BIO-9b**, the impact would be reduced to a *less-than-significant* level.~~

D. Impact Related to Adopted Conservation Plans and Local Policies/Ordinances for the Protection of Biological Resources

Impact BIO-17: Potential Conflict with Local Policies/Ordinances (less than significant with mitigation)

~~**Proposed Project**~~

There are no adopted habitat conservation plans, natural communities conservation plan, or other approved local, regional, or state habitat conservation plans that apply to the project area.

The Project impact related to the County tree preservation policy or ordinance is addressed above under Impact BIO-7.

Analysis of Project consistency with applicable policies of the 2013 CVMP is provided in **Appendix D** of this Second Revised ~~Recirculated~~ Draft EIR. The specific consistency of the Project with policies related to vegetation and wildlife is analyzed in **Appendix D** and the Project has been determined to be consistent with these policies with implementation of mitigation in this chapter.

Thus, relevant to local adopted policies and ordinances for the protection of biological resources, the Project would have a *less-than-significant* impact with implementation of **Mitigation Measure BIO-6** ~~**10**~~ (for trees).

~~**130-Unit Alternative**~~

~~There are no adopted habitat conservation plans, natural communities conservation plans, or other approved local, regional, or state habitat conservation plans that apply to the 130-Unit Alternative area.~~

~~The 130-Unit Alternative impacts would be similar to the Proposed Project. Therefore impacts and mitigation discussed under the Proposed Project apply to the 130-Unit Alternative. With mitigation identified in this chapter, the 130-Unit Alternative would have a *less-than-significant* impact on local adopted policies and ordinances for the protection of biological resources and the implementation of **Mitigation Measure BIO-10** (for trees).~~

E. Impact on Wildlife from Increased Presence of Dogs and Cats

Impact BIO-18: Potential Adverse Impact on Wildlife due to Increased Presence of Dogs and Cats Associated with Residential Development (less than significant with mitigation)

~~**Proposed Project**~~

The Project, once occupied, has the potential to increase the presence of dogs and cats in the habitat preserve and residential portion of the Project. Uncontrolled dogs have the potential to harass, injure, or kill wildlife. Cats that are let outside have the potential to harass, injure, or kill wildlife such as reptiles, birds, and rodents. The presence of trails through the preserve will guide people through the preserve and confine them to designated areas, thereby minimizing the area in which wildlife could be disturbed by dogs.

It is important to take into account that the current context is not a pristine riparian corridor – it is a golf course with active human presence in the form of golfers and maintenance workers, including the turf management activities that include mowing and the use of pesticides and herbicides.

While the Project would add residences at the project site and some residents will have cats or dogs (or both) that have the potential for the effects noted above, the Project would also restore riparian woodland to acres of golf course and would remove baseline golf course uses which is an improvement in wildlife habitat conditions compared to the baseline conditions.

The new restoration habitat area would serve as a buffer between the existing riparian corridor along the Carmel River and the residential area which will not be immediately adjacent to the river and existing riparian corridor. The provision of this new habitat helps to offset the effect not only of residential pets, but also human presence.

Mitigation Measure BIO-19 ~~23~~ is recommended as a prudent measure to help control the effect of cats and dogs on wildlife (and vice-versa). Taking into account the improvement in habitat conditions along the Carmel River with the change from golf course to riparian woodland, the existing context of intense human use on the golf course, and the implementation of **Mitigation Measure BIO-19~~23~~,** the addition of some residential cats and dogs will not result in an overall significant impact on wildlife.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative has the potential to increase the presence of dogs and cats in the habitat preserve and residential portion of the Project. **Mitigation Measure BIO-23** is recommended as a prudent measure to help control the effect of cats and dogs on wildlife (and vice-versa). Taking into account the improvement in habitat conditions along the Carmel River with the change from golf course to riparian woodland, the existing context of intense human use on the golf course, and the implementation of **Mitigation Measure BIO-23,** the addition of some residential cats and dogs will not result in an overall significant impact on wildlife.~~

Mitigation Measure BIO-19~~23~~: Install Signs Along and Within the Habitat Preserve about Restraining Dogs and Encouraging Cats to be Kept Inside

The Homeowners' Association (HOA), Monterey Peninsula Regional Park District, or other entity that will be responsible for maintenance of the habitat preserve will ensure that signs are

installed along and throughout the habitat preserve that contain the following information to educate pet owners about the potential impacts of dogs and cats on wildlife.

"*Please help minimize the harassment, injury, or mortality of wildlife by dogs and cats by following these measures.*

- *Dogs must be on leashes. Please keep control of your dog at all times.*
- *Please pick up after your dog.*
- *Recognize that keeping your cat inside keeps wildlife safe from cats and cats safe from wildlife."*

Chapter 3.4
Aesthetics

Introduction

This chapter provides a discussion of the aesthetics issues related to the Proposed Project ~~and the 130-Unit Alternative~~ in Carmel Valley. This chapter includes a review of existing conditions based on available literature, field surveys, and photo documentation; a summary of federal, state, and local policies and regulations related to aesthetics; and an analysis of direct and indirect environmental impacts of the project. Where feasible, mitigation measures are recommended to reduce the level of impacts.

Impact Summary

The aesthetic impacts from the Proposed Project ~~and 130-Unit Alternative~~ are summarized in **Table 3.4-1** below. As shown in **Table 3.4-1**, the Proposed Project ~~and 130-Unit Alternative~~ would have some significant impacts related to aesthetics within the project area. However, with the implementation of the mitigation measures described in this section, all of the impacts listed would be reduced to less-than-significant levels.

Table 3.4-1 Aesthetics Impact Summary

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
A. Visual Character and Quality				
AES-1: Changes in Visual Character due to the proposed Residential Use and Habitat Preserve	~~LTS~~	LTS	None Required	–
AES-2: Changes in Visual Quality due to Changes in Views from Adjacent Land Uses due to the Proposed Residential Use	~~Potentially Significant~~	Potentially Significant	AES-1: Implement Measures to Reduce Light and Glare, and Visual Intrusion to Surrounding Land Uses and Other Public Viewpoints	LTS
B. Scenic Vistas and Corridors				
AES-3: Changes in Views from Existing Scenic Vistas and Corridors	~~LTS~~	LTS	None Required	–

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
C. Light and Glare				
AES-4: Create a New Source of Light and Glare	~~Potentially Significant~~	Potentially Significant	AES-1: Implement Measures to Reduce Light and Glare, and Visual Intrusion to Surrounding Land Uses and Other Public Viewpoints	LTS

LTS = Less than Significant

Research Methods

Identification of a project area's existing visual resources and conditions involves three steps.

- Objective identification of the visual features (visual resources) of the landscape.
- Assessment of the character and quality of those resources relative to overall regional visual character.
- Determination of the importance to people, or sensitivity, of views of visual resources in the landscape.

The aesthetic value of an area is a measure of its visual character and quality, combined with the viewer response to the area (Federal Highway Administration 1983). The scenic quality component can best be described as the overall impression that an individual viewer retains after driving through, walking through, or flying over an area (U.S. Bureau of Land Management 1980). Viewer response is a combination of viewer exposure and viewer sensitivity. Viewer exposure is a function of the number of viewers, the number of views seen, the distance of the viewers, and the viewing duration. Viewer sensitivity relates to the extent of the public's concern for a particular viewshed. These terms and criteria are described in detail below.

Visual Character

Both natural and artificial landscape features comprise the character of an area or view. Visual character is influenced by a combination of geologic, hydrologic, botanical, wildlife, and urban features. Urban features include those associated with landscape settlements and development, including roads, utilities, structures, earthworks, and the results of other human activities. The perception of visual character can vary significantly seasonally and even hourly as weather, light, shadow, and the elements that comprise the viewshed change. The appearance of the landscape is described in terms of the dominance of these various features.

Judgments of visual character must be made based on a regional frame of reference (U.S. Soil Conservation Service 1978). The same landform or visual resource appearing in different geographic areas could have a different degree of visual quality and sensitivity in each setting. For example, a small hill may be a significant visual element on a flat landscape but have very little significance in mountainous terrain.

Viewer Response: Exposure and Sensitivity

Viewer response is the psychological reaction of a person to visible changes in the viewshed, and is based on the sensitivity and exposure of the viewer to a given viewshed. Sensitivity relates to the magnitude of the viewer's concern for a viewshed. Exposure is a function of the number of viewers, the type of view seen, and the distance, perspective, and duration of the view.

The measure of the quality of a view must be tempered with the overall sensitivity of the viewer. Viewer sensitivity or concern is based on the visibility of resources in the landscape, the proximity of viewers to the visual resource, the elevation of viewers relative to the visual resource, the frequency and duration of views, the number of viewers, and the type and expectations of individuals and viewer groups.

The importance of a view is related in part to the position of the viewer relative to the resource; therefore, visibility and visual dominance of landscape elements are dependent on their placement within the viewshed. A viewshed is defined as all of the surface area visible from a particular location (e.g., an overlook) or sequence of locations (e.g., a roadway or trail) (Federal Highway Administration 1983). To identify the importance of views of a resource, a viewshed must be broken into distance zones of foreground, middleground, and background. Generally, the closer a resource is to the viewer, the more dominant it is and the greater its importance to the viewer. Although distance zones in a viewshed may vary between different geographic regions or types of terrain, the standard foreground zone is 0.25 to 0.5 miles from the viewer, the middleground zone extends from the foreground zone to approximately 3 to 5 miles from the viewer, and the background zone extends from the middleground to infinity (USDA Forest Service 1974).

Visual sensitivity is dependent on the number and type of viewers and the frequency and duration of views. Visual sensitivity is also modified by viewer activity, awareness, and visual expectations in relation to the number of viewers and viewing duration. For example, visual sensitivity is generally higher for views seen by people who are driving for pleasure; people engaging in recreational activities such as hiking, biking or camping; and homeowners. Sensitivity tends to be lower for views seen by people driving to and from work or as part of their work (USDA Forest Service 1974, Federal Highway Administration 1983, U.S. Soil Conservation Service 1978). Commuters and non-recreational travelers have generally fleeting views and tend to focus on commute traffic and not on surrounding scenery, and therefore are generally considered to have low visual sensitivity. Residential viewers typically have extended viewing periods and are concerned about changes in the views from their homes; therefore, they generally are considered to have high visual sensitivity. Viewers using recreation trails and areas, scenic highways, and scenic overlooks are usually assessed as having high visual sensitivity.

Environmental Setting

Regional Visual Character

The project site is located in the Carmel Valley in northern Monterey County, which consists of a relatively flat valley bottom bounded to the north and south by the Coast Range Mountains, and drained by the Carmel River. Land on both sides of the valley includes open space and preserved areas, including Santa Lucia Preserve, Palo Corona Ranch Regional Park, Thomas Open Space,

Garland Ranch Regional Park, Jacks Peak County Park, and Hatton Canyon State Park. As these areas remain largely undeveloped, they tend to support a rich mosaic of oak forests, chaparral scrublands, grasslands, and riparian habitats, and are generally characterized by rolling hills and broad northwest-southeast trending valleys.

Overall, the developed landscapes of the region are comprised of rural residential development, various commercial uses that support the Valley's residents and visitors, and small-scale agricultural pursuits. Carmel Valley has traditionally been divided into three areas: the Lower Valley area, near State Route 1 (SR 1); Mid-Valley area, in the vicinity of Robinson Canyon Road; and Upper Valley area, in the vicinity of Carmel Valley Village. Higher residential densities are located near commercial centers and golf courses within the Lower, Mid- and Upper Valley areas, while lower density development predominately occurs elsewhere throughout the valley. Recreational land uses, including several golf and tennis facilities, occur throughout the valley at a variety of locations.

Several scenic routes link the Carmel Valley with other areas of the County. Carmel Valley Road, a proposed County scenic route and the principal arterial through the valley, extends from SR 1 to US Highway 101 (US 101), connecting to Salinas Valley in the east. Laureles Grade Road, another proposed County scenic route, connects Carmel Valley Road with State Route 68 (SR 68), which ultimately extends east to US 101 in Salinas and west to SR 1 in Monterey. SR 1, which traverses the lower end of Carmel Valley, provides a major coastal thoroughfare from Big Sur to Monterey. Portions of this route have been designated as a State Scenic Highway, including the portion in Monterey County that extends from the Carmel River north to SR 68.

Project Vicinity Visual Character

Rancho Cañada Golf Club is situated on approximately 270-acres of land near the mouth of the Carmel Valley, just east of the intersection of Carmel Valley Road and SR 1. The project site is located ~~on 81+ acres and the western area of the 130-Unit Alternative site is located~~ on approximately 76 ~~77~~ acres of the existing 18-hole West Course, which is bounded by a second 18-hole course to the east (the East Course), the Carmel River to the south, the residential areas to the west, and two public/quasi-public facilities—Community Church of Monterey Peninsula (Community Church) and Carmel Middle School—to the north. The existing site is composed of traditional golf course design features, such as fairways, sand bunkers, water hazards, and landscaped rough areas, with a number of distinctive natural elements forming the background to the site. ~~The 130-Unit Alternative's Lot 130 is on the northeastern area of the East Course. On Lot 130 there are maintenance facilities used for the golf course.~~

Entrance to the project site is gained via a two-lane road that connects to Carmel Valley Road approximately 1 mile east of its intersection with SR 1. The road extends due south for a short distance and then forks west toward the Community Church and east towards the Rancho Cañada Golf Club clubhouse. From the clubhouse, a paved golf cart path provides internal access to both the East and West Courses. Presently, entrance to the West Course cannot be gained from the west. This is principally due to an existing security gate and fence along the western border of the project site, which prohibits access from the residential areas to the west. In addition, an existing vegetated berm and buffer strip along the northern border of the project site hinders access to the site from the school and church properties to the north. ~~Lot 130 is accessible from Carmel Valley Road.~~

Due to being a relatively open and flat area, the Proposed Project ~~and 130-Unit Alternative~~ site~~s~~ permit<u>s</u> expansive views of Carmel Valley in all directions. Distinctive natural features include the

mature riparian woodland habitat associated with the Carmel River drainage corridor that borders the site to the south and the hills of the nearby Santa Lucia Range. Prominent topographic features include an unnamed, west-facing ridge that is girdled by an unpaved trail halfway up the slope, and two prominent ridgelines, Chamisal Ridge and the ridgeline associated with Saddle Mountain, which are visible further to the east. In general, the hills to the south of the project site are characterized by steep, undulating slopes separated by deep swales, while the northern side of the valley consists of gentle slopes traversed by narrow canyons. Much of the valley north of the project site consists of preserved open space; however, conspicuous residential development occurs on the hillside between Hatton and Martin Canyons, northwest of the project site. Other distinctive developed features within the viewshed of the project area include the buildings associated with the school and church to the north, ~~residences along Via Mallorca to the east of Lot 130,~~ and the residential areas located adjacent to Rio Road and Carmel Rancho Boulevard. In addition to these neighboring developments, a single, two-story yellow structure, presumably a residence, overlooks the site from the west, near Val Verde Drive.

Locations of photos and visual simulations prepared for this section are shown in **Figure 3.4-1**. Representative on-site views to the north, south, east, and west are shown in **Figures 3.4-2a** and ~~through~~ **3.4-2b**~~c~~.

Views of the Project Site from Adjacent Areas

Views of the project site from adjacent areas are shown in **Figures 3.4-3a** through **3.4-6.** The location of each photo is indicated in **Figure 3.4-1**.

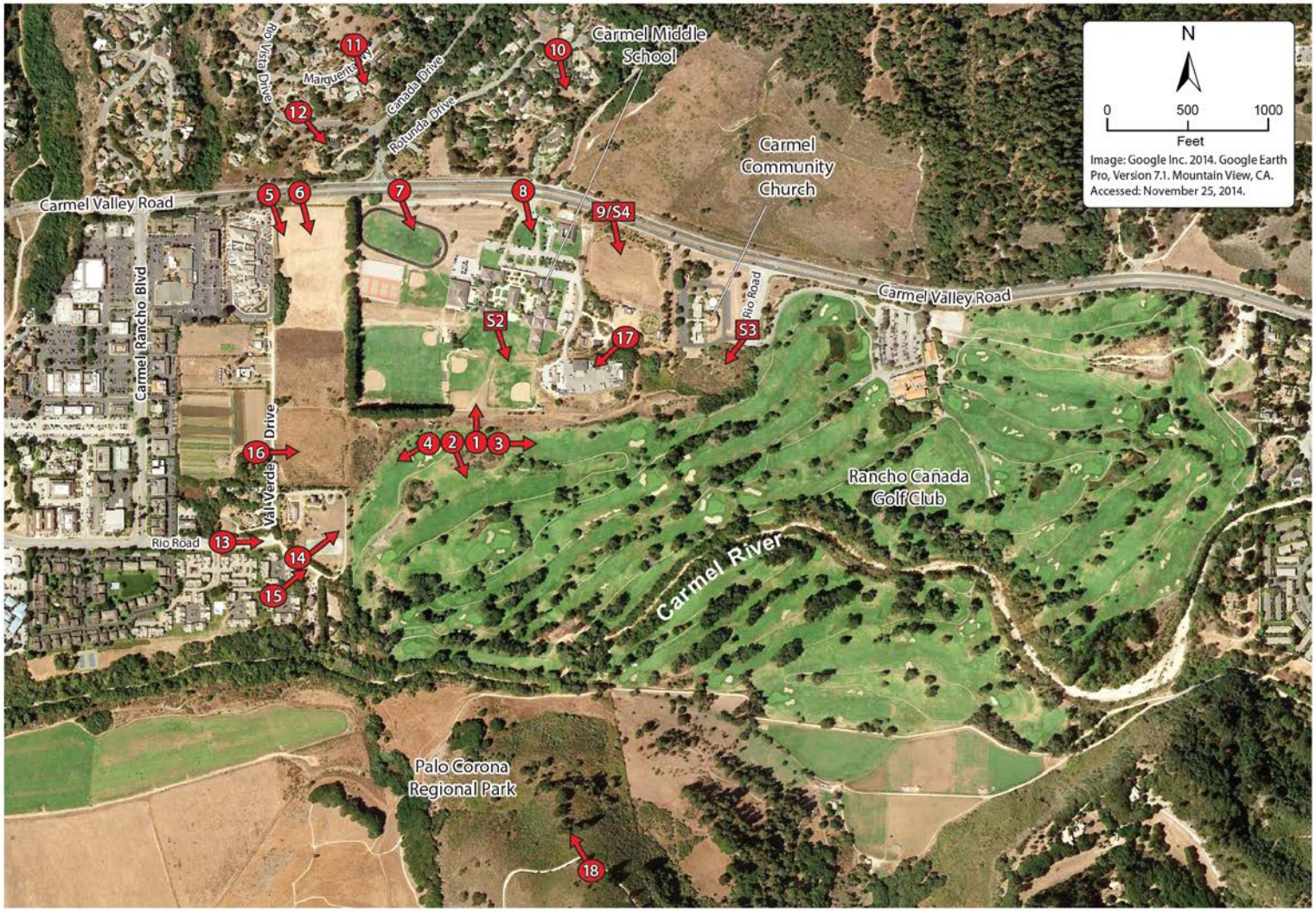
In general, views located in the project vicinity have foreground views of the site and background views of the upper valley ridgelines.

Views from Carmel Valley Road

Although Carmel Valley Road is located less than 1,000 feet from the proposed east entrance of the subdivision, the project site is generally obscured from vehicular traffic traveling east and west by foreground elements such as the school complex, church, and related landscaping. As with views from within the Rancho Cañada Golf Club, the existing fairway buffer vegetation limits middleground views of the site from Carmel Valley Road. As such, views from the roadway at best provide a distant glimpse into the project area. ~~Carmel Valley Road is immediately north of Lot 130 and views of the lot are moderately obscured from the road.~~

- Photo 5 ~~6~~ in **Figure 3.4-3a** shows the view southeast from Carmel Valley Road just east of the commercial areas along Carmel Rancho Boulevard. Vegetation in foreground and middle ground block views of the project site at this location.
- Photo 6 ~~7~~ in **Figure 3.4-3a** shows the view south-southeast from Carmel Valley Road a point between the "Welcome to Carmel Valley" sign and Carmel Middle School. The project site is visible in a small area in the center of the frame. Vegetation in middle ground blocks the remainder of the view of the project site at this location.

Figure 3.4-1 Photo and Simulation Locations



Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Figure 3.4-2a Representative Onsite Views (North-South)

Looking north (Photo 1)

Looking south (Photo 2)

Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Figure 3.4-2b Representative Onsite Views (East-West)

Looking east (Photo 3)

Looking west (Photo 4)

Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Figure 3.4-3a Views of Project Area from Carmel Valley Road

Photo 5.

Photo 6.

Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Figure 3.4-3b Views of Project Area from Carmel Valley Road

Photo 7.

Photo 8.

Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Figure 3.4-3c Views of Project Area from Carmel Valley Road

Photo 9.

Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Figure 3.4-4a Views of Project Area from Neighborhoods North of Carmel Valley Road

Photo 10.

Photo 11.

Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Figure 3.4-4b Views of Project Area from Neighborhoods North of Carmel Valley Road

Photo 12.

Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

- Photo 7 ~~8~~ in **Figure 3.4-3b** shows the view southeast from Carmel Valley Road at the Monterey-Salinas Transit (MST) bus stop west of the entrance to Carmel Middle School to the southwest. The project site is visible just to the right of the school buildings near the center of this frame. Vegetation to the west and school buildings to the east block the remaining views of the project site at this location. A block and mass simulation was prepared for this location and is discussed later in this section.
- Photo 8 ~~9~~ in **Figure 3.4-3b** shows the view south from Carmel Valley Road at the entrance to Carmel Middle School. The school buildings block views of the project site at this location.
- Photo 9 ~~10~~ in **Figure 3.4-3c** shows the view southeast from Carmel Valley Road east of the entrance to the Carmel Middle School across the school's Biological Sciences Project Area (also referred to as the "Hilton-Bialek Habitat"). The project site is visible in a small area just to the right of the greenhouse in the photo.
- ~~Photo 11 in **Figure 3.4-3c** shows the view southwest from Carmel Valley Road east of the entrance to the Rancho Cañada Golf Club, and the Community Church. The project site is visible in a small area in the center of the frame.~~
- ~~Photo 12 in **Figure 3.4-3d** shows the view of Lot 130 southeast from Carmel Valley Road on the far eastern edge of the project site. The top of the existing structure on Lot 130 is visible, but the rest of the project site view is obstructed by tall vegetation.~~

Views from Neighborhoods North of Carmel Valley Road

The Proposed Project ~~and the 130-Unit Alternative~~ would be visible from the neighborhood north of Carmel Valley Road that is north of the Carmel Middle School and is accessed by Rio Vista Drive. From the nearest neighborhood roadways, there are periodic views of the project site. Views from residences toward the site may be more or less apparent depending on house orientation and presence of vegetation.

- Photo 10 ~~13~~ in **Figure 3.4-4a** shows the view south from Rotunda Drive over Carmel Middle School toward Palo Corona Regional Park. The project site is in the center of the frame on the golf course.
- Photo 11 ~~14~~ in **Figure 3.4-4a** shows the view south-southeast from Marguerita Way Road over Carmel Middle School, the existing golf course to Palo Corona Regional Park. The project site in the center of the frame on the golf course behind the school buildings.
- Photo 12 ~~15~~ in **Figure 3.4-4b** shows the view southeast from Rio Vista Drive over Carmel Middle School, the existing golf course to the ridgelines east of Palo Corona Regional Park. The project site is left of the center of the frame on the golf course behind the school buildings.

Views from Neighborhoods and Commercial Areas West of the Project

The Rancho Cañada Golf Club and the portion of the golf course where the Proposed Project ~~and the 130-Unit Alternative~~ would be located are not visible from Rio Road west of the project site, but would be visible from Val Verde Drive and the adjacent residences and from a limited portion of the Riverwood Complex. The project site would be visible from the Rio Road west and the residences accessed via Rio Road west.

- Photo 13 ~~16~~ in **Figure 3.4-5a** shows the view east from the end of Rio Road. The project site is not readily visible from this location.

Figure 3.4-5a Views of Project Area from Area West of the Project

Photo 13.

Photo 14.

Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

- Photo 14 ~~17~~ in **Figure 3.4-5a** shows the view east from Rio Road west toward the project site. The Project would be visible from this location which is proposed to be paved as an extension of Rio Road. A block and mass simulation from this location was prepared and is discussed later in this section. There are two houses south of this levee that will have close views of the project site.
- Photo 15 ~~18~~ in **Figure 3.4-5b** shows the view northwest from within the Riverwood Complex. Although the project site is not visible in this photo, the Project residences (particularly the second stories) will be visible from this location.
- Photo 16 ~~19~~ in **Figure 3.4-5b** shows the view east from the private Val Verde Drive. The project site is readily visible from this location and from residences near this location. There are several commercial buildings west of Val Verde Drive along Carmel Rancho Boulevard that will have a similar view but at a longer range.

Views from Carmel Middle School and Community Church of the Monterey Peninsula

From Carmel Middle School, views of the project site tend to be expansive, with largely unobstructed foreground views of the site and background views of prominent Santa Lucia Range ridgelines to the south. A simulation of the view from Carmel Middle School (Simulation 3) is discussed later in this section

- Photo 17 ~~20~~ in **Figure 3.4-6** shows the view from the amphitheater in the Biological Sciences project area. The Project residences will be visible from the access trails leading to the amphitheater but will not be visible when seated.

The site is visible from the Community Church but is partially screened from view by an existing 4- to 5-foot-tall berm near the southern border of the church property. A simulation of the view from Rio Road east is discussed later in this section.

Views from the East Course of Rancho Cañada

From within the existing Rancho Cañada Golf Club, several fairways located on the northeastern portion of the East Course provide direct, although somewhat narrow, views of the project site. Views from this vantage point feature the site in the foreground and the ridgelines of the Lower Carmel Valley in the distant background. The remainder of the East Course provides only limited views of the site through occasional clearings in the vegetation. Visibility becomes progressively more difficult the further south one moves in relation to the project site. The predominant northwest-southeast orientation of the fairways buffer vegetation, which often consists of dense stands of mature trees, limits views beyond the immediate foreground in most places.

~~From within the existing Rancho Cañada Golf Club, several fairways located on the eastern portion of the East Course provide direct views of Lot 130. The views are slightly obstructed by existing vegetation. Refer to **Figure 3.4-2d**.~~

Figure 3.4-5b Views of Project Area from West of the Project

Photo 15.

Photo 16.

Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Figure 3.4-6 Other Views of Project Area

Photo 17.

Photo 18.

Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Views from Palo Corona Regional Park

The project site is visible from the main trail at Palo Corona Regional Park. Views of the project site from the trail from west to east include the following features: parkland and farmland, Carmel River, residential and commercial development west of the project site, open land along Val Verde Drive, Carmel Valley Road, neighborhoods north of Carmel Valley Road, the existing golf course, the Carmel Middle School, and the Community Church.

- Photo 18 ~~21~~ in **Figure 3.4-6** shows the view northwest from the main trail on Palo Corona Regional Park at the nearest point to the project site. The Project would be visible from this location which is open to the public (via a permit process) presently. The project site is in the center of the frame on the golf course.

Regulatory Setting

This section discusses the federal, state, and local policies and regulations that are relevant to the analysis of aesthetics in the project area being considered by Monterey County.

Federal Policies and Regulations

There are no specific federal regulations that apply to the aesthetic resources associated with this project.

State Policies and Regulations

California Department of Transportation

State Scenic Highway Program

California's Scenic Highway Program was created by the California State Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes on the traveler's enjoyment of the view. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation (Caltrans) for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a Scenic Highway. For the purpose of visual resource protection, this analysis shall treat eligible roadways with the same status as officially designated roadways (California Department of Transportation 1996).

One designated scenic highway is within the vicinity of the Proposed Project: the portion of SR 1 that extends from the Carmel River to SR 68 in Monterey County. The route passes over a series of rolling hills, permitting views of Carmel-by-the-Sea, the Carmel River Valley, Point Lobos, and the Pacific Ocean.

Local Policies and Regulations

The Proposed Project ~~and the 130-Unit Alternative~~ site is ~~are~~ located in a presently unincorporated area of Monterey County, where it occurs within the plan area boundaries of the 2013 Carmel Valley Master Plan (CVMP). The Proposed Project is therefore subject to the goals, policies, and objectives set forth in the 2010 Monterey County General Plan (General Plan), and the 2013 CVMP. A discussion of the individual plans and policies that apply to the Proposed Project ~~and the 130-Unit Alternative~~ is included below.

Current County Plans and Policies

2010 Monterey County General Plan

The 2010 General Plan presents goals and policies that guide the general distribution and intensity of land uses, including residential, agricultural, commercial and industrial, public facilities, and open space uses, for lands in the County outside the Coastal Zone (Monterey County 2010). The following General Plan policy is relevant to aesthetics and visual resources.

Policy OS-1.2: Development in designated visually sensitive areas shall be subordinate to the natural features of the area.

2013 Carmel Valley Master Plan

The 2013 CVMP was enacted as part of the 2010 General Plan and is intended to guide future land use within the 2013 CVMP plan area boundary. Specifically the plan area boundary is defined as "the primary watershed of the Carmel River from SR 1 to just east of Carmel Valley Village, except for the upper reaches of Garzas Creek and Robinson Canyon" (Monterey County 2010). Visual policies in the 2013 CVMP support the County's overall goal of preserving the "rural residential" character of the valley. They include the following:

Policy CV-1.3. Open space uses shall be located between the development areas in order to clearly define them and maintain a distinction between the more rural and more suburban areas of the valley. Small and large open space areas should be created with preference given to those that add open space to existing open space areas.

Policy CV-1.8. Cluster development:

a. must meet the objectives of the Master Plan.

b. shall be used to protect visible open space in sensitive visual areas or to protect natural resources.

Policy CV-1.9. Structures proposed in open grassland areas that would be highly visible from Carmel Valley Road or Laureles Grade shall be minimized in number and be clustered near existing natural or man-made vertical features.

Policy CV-1.20. Design ("D) and site control ("S") overlay district designations shall be applied to the Carmel Valley area. Design review for all new development throughout the Valley, including proposals for existing lots of record, utilities, heavy commercial, and visitor accommodations, but excluding minor additions to existing development where those changes are not conspicuous from outside of the property, shall consider the following guidelines:

a. Proposed development encourages and furthers the letter and spirit of the Master Plan.

b. Development either shall be visually compatible with the character of the valley and immediate surrounding areas or shall enhance the quality of areas that have been degraded by existing development.

c. Materials and colors used in construction shall be selected for compatibility with the structural system of the building and with the appearance of the building's natural and man-made surroundings.

d. Structures should be controlled in height and bulk in order to retain an appropriate scale.

e. Development, including road cuts as well as structures, should be located in a manner that minimizes disruption of views from existing homes.

f. Minimize erosion and/or modification of landforms.

g. Minimize grading through the use of step and pole foundations.

2010 Greater Monterey Peninsula Area Plan

The *Greater Monterey Peninsula Area Plan* (GMPAP) provides supplemental policies that apply to the inland areas, including the Project site. According to GMPAP Figure 14, *Scenic Highway Corridors & Visual Sensitivity*, the Project site is located within the view of a proposed scenic route, and is located within a visually sensitive area (Monterey County 2010). The following GMPAP policies are relevant to aesthetics and visual resources.

Policy GMP-1.4: Development proposals shall include compatible open space uses located between other developed areas in order to maintain a rural atmosphere and to protect scenic resources.

Policy GMP-1.5: Open space, low intensity educational, and recreational uses shall be considered to be appropriate and compatible land uses in environmentally sensitive areas and areas of high visual sensitivity.

Policy GMP-3.1: The County shall encourage creative public and private efforts to restore the scenic beauty of visually impacted common public viewing areas.

Policy GMP-3.3: The Greater Monterey Peninsula Scenic Highway Corridors and Visual Sensitivity Map (Figure 14) shall be used to designate visually "sensitive" and "highly sensitive" areas generally visible from designated Scenic Highways. The following policies shall apply to areas that have one of these designations:[1]

a. All areas designated as "sensitive" or "highly sensitive" shall be interpreted within the meaning of this policy and are to be protected.

b. Landowners will be encouraged to dedicate scenic easements to an appropriate agency or non-profit organization over portions of their land shown as "sensitive" or "highly sensitive" on the Map.

e. New development to be located in areas mapped as "sensitive" or "highly sensitive" and which would be visible from a designated scenic route shall maintain the visual character of the area. In order to adequately mitigate the visual impacts of development in such areas, the following shall be required:

1. Development shall be rendered compatible with the visual character of the area using appropriate siting, design, materials, and landscaping;

[1] The Monterey County Zoning Ordinance, Section 21.06.195, defines a "common public viewing area" as a public area such as a street, road, designated vista point, or public park from which the general public ordinarily views the surrounding viewshed.

2. Development shall maintain no less than a 100-foot setback from the scenic route right-of-way;
3. The impact of any earth movement associated with the development shall be mitigated in such a manner that permanent scarring is not created;
4. Tree removal shall be minimized;
5. Landscape screening and restoration shall consist of locally native plant and tree species consistent with surrounding native vegetation;
6. Architectural review of projects shall be required to ensure visual compatibility of the development with the surrounding area; and
7. New development in open grassland areas shall minimize its impact on the uninterrupted viewshed.

Exceptions to the above may be considered if compelling circumstances are demonstrated. In cases where the extent of visibility of development proposed in "highly sensitive" areas is not clear, individual on-site investigations by the Planning Department staff shall be required.

Policy GMP-3.4: Plant materials shall be used to integrate manmade and natural environments, to screen or soften the visual impact of new development, and to provide diversity in developed areas.

Prior County Plans and Policies

The prior relevant County Land Use Plans are presented here for informational purposes only.

1982 Monterey County General Plan

The County's 1982 General Plan, which was first adopted by the County Board of Supervisors (Board) in 1982, addresses all aspects of future growth, development, and conservation throughout the unincorporated areas of Monterey County. The 1982 General Plan contains visual resource policies intended to preserve the County's scenic and rural character. As stated in Chapter 1, *Introduction*, discussion pertaining to the 1982 General Plan is provided for informational purposes only.

Policy 26.1.6: Development which preserves and enhances the County's scenic qualities shall be encouraged.

Policy 26.1.9: In order to preserve the County's scenic and rural character, ridgeline development shall not be allowed unless a special permit is first obtained. Such permit shall only be granted upon findings being made that the development as conditioned by permit will not create a substantially adverse visual impact when viewed from a common public viewing area. New subdivisions shall avoid lot configurations which create building sites that will constitute ridgeline development. Siting of new development visible from private viewing areas, may be taken into consideration during the subdivision process.

Policy 26.1.20. All exterior lighting shall be unobtrusive and constructed or located so that only the intended area is illuminated, long range visibility is reduced, and offsite glare is fully controlled.

Policy 40.2.1. Additional sensitive treatment provisions shall be employed within the scenic corridor, including placement of utilities underground, where feasible; architectural and landscape controls; outdoor advertising restrictions; encouragement of area native plants,

especially on public lands and dedicated open spaces; and cooperative landscape programs with adjoining public and private open space lands.

Policy 40.2.2. Land use controls shall be applied or retained to protect the scenic corridor and to encourage sensitive selection of sites and open space preservation. Where land is designated for development at a density which, should maximum permissible development occur, would diminish scenic quality, the landowner shall be encouraged to voluntarily dedicate a scenic easement to protect the scenic corridor.

1986 Carmel Valley Master Plan

The 1986 CVMP was enacted as part of the 1982 General Plan and is intended to guide future land use within the 1986 CVMP plan area boundary. Specifically the plan area boundary is defined as "the primary watershed of the Carmel River from SR 1 to just east of Carmel Valley Village, except for the upper reaches of Garzas Creek and Robinson Canyon" (Monterey County 1986). Visual policies in the 1986 CVMP support the County's overall goal of preserving the "rural residential" character of the valley. As stated in Chapter 1, *Introduction*, discussion pertaining to the 1986 CVMP is provided for informational purposes only.

Policy 26.1.21. It is intended that Carmel Valley remain rural residential in character.

Policy 26.1.24. Every attempt should be made to minimize hillside scarring by avoiding cuts and fills where possible and where cuts and fills are unavoidable, by creating slopes that shall be revegetated. Permanent non-revegetated scarring of hillsides is strongly discouraged and should occur only if no other reasonable alternative is available.

Policy 26.1.25. The visible alteration of natural landforms caused by cutting, filling, grading, or vegetation removal shall be minimized through sensitive setting and design of all improvements and maximum possible restoration including botanically appropriate landscaping.

Policy 26.1.26. Development either shall be visually compatible with the character of the valley and immediate surrounding areas or shall enhance the quality of areas that have been degraded by existing development.

Policy 26.1.28. Structures located in open grassland areas where they would be highly visible from Carmel Valley Road and Laureles Grade Road shall be minimized in number and clustered near existing natural or man-made vertical features.

Policy 26.1.31. Materials and colors used in construction shall be selected for compatibility with the structural system of the building and with the appearance of the buildings natural and man-made surroundings.

Policy 26.1.32. Development should be located in a manner that minimizes disruption of views from existing homes. This applies to road cuts as well as structures.

Policy 40.1.1.1. County Scenic Route status shall be sought for Carmel Valley Road.

Policy 40.2.1.1. An appropriate setback of 100 feet shall be established along Carmel Valley Road without causing existing structures to become non-conforming and without rendering existing lots of record unbuildable.

1984 Greater Monterey Peninsula Area Plan

The GMPAP is one of eight non-coastal area of the County for which "Area Plans" are required. The GMPAP is more specific than the General Plan, as its policies are more precisely adapted to its area of focus than are the more general policies of the General Plan.

Figure 10 of the GMPAP depicts areas of visual sensitivity in northwestern Monterey County, from the Big Sur Coast and Cachagua planning areas in the south to the Greater Salinas planning area in the north. These areas are as shown in **Figure 3.4-7**. The project site, as shown in **Figure 3.4-7**, is located in a visually sensitive area and the ridge to the south is considered highly sensitive. Similarly to the 1982 General Plan, discussion associated with the 1984 GMPAP is for informational purposes only. Specific policies regarding visual sensitivity include:

Policy 1.1.3. The County shall take comprehensive measures to ensure protection of sensitive scenic areas as shown on the Greater Monterey Peninsula Visual Sensitivity Map. Implementing policies are located in the transportation section of this plan.

Policy 26.1.9.1. Development on canyon edges and hilltops shall be designed to minimize the visual impact of the development.

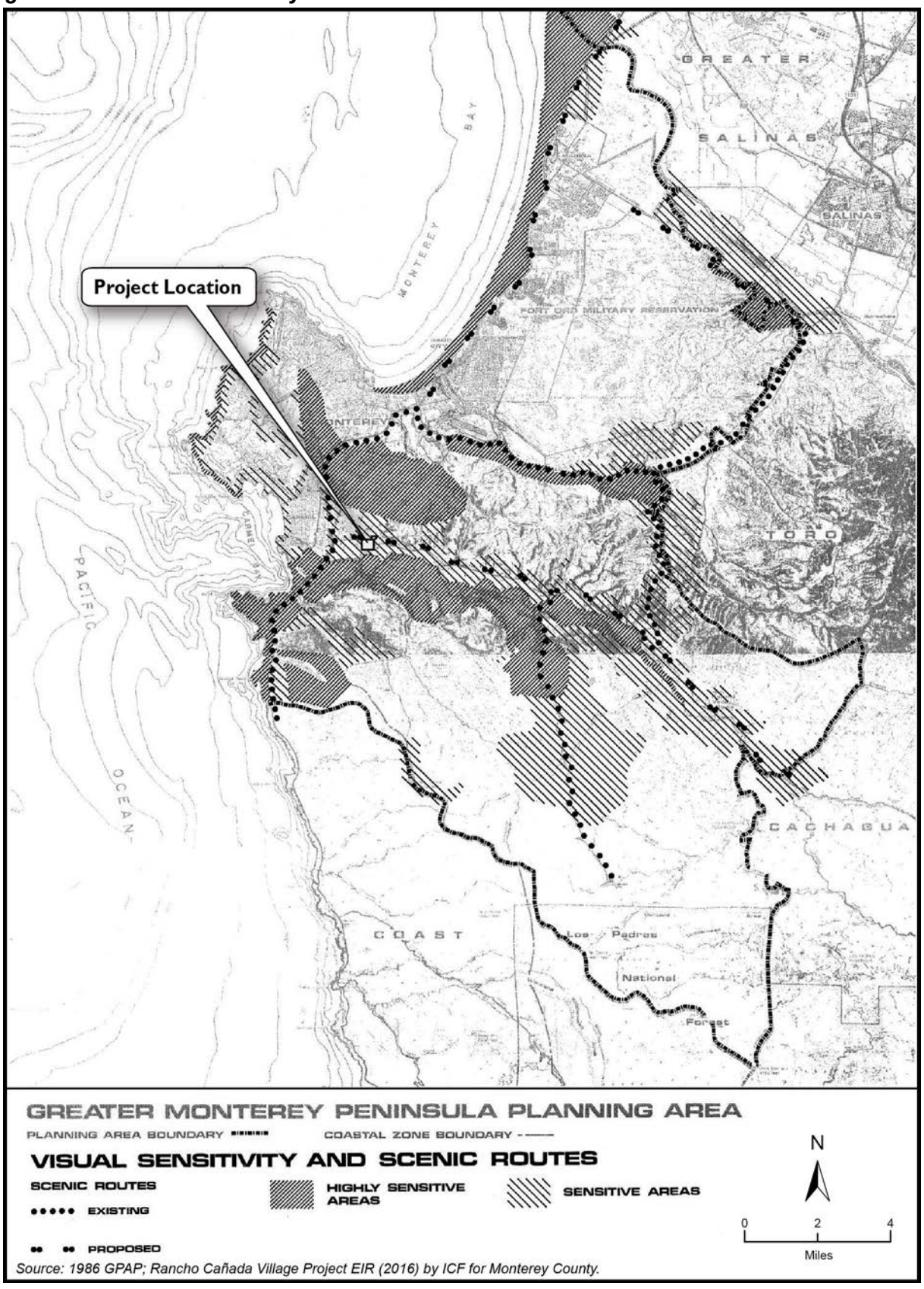
Policy 40.2.6. Areas shown as "highly sensitive" on the Greater Monterey Peninsula Visual Sensitivity Map should be preserved as open space to the maximum extent possible through scenic easements or, if necessary, fee acquisition.

Policy 40.2.7. New development should not be sited on those portions of property which have been mapped as "highly sensitive." Where exceptions are appropriate to maximize the goals, objectives and policies of this plan, development shall be sited in a manner which minimizes visible effects of proposed structures and roads to the greatest extent possible and shall utilize landscape screening and other techniques to achieve maximum protection of the visual resource.

Policy 40.2.9. New development to be located in areas mapped as "sensitive" or "highly sensitive" and which will be visible from the scenic route shall maintain the visual character of the area. In order to adequately mitigate the visual impacts of development in such areas, the following shall be required:

- Development shall be rendered compatible with the visual character of the area using appropriate siting, design, materials, and landscaping;
- Development shall maintain no less than a 100' setback from the scenic route right-of-way;
- The impact of any earth movement associated with the development shall be mitigated in such a manner that permanent scarring is not created;
- Tree removal shall be minimized;
- Landscape screening and restoration shall consist of plant and tree species consistent with surrounding native vegetation;
- Architectural review of projects shall be required to ensure visual compatibility of the development with the surrounding area; and
- New development in open grassland areas shown as "sensitive" or "highly sensitive" on the Visual Sensitivity Map should minimize its impact on the uninterrupted viewshed.

Figure 3.4-7 Visual Sensitivity



Source: 1986 GPAP; Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Impact Analysis

Methods of Analysis

Assessment of the aesthetics impacts of the Proposed Project ~~and 130-Unit Alternative~~ are based on the following methods.

- Direct field observation from vantage points, including neighboring buildings, property, and roadways
- Photographic documentation of key views of and from the project site, as well as regional visual context.
- Review of Project construction drawings.
- Review of the Project in regard to compliance with state and local ordinances and regulations pertaining to visual quality.

Analysis of the Proposed Project takes into account the *Rancho Cañada Village Pattern Book* (Pattern Book) (**Appendix B**) which includes architectural design standards that govern the style, height, massing, composition, materials, and colors of new buildings; design standards that restrict the use of certain landscape materials, upgrade accessories, and ornamental plant species; and site development standards that guide the construction of roads, drives, sidewalks, and bike lanes; the placement of utilities; and the size and spacing of home lots. Discussion of specific development standards is included with the discussion of potential impacts and mitigation measures later in this chapter.

~~Analysis of the 130-Unit Alternative takes into account the development standards and the design guidelines proposed for this alternative as described in Chapter 2, *Project Description*.~~

Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, and the 2010 General Plan plans and policies, the 2013 CVMP plans and policies, the 2010 GMPAP plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

A. Visual Character and Quality

- Substantially degrade the existing visual character or quality of the site and/or surrounding area, result in ridgeline development, or be incompatible with the development scale and style of the surrounding area.

B. Scenic Vistas and Corridors

- Have substantial adverse effects on a scenic vista, public viewing area, or view corridor, including obstructing or obscuring public views or visually prominent areas;
- Result in removal of or damage to scenic resources, including but not limited to trees, rock outcrops, historic buildings, or natural landforms such as waterways along a state scenic highway or County-designated scenic roadway; or

- Result in visible alteration of sensitive natural landforms caused by cutting, filling, grading, or vegetation removal.

C. Light and Glare

- Create a new source of substantial light or glare that would adversely affect daytime or nighttime views or activities in the area or pose a nuisance.

Impacts and Mitigation Measures

A. Visual Character and Quality

Impact AES-1: Changes in Visual Character due to Proposed Residential Use and Habitat Preserve (less than significant)

~~**Proposed Project**~~

Approximately 130 residential units would be developed on the approximately 76-acre site, with the approximately 51 acres of open space (approximately 40 acres of habitat preserve, approximately 2 acres of open space, and approximately 11 acres of common area). Implementation of the Project would change the visual character of the project area by converting approximately 76 acres of the West Course of Rancho Cañada Golf Club from a recreational use to residential uses and a habitat preserve. Although the Project would be generally consistent with visual resource policies of the 2010 General Plan, and the 2013 CVMP, the conversion from a recreational use to a developed residential use would constitute a noticeable change in the visual character of the area.

~~Approximately 281 residential units on 42 acres would be developed on the 81-plus acre site, with the remaining 39 acres retained as open space (31 acres of which would be restored as described in applicant's proposed 2006 Restoration Plan). Implementation of the Proposed Project would change the visual character of the project site by converting approximately 42 acres of the existing West Course of Rancho Cañada Golf Club from a recreational use to a residential use and a habitat preserve. Although the Project would be generally consistent with visual resource policies of the 2010 General Plan, the 2010 GMPAP, and the 2013 CVMP, the conversion from a recreational use to a developed condition would constitute a noticeable change in the visual character of the area.~~

The proposed residential units would be located on the valley floor at or near the existing grade and would not result in ridgeline development. In accordance with Policy CV-1.9 of the 2013 CVMP, which states that development in grassland areas visible from Carmel Valley Road or Laureles Grade should be "minimized in number and be clustered near existing natural or man-made vertical features," the proposed development would be generally obscured from the roadway viewshed by existing development and landscaped features in the immediate foreground. The Project would also be located adjacent to an existing residential development on Rio Road.

The Proposed Project building height limitations and limitations on the number of stories for each proposed land use type is summarized in **Table 3.4-2**. The maximum number of stories is two and the maximum building height is 24 ~~35~~ feet.

Table 3.4-2. Summary of Proposed Project Height Limits

Land Use Categories	Description	Permitted Number of Stories	Maximum Dimension Between finished 1st and 2nd floor elevations	Maximum building height above finished 1st floor elevation
RL (detached single-family)	Residential Low	1 story	12 feet	20 feet
RM (detached single-family)	Residential Medium	2 stories	12 feet	35 feet
RM (detached townhouse)	Residential Medium	2 stories	12 feet	35 feet
P	Parks	1 story	n/a	25 feet
OS	Open Space	1 story	n/a	25 feet

A Pattern Book (**Appendix B**) has been prepared for the Project that establishes minimum standards for the intended neighborhood character, house designs, and landscape elements. The design guidelines contained in the Pattern Book include community patterns, which set standards for how buildings are sited on the various lot types; architectural patterns, which establish design guidelines for the prescribed architectural styles; and landscape patterns, which provide guidelines for individual landscaping on lots.

The Pattern Book includes three architectural styles for Rancho Cañada Village: Central Coast Craftsman, Carmel Valley Farmhouse, and Monterey Revival. The Pattern Book also includes a variety of lot types, including townhouse, cottage, meadow, valley and preserve lots. Most of these lots have rear lane accessed parking with continuous front yard landscaping. Lot types are mixed throughout the community. **Table 3.4-3** provides a summary of lot specifications for each of the lot types included in the proposed project.

The Project design would result in a mixture of residences and open space to retain a semi-rural character. The gross density of the Project would be 1 to 5 ~~less than 4~~ units per acre. ~~Within the residential area, the overall density would be between 6 and 7 units per acre, similar to the approximately 25-acre area along the south side of Rio Road west of the project site, which has a zoned density of just over 5–20 units per acre in the 2013 CVMP.~~ Approximately 38 ~~39~~ acres would be dedicated to open space. Although development would be visible from some of the adjacent residential areas, Carmel Middle School, and the Community Church, the Proposed Project contains design measures to assure the development would be sensitively designed and sited and be visually compatible with the development scale and style of the surrounding area (Note: Impacts on views from adjacent areas are addressed under Impact AES-2 and AES-3 separately below).

~~The open space would be located primarily in the southern portion of the site and would continue to preserve the existing natural riparian woodland vegetation that grows along the Carmel River. By creating a habitat preserve, in which the existing artificially wooded landscape would be partially restored to an open grassland area, the Project would serve to enhance the visual character and quality of the open space environment and would thus conform to Policy CV-1.20 of the 2013 CVMP which state that development should be "visually compatible with the character of the valley and immediate surrounding areas or shall enhance the quality of areas that have been degraded by existing development."~~

Table 3.4-3. Summary of Lot Specifications

		Lot Size		Setbacks					
Lot Type	Uses	Width (feet)	Depth (feet)	Front (feet)	Side St. (feet)	Side Yard (feet)	Rear (feet)	Off-Street Parking	Encroachments
Townhouse Lots	Attached Single-Family Residential	18 to 30	80	5 to 15	5 to 10	n/a	5 min	2 spaces	Porches and or Bay Windows, 2 into the Front Yard and Side Street Setback Zone.
Cottage Lots	Single-Family Residential	30 to 35	80	5 to 15	5 to 15	4	5 min	2 spaces	Porches and/or Bay Windows, 2 into the Front Yard and Side Street Setback Zones.
Meadow Lots	Single-Family Residential	40 to 45	100	5 to 20	5 to 15	5	5 min	2 spaces min	Porches and/or Bay Windows, 2 into the Front Yard and Side Street Setback Zones.
Valley Lots	Single-Family Residential	50 to 55	100	10 to 25	5 to 15	5	5 min	2 spaces min	None permitted
Preserve Lots	Single-Family Residential	55	100	10 to 20	n/a	5	10 to 20	2 spaces min	None Permitted

Source: Rancho Cañada Village Pattern Book (**Appendix B**)
min = minimum

~~Therefore, the Project is not considered to substantially degrade the existing visual character or quality of the site or surrounding area, result in ridgeline development or be incompatible with the development scale and style of the surrounding area; thus, this impact would be *less than significant.* No mitigation is required.~~

~~**130-Unit Alternative**~~

~~Approximately 130 residential units would be developed on the 83-acre site, with the 53 acres of open space (39 acres of habitat preserve, 2 acres of open space, and 12. acres of common area). Implementation of the 130-Unit Alternative would change the visual character of the project area by converting approximately 78 acres (excludes 4 acres for Lot 130) of the existing West Course of Rancho Cañada Golf Club from a recreational use to residential uses and a habitat preserve. Additionally, the 130-Unit Alternative proposes to construct one of the housing units on Lot 130, the easternmost lot of the 130-Unit Alternative site. As previously mentioned, Lot 130 is developed with a golf course maintenance facility. Although the 130-Unit Alternative would be generally consistent with visual resource policies of the 2010 General Plan, and the 2013 CVMP, the conversion from a recreational use to a developed condition would constitute a noticeable change in the visual character of the area.~~

~~Similar to the Proposed Project, the residential units would be located on the valley floor at or near the existing grade and would not result in ridgeline development. In accordance with Policy CV-1.9 of the 2013 CVMP, which states that development in grassland areas visible from Carmel Valley~~

~~Road should be "clustered near existing natural or man-made vertical features," the 130-Unit Alternative development would be generally obscured from the roadway viewshed by existing development and landscaped features in the immediate foreground. The 130-Unit Alternative would also be located adjacent to an existing residential development on Rio Road. The maximum number of stories is two and the maximum building height is 24 feet.~~

~~The 130-Unit Alternative design would result in a mixture of residences and open space to retain a semi-rural character. The gross density of the 130-Unit Alternative development would be 1 to 5 units per acre. Approximately 53 acres would be dedicated to open space. Although development would be visible from some of the adjacent residential areas, Carmel Middle School, and the Community Church, the 130-Unit Alternative contains property development standards to assure the development would be sensitively designed and sited and be visually compatible with the development scale and style of the surrounding area (Note: Impacts on views from adjacent areas are addressed under Impact AES-2 and AES-3 separately below).~~

~~Similar to the Proposed Project, the open space would be located primarily in the southern portion of the site and would continue to preserve the existing natural riparian woodland vegetation that grows along the Carmel River. The 130-Unit Alternative would serve to enhance the visual character and quality of the open space environment and would thus conform to Policy CV-1.20 of the 2013 CVMP which states that development should be "visually compatible with the character of the valley and immediate surrounding areas or shall enhance the quality of areas that have been degraded by existing development."~~

~~Therefore, the 130-Unit Alternative is not considered to substantially degrade the existing visual character or quality of the site or surrounding area, result in ridgeline development, or be incompatible with the development scale and style of the surrounding area and thus this impact would be *less than significant.* No mitigation is required.~~

Impact AES-2: Changes in Visual Quality due to Changes in Views from Adjacent Land Uses (less than significant with mitigation)

~~**Proposed Project**~~

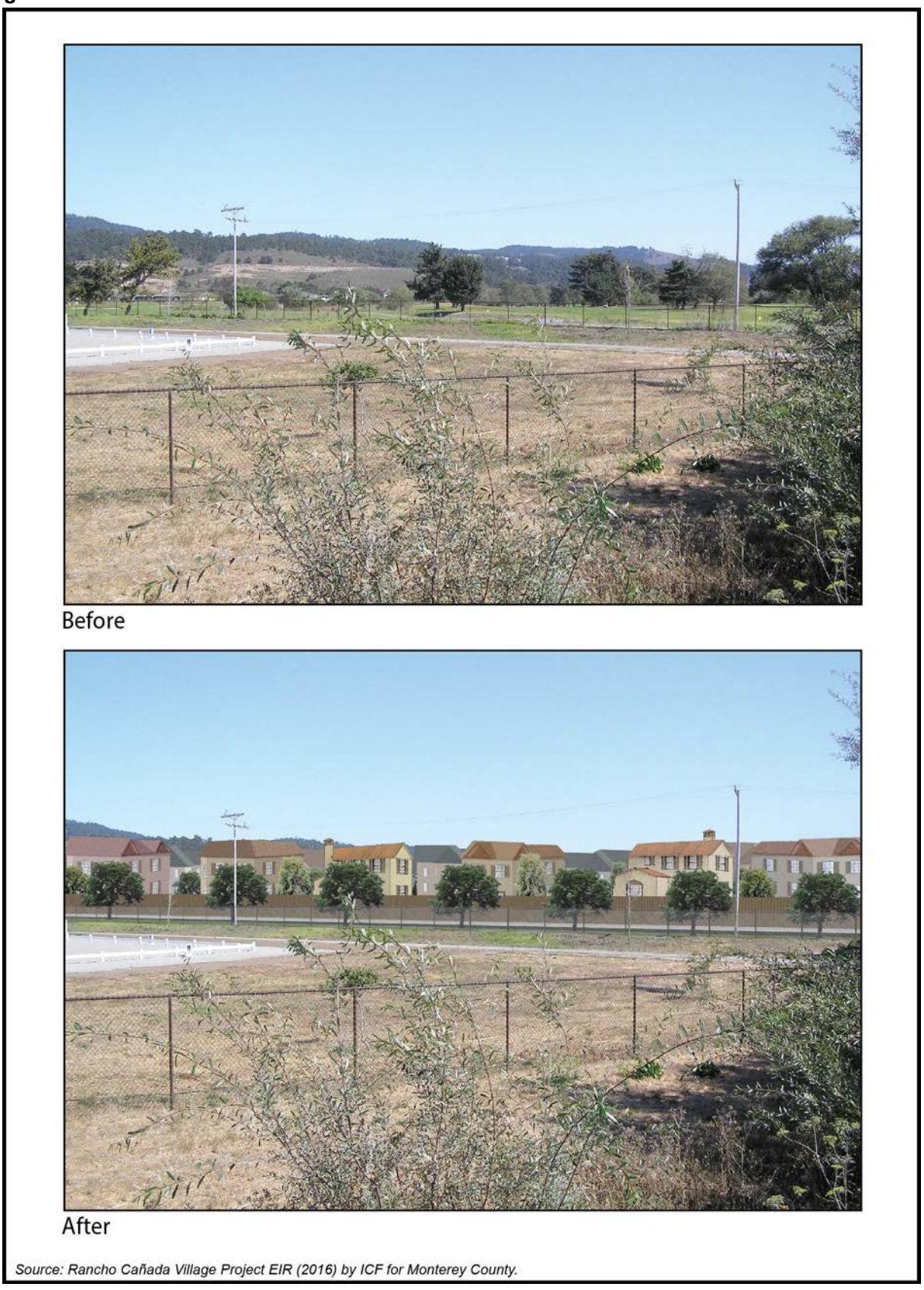
Development within the new subdivision would be visible from a number of adjacent land uses including public roads and private residences to the north, a future public roadway and private residences to the west, and Carmel Middle School and the Community Church to the north and northeast. Views from public scenic vistas and corridors are addressed separately in Impact AES-3.

Existing vegetation would screen some of the views from adjacent areas. However, less obscured views from public and private viewpoints and roadways located north, west, and south of the site would be affected. These affected views are discussed below.

Existing views from adjacent areas are shown in **Figures 3.4-2a** through **3.4-6**. Visual simulations of views from three viewpoints adjacent to the project site (see **Figure 3.4-1** for a viewpoint location map) are shown in **Figures 3.4-8** through **3.4-10**. These simulations are intended to generally illustrate the character of the development's block and mass from adjacent areas and only roughly reflect the architectural styles presented in the Pattern Book (**Appendix B**).

The response of various viewer groups to the Proposed Project would vary in accordance with the types of activities they engage in and the overall frequency and duration of their views.

Figure 3.4-8 Block/Mass Simulations #1 from Rio Road West



Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Figure 3.4-9 Block and Mass Simulations #2 from Carmel Middle School

Before

After

Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Figure 3.4-10 Block/Mass Simulations #3 from Rio Road/Community Church

Before

After

Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Views from North of Carmel Valley Road

As shown in **Figures 3.4-4a-b**, the Project would be visible from some portions of the public roads north of Carmel Valley Road and from residences in this neighborhood. The prominence of the views of the project site will depend on roadway and house orientation and the presence of intervening vegetation. However, the new Project residences would appear as additional buildings within the context of the existing school and church buildings and other residences and would not block views of the ridgelines to the south of the project site. Given the presence of existing development, the elevated nature of views from this neighborhood (which provides unbroken views of the ridgelines south of the Carmel River), and the absence of ridgeline view blockage as a result of the project, impacts on views from the public roads and neighborhoods north of Carmel Valley Road would be *less than significant.* No mitigation is required.

Views from West of the Project Area

As shown in **Figures 3.4-5a-b**, there are no current unobstructed views from public roads or public areas west of the Project to the project site. The Rio Road west proposed extension area is on private land and vegetation blocks views from Rio Road. However, with the project, Rio Road is proposed to be extended, at which point it would be a public road.

Some of the residences west of the project site have private views to the northeast and east that would be affected by the proposed development. The Project would be apparent to the two residences accessed from Rio Road west and to the residents who live on the east side of the Riverwood Complex. The Project would also be apparent to residents along Val Verde Drive.

Figure 3.4-8/Simulation 1 shows a view from the Rio Road west where Rio Road would be extended. As shown, at this location the view would change from views of the golf course and its landscaping and the hills north of Carmel Valley Road to a view of residential landscaping and houses.

Similarly, the Proposed Project would change portions of the views to the east for some residents in the Riverwood Complex and along Val Verde Drive. The Project would also change the southern part of the West Course to a habitat preserve. This may be apparent to the two residences south of the Rio Road west, but would not be apparent from other residences. Views of the hills to the south of the Carmel River would be unimpeded for residents in this area. The Project would be providing a trail to the habitat preserve where views of the northern and southern hills would be readily apparent. The Project would not affect views along Rio Road of the southern hills or of the Carmel River as the Project is not located between Rio Road and these visual features.

Given the intrusion of new residential buildings into the existing view that would substantially change the visual quality of the views from a future public road, and the substantive change in the nature of the private views (particularly for residences along Val Verde Drive, the Project impact on views from west of the project area would be *potentially significant*. Implementation of **Mitigation Measure AES-1** would reduce this impact to a *less-than-significant* level.

The Project would also be apparent from some of the commercial buildings along Carmel Rancho Boulevard. However, commercial offices users are not considered sensitive viewers due to the nature of activity pursued in office and other commercial settings and thus impacts to commercial views would be *less than significant.* No mitigation is required.

Views from Carmel Middle School and Community Church of Monterey Peninsula

Viewers at the Carmel Middle School and the Community Church would be adversely affected by the project, as the development would introduce new visual elements into the foreground of existing views.

Figure 3.4-9/Simulation 2 shows the view from the playground at the Carmel Middle School. The project would change views from a golf course to that of a residential subdivision. The Project would also block views of the toe of the hills to the south of the Carmel River, but would not block views of the majority of the ridgelines of Palo Corona Regional Park. The Project would also provide opportunities for the students at Carmel Middle School to use the trail to the park where views of the northern and southern hills would be readily apparent.

Figure 3.4-10/Simulation 3 shows the view from Rio Road east near the turn to the Community Church. The Project would partially change views by introducing new residential buildings. The Project would block view of the lower part of the hills to the south, but would not block views of the upper part of the hills and the ridgelines.

Given the intrusion of new residential buildings into the view that would change the visual quality of the views from these locations, the number of viewers (students and public users of school facilities and church members) affected, the Project impact on views from the school, church and Rio Road east would be *potentially significant*. Implementation of **Mitigation Measure AES-1** would reduce this impact to a *less-than-significant* level.

Views from the Rancho Cañada East Course

Golfers using the East Course would have a moderate sensitivity to visual changes because their line-of-sight would shift frequently as a result of golfing activity to take into account the adjacent Carmel River and the north and south hills of Carmel Valley. In addition the Project would create a habitat preserve adjacent to the east course which would enhance the natural adjacent aesthetic for portions of the golf course. Due to the existing pattern of vegetation on the East Course, which would continue to screen views of the project site in most places, awareness of the development among this viewer group would likely be moderate as well. This impact would be *less than significant* as the dominant quality of the views of the East Course and surrounding natural areas would be preserved and enhanced. No mitigation is required.

As noted above, the Project impact on the visual quality of views from west of the project area and from the Carmel Middle School and the Community Church would be *potentially significant*. Implementation of **Mitigation Measure AES-1** would reduce this impact to a *less-than-significant* level.

~~**130-Unit Alternative**~~

~~Development of the 129 residential units of the 130-Unit Alternative within the new subdivision would be visible from a number of adjacent land uses including public roads and private residences to the north, a future public roadway and private residences to the west, and Carmel Middle School and the Community Church to the north and northeast. Views from public scenic vistas and corridors are addressed separately in Impact AES-3.~~

Existing vegetation would screen some of the views from adjacent areas. However, less obscured views from public and private viewpoints and roadways located north, west, and south of the site would be affected. These affected views are discussed below.

Existing views from adjacent areas are shown in **Figures 3.4-2a** through **3.4-6**. Visual simulations of the Proposed Project of views from three viewpoints adjacent to the project site (see **Figure 3.4-1** for a viewpoint location map) are shown in F**igures 3.4-8** through **3.4-10**. These simulations are intended to generally illustrate the character of the residential development's block and mass from adjacent areas and only roughly reflect the architectural styles presented in the Pattern Book (**Appendix B**). The 130-Unit Alternative would result in a similar visual appearance as the Proposed Project, but the main development would have a decreased density and lower allowable building heights from the proposed units.

The response of various viewer groups to the 130-Unit Alternative would vary in accordance with the types of activities they engage in and the overall frequency and duration of their views.

Views from North of Carmel Valley Road

Similar to the Proposed Project, as shown in **Figures 3.4-4a and 3.4-4b**, the 130-Unit Alternative would be visible from some portions of the public roads north of Carmel Valley Road and from residences in this neighborhood. Lot 130 is mostly obscured from the residences north of Carmel Valley Road north of Carmel Middle School. Vegetation and slope obscure views of Lot 130 from Pacific Meadows. Given the presence of existing development, vegetation, the elevated nature of views from this neighborhoods north of Carmel Valley Road near the project site (which provides unbroken views of the ridgelines south of the Carmel River), and no blockage of views of ridgelines due to the 130-Unit Alternative, impacts on views from the public roads and neighborhoods north of Carmel Valley Road would be *less than significant.* No mitigation is required.

Views from West of the Project Area

As discussed for the Proposed Project, and shown in **Figures 3.4-5a and 3.4-5b,** there are no current unobstructed views from public roads or public areas west of the 130-Unit Alternative to the 130-Unit Alternative project site. Impacts on views from west of the 130-Unit Alternative project site would be the same as those discussed for the Proposed Project, but with fewer housing units proposed. Lot 130 cannot be viewed from west of the 130-Unit Alternative project site. Given the intrusion of new residential buildings into the existing view that would substantially change the visual quality of the views from a future public road, and the substantive change in the nature of the private views (particularly for residences along Val Verde Drive) the project impact on views from west of the project area would be *potentially significant*. Implementation of **Mitigation Measure AES-1** would reduce this impact to a *less-than-significant* level.

Similar to the Proposed Project, the 130-Unit Alternative would also be apparent from some of the commercial buildings along Carmel Rancho Boulevard. However, commercial offices users are not considered sensitive viewers due to the nature of activity pursued in office and other commercial settings and thus impacts to commercial views would be *less than significant.* No mitigation is required.

Views from Carmel Middle School and Community Church of Monterey Peninsula

As discussed for the Proposed Project, viewers at the Carmel Middle School and the Community Church would be adversely affected by the 130-Unit Alternative, as the development would

~~introduce new visual elements into the foreground of existing views. Impacts on views from Carmel Middle School and Community Church would be the same as those discussed for the Proposed Project, but with fewer housing units proposed. Views of Lot 130 from the Carmel Middle School and Community Church are obstructed by distance, existing vegetation, and the Rancho Cañada Golf Club clubhouse.~~

~~Given the intrusion of new residential buildings into the view that would change the visual quality of the views from these locations, the number of viewers (students and public users of school facilities and church members) affected, the impact on views from the school, church and Rio Road east would be *potentially significant*.~~ **~~Mitigation Measure AES-1~~** ~~is recommended to reduce this impact to a *less-than-significant* level.~~

~~Views from the Rancho Cañada East Course~~

~~As discussed for the Proposed Project, golfers using the East Course would have a moderate sensitivity to visual changes because their line-of-sight would shift frequently as a result of golfing activity to take into account the adjacent Carmel River and the north and south hills of Carmel Valley. In addition, the 130-Unit Alternative would create a habitat preserve southwest of the east course which would enhance the natural adjacent aesthetic for portions of the golf course. Due to the existing pattern of vegetation on the East Course, which would continue to screen views of the 130-Unit Alternative site in most places, awareness of the development among this viewer group would likely be moderate as well.~~

~~Lot 130 is visible from the Rancho Cañada East Course. However, there is an existing structure on Lot 130, and one new housing unit is proposed to replace the existing structure. Lot 130 is adjacent to a residential neighborhood to the east of the East Course. The proposed housing unit would appear as an additional residence within the context of the existing residential neighborhood. Additionally, since the unit would be replacing an existing structure, there would not be significant change from existing conditions. This impact would be *less than significant*. No mitigation is required.~~

~~Views from east of Rancho Cañada East Course~~

~~Lot 130 is not visible from Via Mallorca. Via Mallorca is east, and perpendicular to Carmel Valley Road. Because Lot 130 is not visible, there would be *no impact* on the visual quality due to changes in views. No mitigation is required.~~

~~As noted above, the 130-Unit Alternative impact on the visual quality of views from west of the project area and from the Carmel Middle School, East Course of the Rancho Cañada East Golf Club and the Community Church would be *potentially significant*.~~ Implementation of **~~Mitigation Measure AES-1~~** ~~would reduce this impact to a *less-than-significant* level.~~

Mitigation Measure AES-1: Implement Measures to Reduce Light and Glare, and Visual Intrusion to Surrounding Land Uses and Other Public Viewpoints

The Project Applicant will implement the following measures during the construction of the Project to reduce visual intrusion for existing residences and other public viewpoints:

- Retain mature trees and existing woody vegetation to the maximum extent feasible;
- Use non-reflective building materials to minimize glare and obtrusiveness; and

- Provide a vegetative buffer around the periphery of the project site to provide screening from adjacent residents. Vegetation should be chosen and planted to be compatible with patterns of existing vegetation. Vegetation should be planted concurrent with residential development. The applicant will prepare a landscaping plan which will be reviewed and approved by Monterey County prior to the issuance of any building permits that provides vegetative buffers in the locations noted below. In each case, the buffer area will be planted in native tree/shrub/scrub cover with locally derived stock. The purpose of this buffer is to obscure the residential buildings to the maximum extent feasible without adding any additional height obstruction. Buffers will be provided in the following areas.
    - The western edge of the project north of Rio Road will have a planted buffer to shield views of the new residences from Val Verde Drive and residences.
    - The northern edge of the Rio Road extension to the west will have a planted buffer to shield views of the new residences from road users and the Riverwood Complex.
    - Where not already planted in a sufficiently dense vegetated cover to shield views, the project boundary with Carmel Middle School will have a planted buffer to shield views from the school and the public users of the school.
    - The northern and western edge of the Hatton Parcel will have a planted tree/vegetation buffer views to shield views of the new residences from Rio Road east and the Community Church.
    - The Homeowner's Association (HOA) or other entity responsible for common landscaping areas outside of residential units shall ensure that all required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements.

B. Scenic Vistas and Corridors

Impact AES-3: Changes in Views from Existing Scenic Vistas and Corridors (less than significant)

~~**Proposed Project**~~

The Project would affect one public scenic corridor, Carmel Valley Road, and one public scenic vista, the view from the trail at Palo Corona Regional Park.

Views from Carmel Valley Road

The development would be partially visible from Carmel Valley Road, a proposed scenic route. Views south from Carmel Valley Road toward the Rancho Cañada Village subdivision consist of forested hills and ridges in the background and views of existing semi-rural development in the foreground. Some individual homes within the proposed development have the potential to be visible from Carmel Valley Road.

Figure 3.4-11 shows the lines of sight to the Project from Carmel Valley Road and where the Project would be visible and where it would not. As shown in **Figure 3.4-11**, the Project would be visible along Carmel Road west of Carmel Middle School and at other discrete locations along Carmel Valley Road. However, in all locations the view of the project site would be fleeting due to the distance of

the development from the road and the presence of other features (buildings, vegetation, etc.) which limit the prominence of the new Project residences relative to existing features in the view from Carmel Valley Road.

A visual simulation from Carmel Valley Road is shown in **Figure 3.4-12**. This simulation is intended to generally illustrate the effect of the development's block and mass on existing views and only roughly reflect the architectural styles presented in the Pattern Book (**Appendix B**). As shown in **Figure 3.4-12**, when visible from Carmel Valley, the new residences would appear more as an extension of existing buildings rather than a substantial new intrusion on views from Carmel Valley Road from the areas around Carmel Middle School. The Project would not block views of the ridgelines from Carmel Valley Road at this or any other location along the road.

Based on the site's distance from the roadway, the short duration of the views, the limited intrusion compared to existing development, and the absence of ridgelines view blockage, the visual impact on views from the scenic corridor along Carmel Valley Road would be *less than significant*.

No other existing roads within the vicinity of the project site are designated County Scenic Routes in the 2010 General Plan nor is the Project within the viewshed of the designated scenic portions of SR 1. Therefore, this impact would be *less than significant.* No mitigation is required.

Views from Palo Corona Regional Park

Figure 3.4-6 (Photo 18) shows the view from Palo Corona Regional Park toward the project site. The residential subdivision would be readily observable in the center of this view from the public trail. However, the Project would be located in a portion of Carmel Valley with existing residential, commercial, and institutional development. The Project would add to the developed character of the mouth of Carmel Valley. However, the Project would not substantially alter the character of the scenic view from the trail as the dominant natural features viewed from the trail (northern and southern hills of Carmel Valley, Carmel River, and the park and agricultural fields to the west) would be unaffected by the project. For these reasons, the impact on the scenic view from Palo Corona Regional Park would be *less than significant*. No mitigation is required.

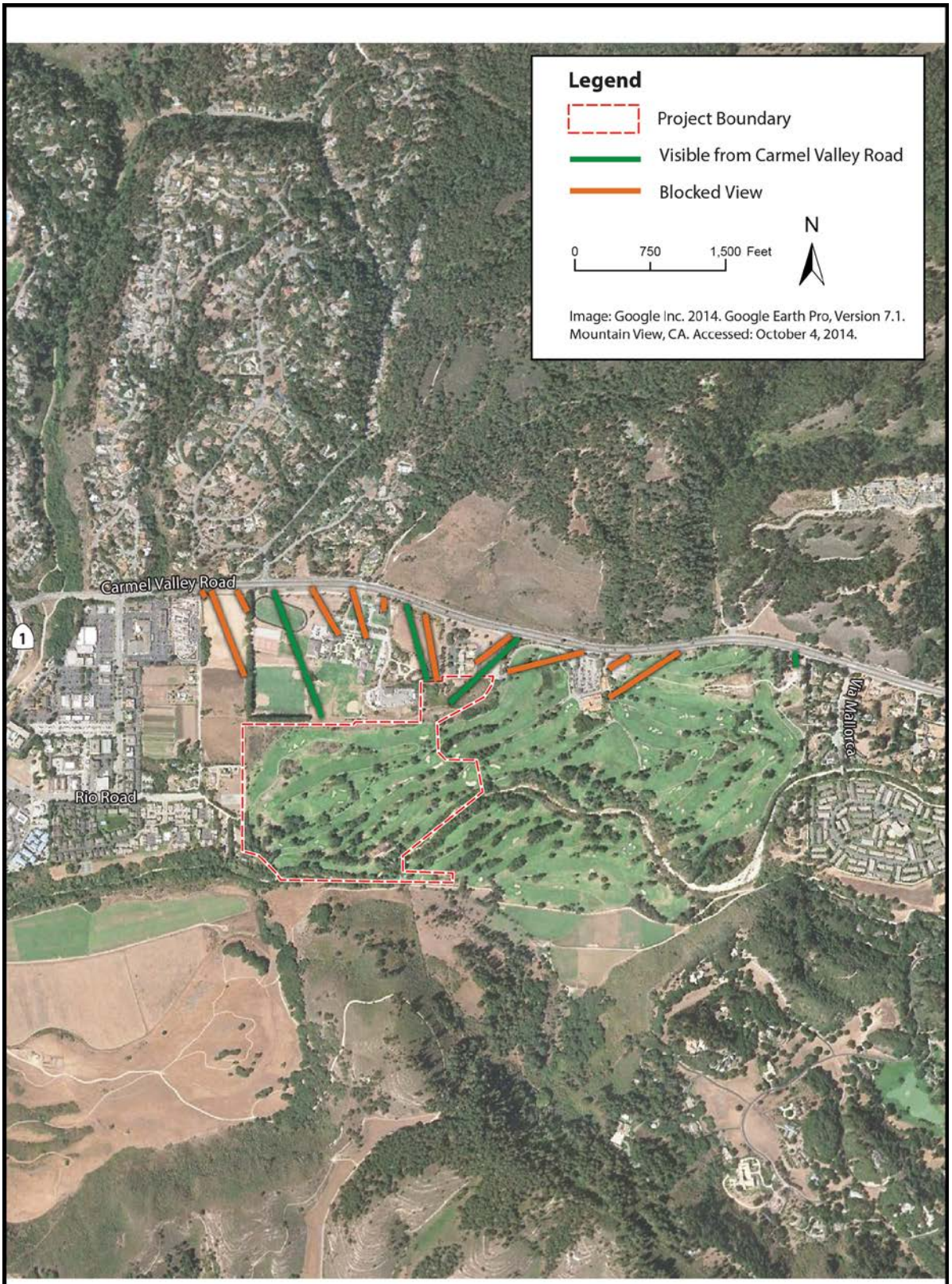
~~130-Unit Alternative~~

~~Similar to the Proposed Project, the 130-Unit Alternative would affect one public scenic corridor, Carmel Valley Road, and one public scenic vista, the view from the trail at Palo Corona Regional Park.~~

~~*Views from Carmel Valley Road*~~

~~As discussed for the Proposed Project, the 130-Unit Alternative development would be partially visible from Carmel Valley Road, a proposed scenic route. Views south from Carmel Valley Road toward the project site consist of forested hills and ridges in the background and views of existing semi-rural development in the foreground. Some individual homes within the proposed development have the potential to be visible from Carmel Valley Road. Impacts on views from Carmel Valley Road would be the same as those discussed for the Proposed Project, but there would be fewer housing units.~~

Figure 3.4-11 Views of Rancho Cañada from Carmel Valley Road



Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Figure 3.4-12 Block and Mass Simulation #4 from Carmel Valley Road

Before

After

Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

~~As shown in **Figure 3.4-3d**, the view of Lot 130 southeast on the far eastern edge of the project site, the top of the existing structure on Lot 130 is visible from Carmel Valley Road, but the majority of the view of Lot 130 is obstructed by tall vegetation.~~

~~No other existing roads within the vicinity of the 130-Unit Alternative project site are designated County Scenic Routes in the 2010 General Plan, nor is the 130-Unit Alternative within the viewshed of the designated scenic portions of SR 1. Therefore, this impact is *less than significant.* No mitigation is required.~~

~~Views from Palo Corona Regional Park~~

~~As discussed for the Proposed Project, **Figure 3.4-6** shows the view from Palo Corona Regional Park toward the 130-Unit Alternative project site. The residential subdivision would be readily observable in the center of this view from the public trail. Impacts on views from Palo Corona Regional Park would be the same as those discussed for the Proposed Project, but with fewer housing units in the viewshed. Lot 130 is also observable from Palo Corona Regional Park. However, the single residence on Lot 130 would blend with the residential development to the west. The130-Unit Alternative would be located in a portion of Carmel Valley with existing residential, commercial, and institutional development. The 130-Unit Alternative would add to the developed character of the mouth of Carmel Valley. However, the 130-Unit Alternative would not substantially alter the character of the scenic view from the trail as the dominant natural features viewed from the trail (northern and southern hills of Carmel Valley, Carmel River, and the park and agricultural fields to the west) would be unaffected by the project. For these reasons, the impact on the scenic view from Palo Corona Regional Park would be *less than significant*. No mitigation is required.~~

C. Light and Glare

Impact AES-4: Create a New Source of Light and Glare (less than significant with mitigation)

~~Proposed Project~~

The Proposed Project would introduce nighttime light sources associated with both streetlights and lighting of the proposed buildings. In addition, some glare associated with the new buildings could occur on sunny days. These effects could be noticeable from the existing residences located west of the project site. The Project would be required to implement the County's Condition of Approval for Lighting. PD014(A), *Lighting – Exterior Lighting Plan*, states that all exterior lighting shall be down-lit to light only the intended area and to further help control offsite glare. However, compliance with the County's Condition of Approval would not reduce the potential for some glare associated with new buildings on sunny days. Therefore, this impact would be *potentially significant*. Implementation of **Mitigation Measure AES-1** would reduce the impact to a *less-than-significant* level.

~~130-Unit Alternative~~

~~Similar to the Proposed Project, the 130-Unit Alternative would introduce nighttime light sources and glare sunny days from the 129 units proposed to be developed on the western portion of the project site. The proposed unit on Lot 130 has the potential to result in similar impacts. Implementation of the County's Condition of Approval for Lighting. PD014(A), *Lighting – Exterior Lighting Plan*, would reduce the potential or glare from exterior lighting. However, similar to the Proposed Project, the 130-Unit Alternative could generate glare from the use of reflective material.~~

~~Therefore, this impact would be *potentially significant*. Implementation of **Mitigation Measure AES-1** would reduce the impact to a *less-than-significant* level.~~

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Chapter 3.5
Land Use

Introduction

This chapter provides a discussion of the land use issues related to the Proposed Project ~~and the 130-Unit Alternative~~ in the Carmel Valley. This chapter includes a review of existing conditions based on available literature; a summary of local, state, and federal policies and regulations related to land use; and an analysis of direct and indirect environmental impacts of the Project ~~and 130-Unit Alternative~~.

CEQA requires that an EIR consider whether a proposed project may conflict with any applicable land use plan, policy, or regulation that was adopted for the purpose of avoiding or mitigating an environmental impact. Conflicts of a project with land use policies do not, in and of themselves, constitute significant environmental impacts. Policy conflicts are considered environmental impacts under CEQA only when the policies themselves were adopted for the purpose of avoiding or mitigating an environmental effect.

The policy determination of whether a proposed project is consistent with a jurisdiction's general plan is made by the decision-making body of the jurisdiction and is based on the jurisdiction's broad discretion to assess whether a proposed project would conform to the policies and objectives of its general plan/specific plan as a whole. In addition, the broader general plan consistency determination takes into account all evidence in the record concerning the project characteristics, its desirability, as well as its economic, social, and other non-environmental effects.

Impact Summary

Table 3.5-1 provides a summary of the potential environmental impacts of the Project ~~and the 130-Unit Alternative~~ related to land use. As shown in **Table 3.5-1**, with the exception of policy consistency related to land use designation and zoning, the Proposed Project ~~and the 130-Unit Alternative~~ would not have any significant adverse impacts related to land use.

Table 3.5-1. Land Use Impact Summary

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
A. Land Use Compatibility				
LU-1: Land Use Compatibility	~~Potentially Significant~~	Potentially Significant	AES-1: Implement Measures to Reduce Light and Glare, and Visual Intrusion to Surrounding Land Uses and Other Public Viewpoints	LTS
B. Plan/Policy Consistency				
LU-2: Conflicts with Land Use Plans, Policies, or Regulations	~~Significant (re: CVMP Buildout Limits in Policy CV-1.6)~~	Significant (re: 50% affordable requirement in CVMP Policy CV-1.27)	Traffic Mitigation Measures in Chapter 3.7 and Chapter 4	SU ~~(Proposed Project and 130-unit Alternative, but for different conflicts)~~
LU-3: Conflicts with Habitat Conservation Plans	~~NI~~	NI	None Required	_
C. Division of an Established Community				
LU-4: Physically Divide a Community	~~LTS~~	LTS	None Required	_
SU: Significant and Unavoidable; LTS = Less than Significant, NI = No Impact				

Environmental Setting

The project area is located along Carmel Valley Road at the mouth of the Carmel Valley (**Figure 2-1**). The 2013 Carmel Valley Master Plan (CVMP) encompasses an area of relatively secluded valleys and hills in the unincorporated area of Monterey County immediately east of State Route 1 (SR 1) with built-up areas at the mouth, in the Mid-Valley area, and in the Carmel Valley Village. The Project ~~and the 130-Unit Alternative~~ site~~s~~ (**Figure 2-2**) is ~~are~~ located to the west and east of the Rancho Cañada Golf Club. Residential, school, recreational, and open space land uses surround the sites.

The following sections describe the methodology used to assess the environmental setting for land use within the project area, and the existing conditions on lands surrounding the project sites. The term*s* *project area* and *project region* include~~s~~ the Proposed Project site ~~and the 130-Unit Alternative sites~~.

Research Methods

The following plans were reviewed to assess land use policies, plans, and regulations in the project area.

- 2010 *Monterey County General Plan* (General Plan)
- 2013 *Carmel Valley Master Plan* (CVMP)

Monterey County planning staff also provided information on the current status of certain matters, such as the amount of units built under the CVMP cap to date.

As discussed in Chapter 1, *Introduction*, the 1982 General Plan and 1986 CVMP were reviewed for informational purposes only.

Regional Setting

The Carmel Valley region is considered to be the 28,000-acre area within the CVMP. The area south of Rancho Cañada Golf Club is largely comprised of open space and preserved areas, although several small communities are interspersed throughout. The three population centers in the Valley are the "Lower Valley" at the west end of Carmel Valley Road near the intersection with SR 1, "Mid-Valley" in the vicinity of Robinson Canyon Road, and Carmel Valley Village.

Carmel Valley is primarily rural residential in nature, with notable scenic values resulting from natural landforms and the vegetative masses that are widely visible. Land use in Carmel Valley consists primarily of rural residential development and small-scale agricultural pursuits; other land use includes some concentrated residential development; commercial development and visitor accommodation facilities; public and quasi-public (PQP) facilities; and resource conservation and recreational facilities including four regional parks, three golf courses, and tennis facilities.

Residential development is dispersed, but generally tends to cluster around areas where commercial services are available: (1) the lower valley near SR 1, (2) mid-valley in the vicinity of Robinson Canyon Road, and (3) in the vicinity of Carmel Valley Village (Monterey County 1986). Garland Ranch Regional Park, Jacks Peak Regional Park, Thomas Open Space[1], Palo Corona Regional Park (limited public use allowed at present), and Carmel Valley Community Park provide recreational and resource conservation land use.

Principal road access to Carmel Valley is via Carmel Valley Road (from SR 1) and via Laureles Grade Road (from State Route 68 [SR 68]). Carmel Valley Road is the principal arterial route, intersecting SR 1 to the west. It is both four-lane and two-lane, depending on proximity to SR 1 and to commercial centers in the valley. Laureles Grade Road is a two-lane, steep, curved road that climbs the northern slopes from Carmel Valley to SR 68 north of the valley.

Project Setting

The project site is ~~Project site and the 130-Unit Alternative site are~~ located on the Rancho Cañada Golf Club course. The Rancho Cañada Golf Club was created in 1970 and currently operates two

[1] Thomas Open Space is closed to the public except for those with a valid permit.

courses, the West Course and the East Course.[2] The Proposed Project ~~and western area of the 130-Unit Alternative~~ site is bounded to the north by Carmel Valley Road and the Carmel Middle School (CMS), on the west by low-density residential development (along Val Verde Drive), on the southwest by high-density residential development (5 to 20 units per acre), on the east by the remainder of the golf course (and single-family development to the east of the golf course), and on the south by the Carmel River and adjoining open space. ~~On the East Course is the 130-Unit Alternative's Lot 130. This area is bound to the north by Carmel Valley Road, to the east by single-family residences along Via Mallorca, and north of the remaining golf course (**Figure 2-2**). As shown in **Figure 3.5-1**, the County's 2010 General Plan designate the area as PQP open space.~~

~~The Proposed Project comprises 281 residential units on approximately 42 acres and 39 acres of permanent open space.~~ The Project ~~130-Unit Alternative~~ proposes 130 residential units on approximately 25 ~~42~~ acres (excluding drainage area and habitat area), approximately 11 acres of common area, and approximately 40 total ~~39~~ acres of open space ~~drainage area~~ and habitat preserve.

The project site is ~~Project site and the 130-Unit Alternative site are~~ currently developed for recreational use (golf course) in an area that gently slopes from the north boundary of the site down to the north bank of the Carmel River. ~~Lot 130 of the 130-Unit Alternative is developed with golf course maintenance facilities.~~ Residential development extends westward from the west side of the project area and is separated from the project site by a strip of vacant land.

Regulatory Setting

This section discusses the local, state, and federal policies and regulations that are relevant to the analysis of land use impacts of the Proposed Project ~~and the 130-Unit Alternative~~.

Federal Policies and Regulations

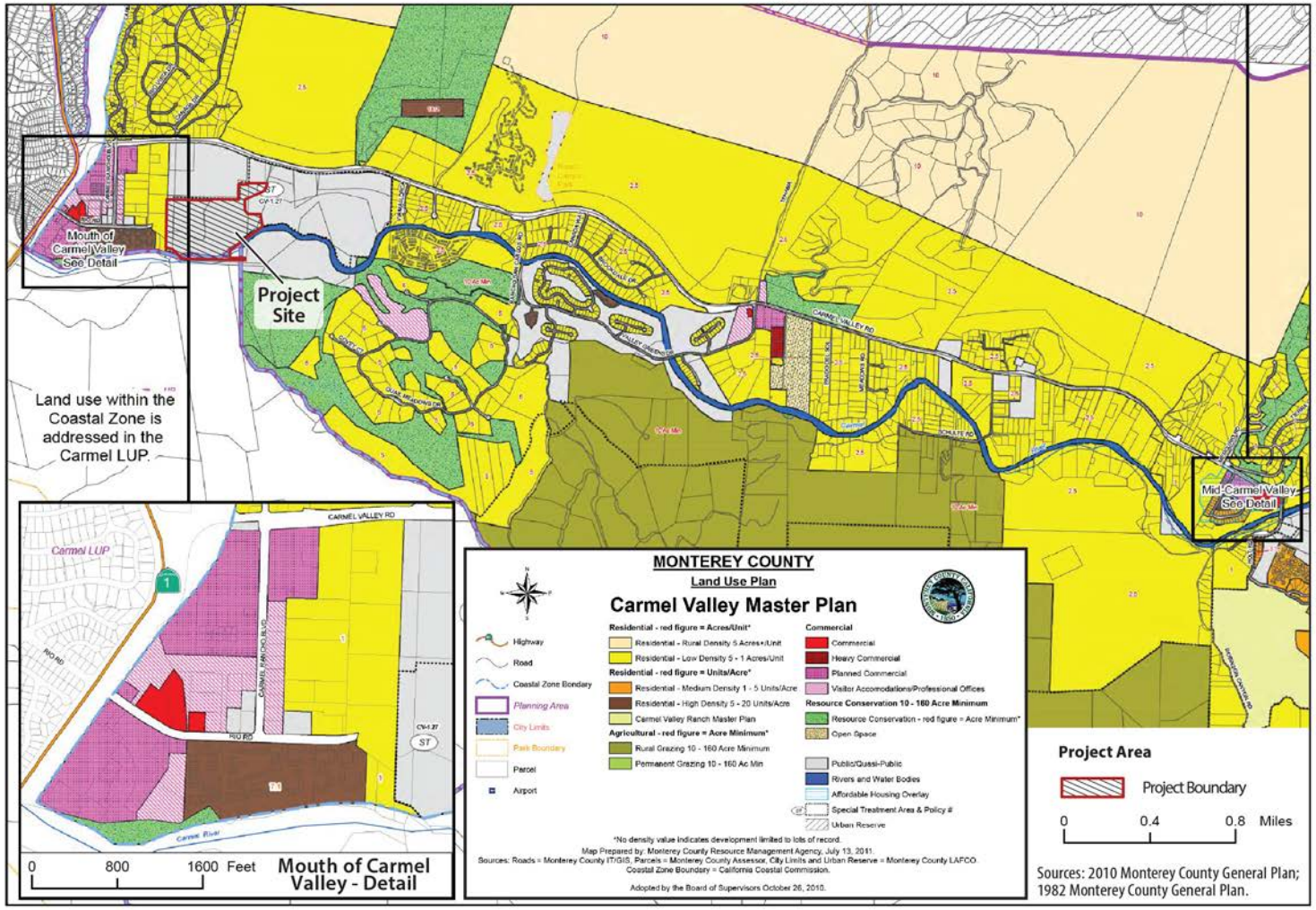
There are no specific federal regulations that apply to the land use issues associated with this Project.

State Policies and Regulations

California planning law requires each city and county in the state to adopt a general plan for its future development. This plan identifies the allowable uses of land within their boundaries and establishes policies for both the development and protection of resources. They form the foundation for zoning and establish regulatory standards for development and resource protection.

[2] In 2018 the former Rancho Cañada golf course was acquired by the Monterey Peninsula Regional Park District and the land is no longer used for golf. As described in Chapter 2, *Project Description*, the baseline conditions at the time of the Notice of Preparation for the 2016 EIR, including golf use at the former golf course, are retained in this Second Revised Draft EIR.

Figure 3.5-1 Existing Land Use Designation



Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Local Policies and Regulations

The Proposed Project is and the 130-Unit Alternative are being analyzed in this Second Revised Recirculated Draft Environmental Impact Report (EIR) under the 2010 General Plan and the 2013 CVMP.

Current County Plans, Policies and Regulations

2010 Greater Monterey Peninsula Area Plan

According to GMPAP Figure 14, *Scenic Highway Corridors & Visual Sensitivity* parcel H of the Proposed Project is within the coastal zone. However, as discussed in Chapter 2, *Project Description*, the Proposed Project does not propose land uses changes to parcel H.

2010 Monterey County General Plan

The 2010 Monterey County General Plan presents goals and policies that guide the general distribution and intensity of land uses, including residential, agricultural, commercial and industrial, public facilities, and open space uses, for lands in the County outside the Coastal Zone (Monterey County 2010). The 2010 General Plan thereby enables the County to direct growth to areas within or near existing developed areas in order to preserve and minimize impacts on natural and agricultural resources, public services, and infrastructure.

The 2010 General Plan Land Use Element presents goals and policies, as well as the adopted density standards for residential uses and the intensity of non-residential land use designations. The following goals and policies are applicable to land use within and near the project Project site.

Land Use Element

Goal LU-1: Promote appropriate and orderly growth and development while protecting desirable existing land uses.

Policy LU-1.1: The type, location, timing, and intensity of growth in the unincorporated area shall be managed.

Policy LU-1.2: Premature and scattered development shall be discouraged.

Policy LU-1.5: Land uses shall be designated to achieve compatibility with adjacent uses.

Policy LU-1.7: Clustering of residential development to those portions of the property which are most suitable for development and where appropriate infrastructure to support that development exists or can be provided shall be strongly encouraged. Lot line adjustments among four lots or fewer, or the re-subdivision of more than four contiguous lots of record that do not increase the total number of lots, may be allowed pursuant to this policy without requirement of a general plan amendment.

Policy LU-1.11: Development proposals shall be consistent with the General Plan Land Use Map designation of the subject property and the policies of this plan.

Policy LU-1.19: Community Areas, Rural Centers and Affordable Housing Overlay districts are the top priority for development in the unincorporated areas of the County. Outside of those areas, a Development Evaluation System shall be established to provide a systematic, consistent, predictable, and quantitative method for decision-makers to evaluate developments of five or more lots or units and developments of equivalent or greater traffic, water, or wastewater intensity. The system shall be a pass-fail system and shall include a

mechanism to quantitatively evaluate development in light of the policies of the General Plan and the implementing regulations, resources and infrastructure, and the overall quality of the development. Evaluation criteria shall include but are not limited to:

a. Site Suitability
b. Infrastructure
c. Resource Management
d. Proximity to a City, Community Area, or Rural Center
e. Mix/Balance of uses including Affordable Housing consistent with the County Affordable/Workforce Housing Incentive Program adopted pursuant to the Monterey County Housing Element
f. Environmental Impacts and Potential Mitigation
g. Proximity to multiple modes of transportation
h. Jobs-Housing balance within the community and between the community and surrounding areas
i. Minimum passing score

Residential development shall incorporate the following minimum requirements for developments in Rural Centers prior to the preparation of an Infrastructure and Financing Study, or outside of a Community Area or Rural Center:

1) 35% affordable/Workforce housing (25% inclusionary; 10% Workforce) for projects of five or more units to be considered.
2) If the project is designed with at least 15% farmworker inclusionary housing, the minimum requirement may be reduced to 30% total.

This Development Evaluation System shall be established within 12 months of adopting this General Plan.

Goal LU-2: Encourage residential development of various types and densities for all income levels in areas where such development would be accessible to major employment centers and where adequate public services and facilities exist or may be provided.

Policy LU-2.7: Open space may be provided in and/or on the fringes of residential areas.

Policy LU-2.13: The County shall assure consistent application of an Affordable Housing Ordinance that requires 25% of new housing units be affordable to very low, low, moderate, and workforce income households. The Affordable Housing Ordinance shall include the following minimum requirements:

a) 6% of the units affordable to very low-income households
b) 6% of the units affordable to low-income households
c) 8% of the units affordable to moderate-income households
d) 5% of the units affordable [to] Workforce I income households

Goal LU-8: Encourage the provision of open space lands as part of all types of development including residential, commercial, industrial, and public.

Policy LU-8.1: The open space needs of the community and new development shall be reviewed and addressed through the planning process. The extent of use of land for this designation shall be limited to building coverage of 25% of the subject property.

Policy LU-8.2: Clustering, consistent with the other policies of this Plan, shall be considered as a means of maximizing permanent open space within new development.

Policy LU-8.4: Wherever possible, open space lands provided as part of a development shall be integrated into an area-wide open space network.

Policy LU-8.5: Development may consider use of open space buffers on the perimeter and integrated into the development.

2013 Carmel Valley Master Plan

The 2013 CVMP was enacted as part of the 2010 General Plan and is intended to guide future land use within the 2013 CVMP plan area boundary. Specifically the plan area boundary is defined as "the primary watershed of the Carmel River from SR 1 to just east of Carmel Valley Village, except for the upper reaches of Garzas Creek and Robinson Canyon" (Monterey County 2010). Key 2013 CVMP land use policies and regulations relevant to the Proposed Project are noted below. A land use consistency analysis is presented in **Appendix D** that includes all 2013 CVMP policies.

Open Space and Conservation

CV-1.7: Subdivision for conservation purposes that is in the public interest is exempt from any quota and allocation system where such subdivision does not create additional residential building sites. It is preferable that parcels thus created shall be owned by an appropriate public entity or a non-profit public benefit corporation.

General Land Use

CV-1.1: All policies, ordinances, and decisions regarding Carmel Valley shall be consistent with the goal of preserving Carmel Valley's rural character. In order to preserve the rural character of Carmel Valley, development shall follow a rural architectural theme with design review.

CV-1.3: Open space uses shall be located between the development areas in order to clearly define them and maintain a distinction between the more rural and more suburban areas of the valley. Small and large open space areas should be created with preference given to those that add open space to existing open space areas.

CV-1.15 (d): All further development of visitor accommodations in the area west of Via Mallorca and north of Carmel River shall be limited to moderately-sized facilities, not to exceed a total of 175 units.

CV-1.17: Publicly used buildings and areas should be encouraged to be oriented to views of the river.

CV-1.18: Facilities classified as either Public/Quasi-Public or Special Use (such as schools, churches, hospitals, convalescent homes, rehabilitation centers, hospice facilities, emergency facilities, and public facilities such as community halls) may be considered in any land use category provided that they meet the following criteria:

a. Low visibility
b. Safe and unobtrusive access away from pedestrian traffic areas.
c. Low noise impact on surrounding uses.
d. Development should follow a rural architectural theme with design review.
e. Conform to all other Plan requirements.

CV-1.27: Special Treatment Area: Rancho Canada Village – Up to 40 acres within properties located generally between Val Verde Drive and the Rancho Canada Golf Course, from the Carmel River to Carmel Valley Road, excluding portions of properties in floodplain shall be designated as a Special Treatment Area. Residential development may be allowed with a density of up to 10 units/acre in this area and shall provide a minimum of 50% Affordable/Workforce Housing. Prior to beginning new residential development (excluding the first unit on an existing lot of record), projects must address environmental resource constraints (e.g.; water, traffic, flooding). (APN: 015-162-017-000, 015-162-025-000, 015- 162-026-000, 015-162-039-000 and 015-162-040-000, 015-162-033-000, 015- 162-035-000, 015-162-036-000, 015-162-037-000, 015-162-038-000, 015-021-005-000)

Residential Land Use

CV-1.5: In the residential areas, maximum densities are as shown on the Carmel Valley Master Plan Land Use Map. However, attainment of maximum density in these areas is dependent upon conformity of the proposed project to plan goals and policies.

CV-1.6: New residential subdivision in Carmel Valley shall be limited to creation of 190 new units as follows:

a. There shall be preference to projects including at least 50% affordable housing units.

b. Lots developed with affordable housing under the Inclusionary Housing Ordinance or an Affordable Housing Overlay (Policy LU-2.12) may have more than one unit per lot. Each unit counts as part of the total unit cap.

c. Existing lots with five (5) acres or more may have the first single family dwelling plus one accessory dwelling unit. Units added on qualifying existing lots shall not count as part of the total unit cap. New accessory dwelling units or single family dwellings beyond the first single family dwelling shall be prohibited on lots with less than five (5) acres, except that this provision shall not apply to projects that have already been approved, environmental review for such units has already been conducted, and in which traffic mitigation fees have been paid for such units prior to adoption of this Carmel Valley Master Plan.

d. New lots shall be limited to the first single family dwelling. Accessory dwelling units and single family dwellings beyond the first single family dwelling shall be prohibited.

e. Of the 190 new units, 24 are reserved for consideration of the Delfino property (30 acres consisting of APN: 187-521-014-000, 187-521-015-000, 187-512-016-000, 187-512-017-000, 187-512-018-000, and 187-502-001-000) in Carmel Valley Village (former Carmel Valley Airport site) to enable subdivision of the property into 18 single family residential lots and one lot dedicated for six affordable/inclusionary units, provided the design of the subdivision includes at least 14 acres available for community open space use subject to also being used for subdivision related water, wastewater, and other infrastructure facilities.

CV-1.9: Structures proposed in open grassland areas that would be highly visible from Carmel Valley Road or Laureles Grade shall be minimized in number and be clustered near existing natural or man-made vertical features.

Area Development – Open Space

CV-1.8: Cluster development:

a. must meet the objectives of the Master Plan.

b. shall be used to protect visible open space in sensitive visual areas or to protect natural resources.

c. adjacent to vertical forms, although preferable to development in open spaces, will be considered in light of the visual sensitivity of the building site.

d. Should be consistent with wastewater application rates of the Carmel Valley Wastewater Study that generally would require clustering of five units or less on a minimum of five acres of land.

e. may be permitted only where it will result in the preservation of visible open space and is in compliance with other applicable policies.

f. Open space shall be dedicated in perpetuity.

Transportation

CV-2.17: To implement traffic standards to provide adequate streets and highways in Carmel Valley, the County shall conduct and implement the following:

a. Twice yearly monitoring by Public Works (in June and October) of peak hour traffic volumes and daily traffic volumes at six (6) locations indicated in bold in the 2013 CVMP (at least one of the yearly monitoring periods will occur when local schools are in session).

b. A yearly evaluation report shall be prepared by the Public Works Department in December that shall report on traffic along the six (6) indicated segments. The report shall evaluate traffic using the PTSF methodology (or such other methodology as may be appropriate for a given segment in the opinion of the Public Works Department), and the ADT methodology. ADT thresholds for each segment are listed above, and the Public Works Department shall annually establish appropriate PTSF or other methodology thresholds for each of the six (6) segments listed above.

c. A public hearing before the Board of Supervisors shall be held in January immediately following the December report when only 100 or fewer ADT remain before the ADT count for a segment will equal or exceed the indicated threshold, or where the PTSF (or such other methodology as may be appropriate for a given segment in the opinion of the Public Works Department) for a segment exceeds or is within one percent (1%) of the value that would cause a decrease in the LOS.

d. At five year intervals the County shall monitor all segments listed in Policy CV-2.17(a) and the annual report described in Policy CV-2.17(b) shall include a report on all segments. If such periodic monitoring and reporting shows that any segment not previously part of the annual report is within twenty percent (20%) of the listed ADT threshold, that segment shall thereafter be subject to the annual monitoring and reporting.

e. Also at five year intervals the County shall examine the degree to which estimates of changes in Levels of Service ("LOS") in the Carmel Valley Master Plan Area may be occurring earlier than predicted in the General Plan Environmental Impact Report. If the examination indicates that LOS are likely to fall to a lower letter grade than predicted for 2030, then the County shall consider adjustments to the cap on new residential units established in Policy CV-1.6 and/or the cap on new visitor serving units established in Policy CV-1.15 or other measures that may reduce the impacts, including, but not limited to, deferral of development that would seriously impact traffic conditions.

f. The traffic standards (LOS as measured by peak hour conditions) for the CVMP Area shall be as follows:

1. Signalized Intersections – LOS of "C" is the acceptable condition.
2. Unsignalized Intersections – LOS of "F" or meeting of any traffic signal warrant are defined as unacceptable conditions.
3. Carmel Valley Road Segment Operations: a) LOS of "C" and ADT below its threshold specified in Policy CV-2.17(a) for Segments 1, 2, 8, 9, 10, 11, 12 and 13 is an acceptable condition; b) LOS of "D" and ADT below its threshold specified in Policy CV-2.17(a) for Segments 3, 4, 5, 6, and 7 is an acceptable condition.

During review of development applications that require a discretionary permit, if traffic analysis of the Proposed Project indicates that the project would result in traffic conditions that would exceed the standards described above in Policy CV 2.17(f), after the analysis takes into consideration the Carmel Valley Traffic Improvement Program to be funded by the Carmel Valley Road Traffic Mitigation Fee, then approval of the Project will be conditioned on the prior (e.g., prior to project-generated traffic) construction of additional roadway improvements or an EIR will be prepared for the project, that will include evaluation of traffic impacts based on the ADT methodology. Such additional roadway improvements must be sufficient, when combined with the projects programmed for completion prior to the project- generated traffic in the Carmel Valley Traffic Improvement Program, to allow the County to find that the affected roadway segments or intersections would meet the acceptable standard upon completion of the programmed plus additional improvements. Any EIR required by this policy will assess cumulative traffic impacts outside the 2013 CVMP area arising from development within the 2013 CVMP area.

This policy does not apply to the first single family residence on a legal lot of record. The use of the ADT methodology as set forth in this Policy CV-2.17 will be limited to the purposes described in the policy, and the County may utilize any traffic evaluation methodology it deems appropriate for other purposes, including but not limited to, road and intersection design. This policy will also not apply to commercial development in any Light Commercial Zoning ("LC") district within the 2013 CVMP area where the Director of Planning has determined that the requirement for a General Development Plan, or amendment to a General Development Plan, may be waived pursuant to Monterey County Code section 21.18.030 (E).

Prior County Plans and Policies

As stated in Chapter 1, *Introduction*, discussion pertaining to the 1982 General Plan and the 1986 CVMP, is provided for informational purposes only.

1982 Monterey County General Plan

The 1982 General Plan was adopted by the Monterey County (County) Board of Supervisors (Board) in 1982 and, when in effect, was periodically amended. The 1982 General Plan provides a general direction for future growth throughout the unincorporated areas of the County. The 1982 General Plan's objective is to promote balanced growth throughout the County in a manner that protects the County's exquisite but fragile natural resources.

General Land Use

Policy 26.1.1: The County in coordination with the cities, shall manage the type, location, timing, and intensity of growth in the unincorporated area.

Policy 26.1.5: The County shall designate future land uses in manner which will achieve compatibility with adjacent land uses.

Policy 26.1.6: Development which preserves and enhances the County's scenic qualities will be encouraged.

Policy 26.1.11: The County shall encourage clustering in all development projects, where appropriate.

Residential

Policy 27.3.2: The County shall encourage that open space be provided within and on the fringes of residential areas.

Open Space

Policy 34.1.1: The County shall encourage the clustering of all types of development, where appropriate, in order to allow for a portion of each project site to be dedicated as permanent open space.

Policy 34.1.3: Wherever possible, open space lands provided as part of a development project should be integrated into an areawide open space network.

Holding Capacity and Zoning

Goal 36: to maintain consistency between the general plan and its implementing regulations.

Policy 36.0.3: Areas which have further division or additional density restrictions in place by zoning designation on the date of adoption of this general plan shall be executed in accordance with such restrictions and zoning designation as part of the implementation process.

Policy 36.0.4: Except in areas designated as medium- or high-density residential or in areas designated as commercial or industrial where residential use may be allowed, an applicant wishing to apply for a subdivision under this General Plan must use the following procedures to calculate the maximum density that can be considered under the Plan and thereby prepare an application consistent with or less than the maximum allowable density:

A. One factor in density determination shall be the land use designation. The maximum density allowable under the General Plan for a parcel shall be divided into the total number of acres found within the parcel. For example, a 100-acre parcel with a maximum General Plan density of 1 unit per 2.5 acres would have a General Plan density of 40 sites.

B. The slope of the property shall be determined and the slope-density formula defined in this Plan applied. For example, a 100-acres parcel might consist of 50% of the land having a slope of over 30% and the other 50% below 19%. The maximum density allowable on that parcel as calculated according to slope would be 50 sites.

C. All of the policies of the Plan must be applied to the parcel. Any policies resulting in a decrease in density must be tabulated. This decrease in density would then be subtracted from the maximum density allowable under the slope formula.

D. The maximum density allowable according to the General Plan land use designation (Step A above) and the maximum density allowable according to the Plan policies (Steps B and C above) shall then be compared. Whichever of the two densities is the lesser shall be established as the maximum density allowable under this Plan.

E. The calculations of maximum density made by an applicant will be reviewed during public hearings prior to the approval of any permits or quota allocation pursuant to this Plan.

1986 Carmel Valley Master Plan

The 1986 CVMP is a component of the 1982 General Plan. The major function of the 1986 CVMP is to guide the future development of the valley using goals and policies that reflect an understanding of the physical, cultural, and environmental setting of the area. Key 1986 CVMP policies and regulations relevant to the Proposed Project are noted below. A land use consistency analysis is presented in **Appendix D** that includes all 1986 CVMP policies.

Open Space Conservation

1.1.3 (CV): Both small and large open space areas should be created with preference given to those projects which add open space that is contiguous to existing open space.

General Land Use

26.1.21 (CV): It is intended that the Carmel Valley remain rural residential in character.

26.1.22 (CV): Developed areas should be evaluated in the light of resource constraints especially the water supply constraint addressed by policy 54.1.7 (CV) and the character of each area. No further development in such areas shall be considered until a need is demonstrated through public hearings.

26.1.23 (CV): Open space uses are to be located between the development areas in order to clearly define them and maintain a distinction between the more rural and more suburban areas of the valley.

26.1.25 (CV): The visible alteration of natural landforms caused by cutting, filling, grading, or vegetation removal shall be minimized through sensitive siting and design of all improvements and maximum possible restoration including botanically appropriate landscaping.

26.1.26 (CV): Development either shall be visually compatible with the character of the valley and immediate surrounding areas or shall enhance the quality of areas that have been degraded by existing development.

26.1.28 (CV): Structures located in open grassland areas where they would be highly visible from Carmel Valley Road and Laureles Grade Road shall be minimized in number and clustered near existing natural or man-made vertical features.

26.1.29 (CV): Design and site control shall be required for all new development throughout the Valley, including proposals for existing lots of record, utilities, heavy commercial and visitor accommodations but excluding minor additions to existing development where those changes are not conspicuous from outside of the property. The design review process shall encourage and further the letter and spirit of the CVMP.

26.1.30 (CV): Publicly used buildings and areas should be encouraged to be oriented to views of the river.

26.1.31 (CV): Materials and colors used in construction shall be selected for compatibility with the structural system of the building and with the appearance of the building's natural and man-made surroundings.

26.1.32 (CV): Development should be located in a manner that minimizes disruption of views from existing homes. This applies to road cuts as well as structures.

26.1.33 (CV): Of the range of land uses allowed (either with or without special approval) in any zoning district applied to Carmel Valley, only those uses specifically designated by this Plan shall be considered consistent as required by law.

26.1.34 (CV): The maximum density allowable according to the slope/density formula and the maximum density allowable according to other plan policies should be compared. Whichever of the two densities is the lesser shall be established as the maximum density allowable under this plan.

Residential Land Use

27.1.5 (CV): In the low-density residential areas, maximum densities are as shown on the Land Use Plan. However, attainment of maximum density in these areas is dependent upon conformity of the Proposed Project to plan goals and policies.

27.3.4 (CV): All land division approvals shall be based on and require full standard subdivision standards regardless of the number of lots created. Exception may be granted under policy 39.2.7 (CV).

27.3.5 (CV): The Carmel Valley development limit shall consist of the existing 572 buildable lots of record, plus 738 additional lots which shall be subject to the quota and allocation system and the policies of this Plan governing deduction from the quota for additional units, caretakers, senior citizen, and low and moderate income units. This constitutes the 20-year buildout allowed by this Plan. The existing lots of record shall include the remaining 150 lots in the amended Carmel Valley Ranch Specific Plan.

27.3.6 (CV): All development proposals shall make provision for low or moderate income housing in accordance with the Inclusionary Housing Ordinance, except that all development shall build such units on- site. Low and moderate-income residential units shall be counted as part of the total new residential units and subtracted yearly from the quota and not the allocation.

27.3.9 (CV): Projects for low or moderate income family housing shall be exempt from any annual allocation provisions, but shall be subtracted from the 20-year buildout quota on a basis of one such unit reducing the remaining buildout by one unit.

Furthermore, because of their substantially lower impact on resources and infrastructure, such projects for senior citizens of low or moderate income (e.g., the proposal of the Monterey County Housing Authority) may have up to twice the number of units normally allowed on a site. Such increased density shall only be allowed where it is determined to be feasible and consistent with other plan policies. Such projects shall be subtracted from the 20-year buildout quota on a basis of two such units reducing the remaining buildout by one unit.

27.3.10 (CV): When an ownership is covered by two or more land use designations, the total allowable development should be permitted to be located on the most appropriate portion of the property.

Area Development – Visitor Accommodations

28.1.26 (CV): All further development of visitor accommodations in the area west of Via Mallorca and north of Carmel River shall be limited to a moderately-sized facility, not to exceed 175 units, at the Rancho Cañada Golf Club.

Area Development – Open Space

34.1.1.1(CV): Clustering of development should be permitted only where it will result in the preservation of visible open space and is in compliance with other applicable policies. Cluster development should be consistent with wastewater application rates of the Carmel Valley Wastewater Study. In general, this will result in clusters of five units or less on a minimum of five acres of land. The burden of proof shall be placed on the project sponsors to demonstrate that clustered development meets the objectives of the Plan.

34.1.1.2 (CV): Clustering of development is discouraged except where it would result in preservation of visible open space in critically sensitive areas or protect another natural resource. Clustering adjacent to vertical forms, spaces, will be considered in light of the visual sensitivity of the building site. The burden of proof is placed on project sponsors to demonstrate that proposed cluster development is compatible with policies of this Plan.

Transportation

39.3.2.1 (CV): To implement traffic standards to provide adequate streets and highways in Carmel Valley, the County shall conduct and implement the following:

a. Twice yearly monitoring by Public Works (in June and October) of average daily traffic at 12 locations identified in the Keith Higgins report in Carmel Valley on Carmel Valley Road, Carmel Rancho Boulevard and Rio Road.

b. A yearly evaluation report (December) prepared jointly by the Public Works and Planning Departments to indicate segments approaching a traffic volume which would lower existing level service and which would compare average daily traffic (ADT) counts with service volumes for levels of service.

c. Public hearings to be held in January immediately following a December report in (b) above in which only 100 or less ADT remain before a lower level of service would be reached for any of the 12 segments described on figure B-1 of EIR 85-002 on the Carmel Valley Master Plan.

d. With respect to those 12 identified road segments that are at level of service (LOS) C or below, approval of development will be deferred if the approval would significantly impact roads in the Carmel Valley Master Plan area which area at level of service (LOS) C or below unless and until an EIR is prepared which includes mitigation measures necessary to raise the LOS to an acceptable level and appropriate findings as permitted by law are made which may include a statement of overriding considerations. For purposes of this policy, "acceptable level" shall mean, at a minimum, baseline LOS as contained in the Carmel Valley Master Plan EIR. To defer approval if there is significant impact means that, at a minimum, the County will not approve development without such an EIR where the traffic created by the development would impact the level of service along any segment of Carmel Valley Road (as defined in the Keith Higgins Traffic Report which is part of the Environmental Impact Report (EIR) for the Carmel Valley Master Plan "CVMP") to the point where the level of service would fall to the next lower level. As for those road segments which are at LOS C, D, and E, this would, at a minimum, occur when the LOS F, this would occur when it would cause a significant impact and worsening of traffic conditions as compared with the present condition. Specific findings will be made with each project and may depend on the type and location of any proposed development. Cumulative traffic impacts from development in areas outside the CVMP area must be considered and will cause the same result as development within the plan area.

Impact Analysis

Methods for Analysis

Assessments of potential land use impacts of the Proposed Project <u>is</u> ~~and the 130-Unit Alternative are~~ based on the following methods.

- ~~Review of the Proposed Project preliminary project drawings and *Rancho Cañada Village Pattern Book: Design Guidelines for Residential Neighborhoods* (Pattern Book).~~
- Review of the Project's ~~130-Unit Alternative~~ preliminary project drawings.
- Review of the Project ~~and 130-Unit Alternative~~ for compliance with the County's 2010 General Plan~~s~~, the 2013 CVMP, and Zoning Codes.

Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, the 2010 General Plan' goals and policies, 2013 CVMP policies, and agency and professional standards, a project impact would be considered significant if the project would:

A. Land Use Compatibility

- Introduce new land uses into an area that could be considered to be incompatible with the surrounding land uses or with the general character of the area.

B. Plan/Policy Consistency

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to a general plan, specific plan, LCP, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

C. Division of an Established Community

- Physically divide an established community.

Impacts and Mitigation Measures

A. Land Use Compatibility

Impact LU-1: Land Use Compatibility (less than significant with mitigation)

~~Proposed Project~~

Construction

Temporary land use impacts associated with construction activities would include site grading, excavation, construction staging, and building erection. These activities involve the movement of heavy construction equipment, truck traffic, grading activities, construction noise, and air emissions. The construction time would extend over an approximate 5-year period, but may be substantially longer, depending on market conditions for custom residential units. Construction impacts specifically related to nuisance effects (i.e., air quality, noise, traffic, and aesthetics) are addressed in other sections of this Second Revised ~~Recirculated~~ Draft EIR. Since these construction-related impacts are addressed in other sections of this Second Revised ~~Recirculated~~ Draft EIR and can be mitigated to a less-than-significant level, this impact would be *less than significant*. No additional mitigation is required.

Operation

The Project would change current land uses from a golf course to residential development and open space. As noted above, adjacent uses consist of residential areas (along Rio Road), rural residential (along Val Verde Drive), a school and a church (to the north), golf course (to the east) and open space (to the south). The new residential and open space uses would not create any fundamental incompatibilities with the surrounding land uses that would cause physical changes that might result in significant physical impacts to the environment. As discussed in Chapter 3.4, *Aesthetics*, the new residential uses would not have a significant impact on the visual character of the project area and, with mitigation, would not have a significant impact on views from adjacent areas. The residential densities of the surrounding areas vary from rural residential areas (along Val Verde Drive) to single-family development (along the eastern side of the golf course and north of Carmel Valley Road), to multi-family residential units (along Rio Road). The proposed residential use, while including higher density areas than average single-family and rural residential areas would not have unprecedented densities considering the multi-family residential along Rio Road adjacent to the site. Furthermore, the project's residential development would be visually separate and distinct from the nearby residential areas, which would avoid a significant incompatibility in land use character. Although a formal restoration plan has not yet been developed for the open space area, the Project would result in an open space buffer between new residential development and the open space areas to the south of the golf course. ~~The proposed restoration and establishment of open space on the southern portion of the project would be compatible with the open space uses to the south of the project area and would buffer the adjacent open space areas from the new development.~~ The addition of new residential development adjacent to the existing golf course would also not result in a fundamental land use incompatibility as residential uses next to golf courses are common in Carmel Valley and the adjacent Monterey Peninsula region and is an already and existing condition of the Rancho Canada golf course.

As discussed in Chapter 3.3, *Biological Resources*, the CMS operates an environmental education project called the Hilton-Bialek Biological Sciences Project on land on the east side of the school and on the adjacent Stemple and Hatton parcels. The Proposed Project would develop the Stemple and Hatton parcels and, therefore, remove the potential for the environmental education project to use those parcels. According to the director of the biological sciences project (Hohenberger pers. comm.), the school has an informal arrangement with the owner of these off-school parcels to conduct environmental education activities in these areas. The lack of formal agreement with the school implies the Hilton-Bialek Biological Sciences Project was allowed temporary use of the Stemple and Hatton parcels. The loss of these parcels would reduce the area potentially useable off school grounds for environmental education, but the property on the school property could still be used for those purposes. In addition, the new habitat preserve, which would be open for public use, would be available for environmental education, including a new trail link to the Palo Corona Regional Park, which would add new areas useable by CMS. Although the habitat preserve and Palo Corona Regional Park are farther away from the school than the Stemple and Hatton parcels, the areas are still relatively close by such that environmental education opportunities associated with the Hilton-Bialak project could continue at CMS supplemented by these new areas.

Therefore, the project would have a *less than significant* impact related to land use compatibility with the mitigation in Chapter 3.4, *Aesthetics*. No additional mitigation is required.

~~130-Unit Alternative~~

~~Construction~~

~~Similar to the Proposed Project, temporary land use impacts associated with construction activities of this alternative would include site grading, excavation, construction staging, and building erection. These activities involve the movement of heavy construction equipment, truck traffic, grading activities, construction noise, and air emissions. The construction time would extend over many years, depending on market conditions for custom residential units. Construction impacts specifically related to nuisance effects (i.e., air quality, noise, traffic, and aesthetics) are addressed in other sections of this Recirculated Draft EIR. Since these construction-related impacts are addressed in other sections of this Recirculated Draft EIR and can be mitigated to a less-than-significant level, this impact would be *less than significant*. No additional mitigation is required.~~

~~Operation~~

~~Similar to the Proposed Project, the 130-unit Alternative would not have a significant impact related to land use compatibility or the general character of the project vicinity with the mitigation identified in Chapter 3.4, *Aesthetics*. This Alternative would have a lesser density overall due to the lower number of units, but the general clustering within the residential areas would be similar. Although a formal restoration plan has not yet been developed for the open space area, the 130-unit Alternative would also result in an open space buffer between new residential development and the open space areas to the south of the golf course. Lot 130 would be a single-family dwelling adjacent to other existing single-family dwellings.~~

~~As discussed for the Proposed Project, the 130-Unit Alternative would also develop a portion of the Hatton parcel, and therefore remove the potential for the environmental education project to use that land. According to the director of the biological sciences project (Hohenberger pers. comm.), the school has an informal arrangement with the owner of these off-school parcels to conduct environmental education activities in these areas. The lack of formal agreement with the school implies the Hilton-Bialek Biological Sciences Project was allowed temporary use of the Stemple and Hatton parcels. The 130-Unit Alternative would also add new opportunities for environmental education with the proposed habitat reserve and the new trail connecting to Palo Corona Regional Park, which would offset the loss of use of a portion of the Stemple and Hatton parcels for environmental education.~~

~~Therefore, the 130-unit Alternative would have a *less than significant* impact on land use compatibility, with the mitigation for visual aesthetics in Chapter 3.4, *Aesthetics*. No additional mitigation is required.~~

B. Plan/Policy Consistency

Impact LU-2: Conflicts with Land Use Plans, Policies, or Regulations (significant and unavoidable with mitigation)

~~Proposed Project~~

~~Please see **Appendix D** for an analysis of the consistency of the Project with regard to the 2013 CVMPs land-use policies. The 2013 CVMP includes numerous policies that address development issues such as land use, residential buildout, retaining the rural character of the region and~~

providing open space, providing Affordable Housing, hydrology and water quality, traffic and water constraints, and protection of the Carmel River. These key issues are discussed below. The other sections of this EIR also discuss Project development issues related to other subject areas covered by 2013 CVMPs' policies such as geology, soils, and seismicity, aesthetics, and public services and utilities.

Land Use - 2013 CVMP Policy CV-1.27 establishes a Special Treatment Area on 40 acres within the Rancho Canada golf course (including the Proposed Project's residential element) with residential development allowed with density up to 10 units/acre and providing a minimum of 50% affordable/workforce housing. The policy also describes that prior to beginning residential development, projects must address environmental resource constraints including water, traffic and flooding. The Proposed Project would be consistent with this policy as it would include 50% affordable/workforce housing and its gross density (281 units in an approximately 38 acre area = 7 to 8 units/acre) would comply with the density limits. The Pattern Book (**Appendix B**) would be implemented via recorded Conditions, Covenants, and Restrictions (CC&Rs). Property owners would be required to obtain design review and approval from the Architectural Review Committee formed for the development. The Pattern Book defines appropriate architectural styles as well as traditional zoning criteria for height, setbacks, and parking. The different setback requirements would be implemented via notation on the recorded final map and Section District Map. The setbacks noted on the final map would be the same setbacks identified in the Pattern Book (**Appendix B**). The properties would remain within the Site Design ("S") and Design Control ("D") Zoning Districts.

Regarding environmental constraints regarding water supply, traffic and flooding, these are analyzed in this EIR. Water supply is adequate to serve the project and the project would elevate the new residential areas above the 100-year flood level without resulting in upstream or downstream flooding (with mitigation identified in Chapter 3.2, *Hydrology and Water Quality*. Regarding traffic, as described in Chapter 3.7, *Transportation and Traffic*, even with mitigation, some of the projects' direct or cumulative traffic impacts would be significant and unavoidable and thus the project has addressed traffic impacts to the extent feasible.

The 2013 CVMP and 2010 General Plan land use designation for the site is Public/Quasi-Public (P/QP), which does not allow for residential subdivision. However, as noted above, 2013 CVMP Policy CV-1.27 allows for residential use in the Special Treatment Area. Although an amendment to the 2013 CVMP and 2010 General Plan land use diagram and rezoning to a residential zoning district under Title 21 would be required this is not considered a fundamental inconsistency with existing land use plans due to the provision in 2013 CVMP Policy CV-1.27.

Residential Buildout—The 2013 CVMP establishes a maximum number of 190 new residential units resultant from residential subdivision. As noted in Chapter 2, Project Description, the Proposed Project would be in conflict with Policy CV-1.6 that establishes the residential unit cap. In order to facilitate the project and to still provide the 24 units reserved in Policy CV-1.6 for the Delfino property, the residential unit cap from residential subdivision would need to be raised to 305 units (281 units for the Proposed Project and 24 units for the Delfino property). The residential unit cap was adopted in part to reduce environmental impacts such as those related to water supply and traffic, as well as open space preservation. While the Proposed Project would not result in significant impacts to water supply or open space preservation (the project would actually increase open space open to the public), the project would result in certain significant and unavoidable traffic impacts inside and outside Carmel Valley. Thus, the project's inconsistency with CVMP Policy 1.6 would result in significant secondary environmental impacts and this is considered a significant land

use impact. Although the CVMP could be amended to rectify the policy inconsistency, as discussed in Chapter 3.7, *Transportation and Traffic*, there is no feasible mitigation to eliminate all of the significant traffic impacts and this impact is therefore significant and unavoidable with mitigation.

Rural Character and Open Space—The Project would cluster housing at densities not typical of rural residential development, however, by clustering development, the Project is able to provide 39 acres of dedicated open space, most of which is adjacent to the Carmel River. Approximately 31 acres of this open space would be a publicly accessible habitat preserve which would be more consistent with rural character than the existing golf course.

Affordable Housing—The 2013 CVMP also encourages the development of Affordable Housing to help meet the regional demand. Because of the high cost of housing in the Carmel Valley, Affordable Housing cannot be developed at low densities typical of rural residential development. By clustering development away from the Carmel River and out of the line of site of Carmel Valley Road, the Proposed Project achieves a compromise between the 2013 CVMP policies of maintaining rural character and providing Affordable Housing by providing 140 units of Workforce and Affordable Housing in addition to 39 acres of open space. The Proposed Project would thus provide 50% Affordable/Workforce Housing, which would be consistent with the 2013 CVMP Policy CV-1.27 for the Special Treatment Area: Rancho Village Cañada.

Hydrology and Water Quality—Project impacts related to flooding and water quality are presented in Chapter 3.2, *Hydrology and Water Quality*. The Project would not increase flooding in upstream or downstream areas and the proposed residential area would be elevated out of the 100-year flood plain. Stormwater runoff controls are included in the Project and mitigation has been identified to address both construction and operational water quality concerns related to runoff.

Traffic—Pursuant to the 2013 CVMP Policy CV-2.17, an EIR has been prepared for the proposed project, in part because the Proposed Project would result or contribute to traffic congestion on Carmel Valley Road in excess of the standards described in the 2013 CVMP. As described in this Recirculated Draft EIR, many of the traffic impacts of this Project can be mitigated through direct Project mitigation measures and through payment of the appropriate traffic impact fees for impacts on Carmel Valley Road and to regional highways but some of the project's traffic impacts would be significant and unavoidable where there are no plans to improve regional roadways (i.e., SR 1 in Carmel). Policy CV-2.17 requires that a project be conditioned to provide traffic improvements that would bring the affected roadways up to the policy standards or an EIR be prepared. Since there is not feasible mitigation to improve certain roadway conditions to meet the policy standards, feasible mitigation has been considered and an EIR has been prepared, the project would be consistent with the requirements of Policy CV-2.17.

Water Supply—The Monterey Peninsula Water Management District (MPWMD) allocates water to its various member agencies, which includes a portion of the County. Presently, Cal-Am does not have any water available for new development, which limits new development dependent on Cal-Am, including development on existing vacant lots of record. As a result, until a long-term solution is established, no new development dependent on Cal-Am for water may occur unless an alternative means of supply or entitlement is established for a specific project. The Proposed Project would provide its own supply of water through existing wells or new wells on-site, and is anticipated to result in an overall savings in water use consistent with Ordinance 3310 (see Chapter 3.10, *Public Services, Utilities, and Recreation*).

~~**Carmel River**—The Project would restore approximately 15 acres of riparian habitat adjacent to the Carmel River that would enhance the function of the river as a riparian migration corridor. In addition, the project would lower well withdrawals from the Carmel Valley Alluvial quifer, thus benefiting Carmel River flows. The Project's potential impacts related to hydrology and water quality (see Chapter 3.2, *Hydrology and Water Quality*) and biological resources (see Chapter 3.3, *Biological Resources*) can be mitigated to a *less-than-significant* level.~~

~~**Conclusion—**The Proposed Project would be consistent with the allowable residential use in the Rancho Canada Special Treatment Area and consistent with many of the intentions and purposes in both the 2010 General Plan and the 2013 CVMP. The Project would not, however, be consistent with the residential subdivision limit in CVMP Policy CV-1.6. The additional project-related residential units above the limit would contribute to traffic congestion along Carmel Valley Road and other roadway segments above the level of service standards in the 2013 CVMP. Feasible mitigation is not available to reduce all traffic impacts to a less than significant level. Thus, this policy inconsistency would result in a *significant and unavoidable* environmental impact.~~

~~130-Unit Alternative~~

Please see **Appendix D** for an analysis of the consistency of Project ~~the130-Unit Alternative~~ with regard to the 2013 CVMP land use policies. The ~~As discussed above for the Proposed Project, the~~ 2013 CVMP includes numerous policies that address development issues such as land use, residential buildout, retaining the rural character of the region and providing open space, providing Affordable Housing, hydrology and water quality, traffic and water constraints, and protection of the Carmel River. These key issues are discussed below. The other sections of this Second Revised ~~Recirculated~~ Draft EIR also discuss Project development issues related to other subject areas covered by 2013 CVMP policies such as geology, soils, and seismicity, aesthetics, and public services and utilities.

Land Use—The Project ~~130-Unit Alternative~~ would be inconsistent with 2013 CVMP Policy CV-1.27 in regards to the minimum 50% affordable/workforce housing requirement for the Special Treatment area. The environmental effects of the inconsistency with the 50% housing requirement are difficult to identify specifically. Since affordable housing is limited in general in Carmel Valley, it is probable that less construction of affordable housing within the Rancho Canada Special Treatment Area would result in greater pressure to provide such housing elsewhere in the County. Within Carmel Valley and on the Monterey Peninsula in general, opportunities for affordable housing are limited by a relatively high premium on land values, limited areas zoned for higher densities, and the limitations in water supply availability. Based on these conditions, affordable housing demand is more likely to be met outside the Monterey Peninsula than inside the Peninsula, especially considering water supply conditions at present. Thus, the lesser amount of affordable/workforce housing could result in longer commutes to work for Carmel Valley and Monterey Peninsula employees from outside of Carmel Valley and the Monterey Peninsula, which could result in worsened regional traffic conditions (as well as Carmel Valley Road conditions). However, it is difficult to speculate where the affordable housing demand would specifically be met, and thus to identify the specific impacts of developing affordable housing elsewhere and the specific impacts on traffic conditions in particular. The inconsistency with the 50% affordable/workforce housing requirement could be resolved by requiring the project to be altered to be consistent with the policy requirements. However, the Applicant has identified that, while the Project ~~130-unit Alternative~~ would comply with the County's 20% affordable housing requirement, increased amounts of affordable/workforce housing is not financially feasible. ~~for the 130-unit Alternative given the lesser~~

~~amount of market-rate units than the Proposed Project.~~ Given that the Project ~~130-unit Alternative~~ would result in certain significant and unavoidable traffic impacts, even with mitigation, and the inconsistency with the 50% affordable/workforce housing requirement for the Special Treatment Area would contribute to those traffic impacts, this is considered a *significant and unavoidable* impact.

Without a general plan amendment, the Project would be inconsistent with two other policies concerning affordable housing. The Project is inconsistent with General Plan Policy LU-2.13 (which requires 25% affordable housing units and the project only proposes 20%) and the Inclusionary Housing Ordinance (Ordinance 3768 which requires 20% affordable units on-site). As discussed above, the physical impact on the environment is related to commutes that would be longer with less affordable housing considering that the Project would result in significant unavoidable traffic impacts. Thus inconsistency with these other policies is a significant unavoidable impact like the inconsistency discussed above with Policy CV-1.27. The proposed General Plan amendment would address the level of affordability and resolve the inconsistency with other General Plan policies. However, while a change in the policies would resolve the policy inconsistency, it would not avoid the physical effects described in the Second Revised Draft EIR (e.g. longer commutes for workers from outside Carmel Valley contributing to significant and unavoidable traffic impacts).

Regarding environmental constraints regarding water supply, traffic and flooding, these are analyzed in this Second Revised Draft EIR. Water supply is adequate to serve the project and the project would elevate the new residential areas above the 100-year flood level without resulting in upstream or downstream flooding (with mitigation identified in Chapter 3.2, *Hydrology and Water Quality*. Regarding traffic, as described in Chapter 3.7, *Transportation and Traffic*, even with mitigation, some of the projects' direct or cumulative traffic impacts would be significant and unavoidable and thus the project has addressed traffic impacts to the extent feasible.

The Project ~~130-unit Alternative~~ would be subject to development standards cited in Table 2-2 ~~4~~ (Project Description) and for MDR Zoning District ~~(except for Lot 130, LDR Zoning District)~~. All lots (as well as all of Carmel Valley) are subject to Design Approval (DA) and Site (S) approval due to D and S overlay districts.

The 2013 CVMP and 2010 General Plan land use designation for the site is Public/Quasi-Public (P/QP), which does not allow for residential subdivision. However, as noted above, 2013 CVMP Policy CV-1.27 allows for residential use in the Special Treatment Area. Although an amendment to the 2013 CVMP land use diagram, allowable acreages within the Special Treatment Area, and rezoning to a residential zoning district under Title 21 would be required through a General Plan Amendment, this is not considered a fundamental inconsistency with existing land use plans due to the provision in 2013 CVMP Policy CV-1.27.

Residential Buildout—The Project ~~130-Unit Alternative~~ would not increase the number of residential units allowed under the 2013 CVMP quota for new units from residential subdivision. The 2013 CVMP establishes a quota of 190 new residential units in the plan area from subdivision. Since the quota was established, no new residential units subject to the quota have been approved or built. If the Project ~~this alternative~~ is approved, the 130 residential units would be deducted from the 190 unit total, leaving 60 units for new subdivisions (including 24 units reserved for the Delfino property). The transfer of 60 units ~~AF~~ for other development, while it would make other development more likely, would not result in more units than allowed in the 2013 CVMP because

the County will retain its authority to not approve more subdivision units than allowed in the CVMP. Approval of the alternative would thus not result in exceedance of the residential unit quota.

Rural Character and Open Space—The Project ~~Although less dense than the Proposed Project, the 130-Unit Alternative~~ would cluster housing at densities not typical of rural residential development; however, by clustering development, the project ~~alternative~~ is able to provide approximately 40 ~~53~~ acres of dedicated open space, most of which is adjacent to the Carmel River. Approximately 38 ~~39~~ acres of this open space would be a publicly accessible habitat preserve which would be more consistent with rural character than the existing golf course.

Affordable Housing—The 2013 CVMP also encourages the development of Affordable Housing to help meet the regional demand. Because of the high cost of housing in the Carmel Valley, Affordable Housing cannot be developed at low densities typical of rural residential development. By clustering development away from the Carmel River and out of the line of site of Carmel Valley Road, the Project ~~130-Unit Alternative~~ achieves a compromise between the 2013 CVMP policies of maintaining rural character and providing Affordable Housing by providing 25 units of Workforce and Affordable Housing. However, as noted above, the Project ~~130-unit Alternative~~ would not be consistent with the 50% affordable/workforce housing requirement.

Hydrology and Water Quality—The Project ~~130-Unit Alternative~~ impacts related to flooding and water quality are presented in Chapter 3.2, *Hydrology and Water Quality*. The Project ~~130-Unit Alternative~~ would not increase flooding in upstream or downstream areas and the proposed residential area would be elevated out of the 100-year flood plain. Stormwater runoff controls are included in the Project design ~~130-Unit Alternative~~ and mitigation has been identified to address both construction and operational water quality concerns related to runoff.

Traffic—As described in this Second Revised ~~Recirculated~~ Draft EIR, some of the traffic impacts of the Project ~~this 130-Unit Alternative~~ can be mitigated through direct Project mitigation measures and through payment of the appropriate traffic impact fees for impacts on Carmel Valley Road and to regional highways but some of the project's traffic impacts would be significant and unavoidable where there are no plans to improve regional roadways.

Water Supply—The Project ~~Similar to the Proposed Project, the 130-Unit Alternative~~ would provide its own supply of water through existing wells or rehabilitated well(s) onsite. A pipeline from the existing or new well to the nearby Cal-Am water distribution system would be constructed. The water use proposed under this alternative would require approval from the State Water Resources Control Board and Monterey Peninsula Water Management District. The Project ~~130-Unit Alternative~~ is anticipated to result in an overall savings in water use consistent with Ordinance 3310 (see Chapter 3.10, *Public Services, Utilities, and Recreation*).

Carmel River—The Project ~~130-Unit Alternative~~ would compensate for impacts on riparian habitat adjacent to the Carmel River that would enhance the function of the river as a riparian migration corridor. In addition, the Project ~~130-Unit Alternative~~ would lower well withdrawals from the Carmel Valley aquifer, thus benefiting Carmel River flows. The potential impacts of the Project ~~130-Unit Alternative (including Lot 130)~~ related to hydrology and water quality (see Chapter 3.2, *Hydrology and Water Quality*) and biological resources (see Chapter 3.3, *Biological Resources*) can be mitigated to a *less-than-significant* level.

Conclusion—The Project ~~130-unit Alternative~~ would be consistent with the allowable residential use in the Rancho Cañada Special Treatment Area and consistent with many of the intentions and

purposes in both the 2010 General Plan and the 2013 CVMP. However, the Project ~~project~~ would not be consistent with the 50% affordable/workforce housing requirement in CV-1.27 or under Policy CV1.6(a). The inconsistency with the 50% affordable/workforce housing requirement would result in longer employee commutes to Carmel Valley and the Monterey Peninsula and would contribute to traffic congestion along Carmel Valley Road and other roadway segments above the level of service standards in the 2013 CVMP. Some of the Alternative's traffic impacts cannot be mitigated to a less than significant level. Therefore, the Project's ~~Alternative's~~ policy inconsistency would result in a *significant and unavoidable* environmental impact.

Impact LU-3: Conflicts with Habitat Conservation Plans (no impact)

~~Proposed Project~~

The project site is not located within a habitat conservation plan or natural community conservation plan area. Therefore, there would not be a potential conflict with such conservation plans and there would be *no impact.* No mitigation is required.

~~130-Unit Alternative~~

~~Similar to the Proposed Project, the 130-Unit Alternative, including Lot 130, is not located within a habitat conservation plan or natural community conservation plan area. Therefore, there would not be a potential conflict with such conservation plans and there would be *no impact.* No mitigation is required.~~

C. Division of an Established Community

Impact LU-4: Physically Divide a Community (less than significant)

~~Proposed Project~~

The Proposed Project would result in development of an existing golf course into a residential subdivision and creation of parks and a habitat preserve. The project site is bounded on the north by a school and a church, on the east by a golf course, on the south by the Carmel River, and on the west by existing private and commercial residential uses. At present, there is no direct access through the site. The project would include a public trail that, in the future, would make regional trail connections that would facilitate access. The Project would not affect access to any of the surrounding land uses. Therefore, the Project would not physically divide a community. This impact would be *less than significant.* No mitigation is required.

~~130-Unit Alternative~~

~~Similar to the Proposed Project, the 130-Unit Alternative would result in development of an existing golf course into a residential subdivision and creation of parks and a habitat preserve. The western area of the 130-Unit Alternative is bounded on the north by the CMS and a church, on the east by a golf course, on the south by the Carmel River, and on the west by existing private and commercial residential uses. Lot 130 is bound to the north by Carmel Valley Road, to the east by single-family residences, and to the south and west by the remaining golf course. At present, there is no direct access through the site. The 130-Unit Alternative would provide emergency and pedestrian access through Rio Road west. Access to residential units, including Lot 130, would be via Carmel Valley Road. The Project would include a public trail that would make regional trail connections across the~~

~~existing golf cart bridge over Carmel River to Palo Corona Regional Park. Because the 130-Unit Alternative would not affect access to any of the surrounding land uses, this alternative would not physically divide an existing community. Therefore, the impact would be *less than significant.* No mitigation is required.~~

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Chapter 3.6
Hazards and Hazardous Materials

Introduction

This chapter provides a discussion of the hazards and hazardous materials issues related to the Proposed Project ~~and the 130-Unit Alternative~~ in the Carmel Valley. The chapter includes a definition of hazardous materials and waste, an overview of existing conditions based on available literature, a summary of local, state, and federal policies and regulations related to hazards and hazardous materials that are applicable to the project area, and an analysis of the environmental impacts that could result from the Project ~~and the 130-Unit Alternative~~. Where feasible, mitigation measures are recommended to reduce the level of impacts.

Impact Summary

Table 3.6-1 below provides a summary of the potential environmental impacts of the Project ~~and the 130-Unit Alternative~~. As shown in **Table 3.6-1**, the Proposed Project ~~and the 130-Unit Alternative~~ would have some significant adverse impacts related to hazards and hazardous materials within the project area. However, implementation of the mitigation measures described in this Second Revised ~~Recirculated~~ Draft EIR, would reduce the impacts to less-than-significant levels.

Table 3.6-1. Hazardous Materials Impact Summary

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
A. Public Exposure				
HAZ-1: Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment	~~Potentially Significant~~	Potentially Significant	HAZ-1: Follow the Cypress Fire Protection District and Other Guidelines for Storage and Handling of Hazardous Materials HAZ-2: Immediately Contain Spills, Excavate Spill-Contaminated Soil, and Dispose of Contaminated Soil at an Approved Facility HAZ-3: Develop and Implement Plans to Reduce Exposure of People and the Environment to Hazardous Conditions During Construction Activities	LTS

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
			~~HAZ-4: Test for the Presence of Asbestos or Lead-Based Paint and Remove in Accordance with Occupational Safety and Health Administration (OSHA) and the Monterey Bay Unified Air Pollution Control District (MBUAPCD)Procedures (130-Unit Alternative only)~~ PSU-2: Coordinate with Appropriate Utility Service Providers and Related Agencies to Reduce Service Interruptions	
HAZ-2: Routine Transport, Use, or Disposal of Hazardous Materials	~~Potentially Significant~~	Potentially Significant	HAZ-~~4~~5: Participate in the Local Household Hazardous Waste Collection Program	LTS
HAZ-3: Hazardous Emissions or Hazardous Materials, Substances, or Waste Handling Within One-Quarter Mile of a School	~~Potentially Significant~~	Potentially Significant	~~For the Proposed Project:~~ HAZ-1 through HAZ-4 [see above] ~~3 and HAZ-5~~ ~~For the 130-Unit Alternative:~~ ~~HAZ-1 through HAZ-5~~	LTS
HAZ-4: Location of the Project on a Known Hazardous Material Site	~~LTS~~	LTS	None Required	–
B. Airport Vicinity				
HAZ-5: Potential Exposure of Hazardous Materials in the Vicinity of an Airport or Airstrip	~~LTS~~	LTS	None Required	–
LTS = Less than Significant				

Environmental Setting

The following sections describe existing conditions in the Project study area with regard to hazards and hazardous materials. Information in the following sections was derived from sources in the published hazardous materials literature, 2014 searches of the State Water Resources Control Board's (State Water Board) GeoTracker, the U.S. Environmental Protection Agency's (EPA's) NEPAssist database, and the California Department of Toxic Substances Control's (DTSC's) Envirostor database, and from the prior phase one site assessment reports prepared for the Project.

No additional fieldwork was performed for this Second Revised ~~Recirculated~~ Draft Environmental Impact Report (EIR).

Research Methods

The following literature was reviewed to assess the hazard and hazardous material conditions found in the ~~Proposed Project and 130-Unit Alternative~~ project area.

- ENGEO. 2004. *Phase One Environmental Site Assessment, Rancho Cañada Golf Club 4860 Carmel Valley Road, Carmel Valley California*. Submitted to Lombardo Land Group-1. Monterey, CA. Project No. 6023.3.001.01. March 2.
- ENGEO. 2006. *Phase One Environmental Site Assessment Update, Rancho Cañada Village, Carmel Valley California*. Prepared for Rancho Cañada Community Partners, LLC. Monterey, CA. Project No. 6023.3.004.01. July 31.

This section describes general environmental conditions in terms of potential sources of hazardous materials in soil or groundwater in the project area.

The environmental conditions documented in the phase one site assessment reports provide a historical background and overview of the project area to assess general types of potential impacts and the likelihood of their occurrence. Information on historical land use was obtained from a review of historical topographic maps (dating from 1913 to 1997) and historical aerial photographs (dating from 1956 to 1981). A search for historical fire insurance maps (Sanborn maps) was conducted, although none were located that pertained to the project site or adjacent properties.

Information on the remaining potential sources of hazardous materials was obtained from a review of federal and state environmental databases and local agency records including additional searches conducted in 2014 to examine potential for additional hazardous conditions not found in the earlier reports.

Definitions

Hazardous materials and hazardous wastes are defined in the California Code of Regulations (CCR) Title 22, Sections 66260 through 66261.10. As defined in Title 22, hazardous materials are grouped into four general categories.

- Toxic (causes human health effects).
- Ignitable (has the ability to burn).
- Corrosive (causes severe burns or damages materials).
- Reactive (causes explosions or generates toxic gasses).

Hazardous materials are generally considered to be substances with certain chemical or physical properties that may pose a substantial present or future hazard to human health or the environment when improperly handled, stored, disposed, or otherwise managed. In general, discarded, abandoned, or inherently waste-like hazardous materials are referred to as hazardous wastes. A hazardous material or waste can be present in liquid, semi-solid, solid, or gaseous form.

Existing Conditions in the Project Area

The 2004 Phase One Environmental Site Assessment (ESA) and subsequent 2006 Phase One ESA update reports were prepared for Assessor Parcel Numbers (APNs) 015-162-016, 015-162-017, 015-162-025, 015-162-026, 015-162-037, 015-162-039, and 015-162-040. These reports include the West Course of the Rancho Cañada Golf Club~~, which is the overlap area of the Proposed Project and the 130-Unit Alternative~~. Some areas ~~Areas~~ of the project site ~~130-Unit Alternative that do not overlap with the Project~~ are not covered by the Phase One ESA report and subsequent update report. These reports are based on data gathered through record searches of the area, including environmental record databases, historical photographs, maps, and through field reconnaissance. Additional environmental databases were reviewed in 2014. None of the environmental databases searched produced records of chemical storage, spills, or contamination on the APNs listed in the reports as being within the project area boundaries.

Historically, the project area had been undeveloped open space until 1976. Since 1976, the project site has supported a commercial golf course with one small restroom on the southwest corner of the site and a mobile office. It is conceivable that persistent agrichemicals may have been applied to the property. Chemical usage associated with golf course landscaping may have resulted in on-site contamination to soil and groundwater.

According to the Phase One ESA, sampling and testing of 40-near surface (3- to 9-inches below the surface) soil samples showed organochlorine pesticides at trace levels, which were below the EPA's Region 9 Preliminary Remedial Goals (PRGs) for residential soils. Organophosphorus pesticides were not detected.

While the Hatton Parcel, a 3-acre parcel in the northwest corner of the project site, was not included in the soil sample testing of the report, it has historically remained undeveloped and presently remains mostly undeveloped as an entryway into the golf course. These past and present land uses are not associated with usage of chemicals that would have caused contamination on the site.

An irrigation water supply well and a groundwater monitoring well were observed on the property. One pad-mounted transformer was observed next to the irrigation water supply well. There was no obvious leaking or staining observed at or near the transformer.

Portions of the periphery of the project site were ~~130-Unit Alternative, including Lot 130 are~~ not included in the Phase One ESA~~. The periphery of the site of the Proposed Project that is part of the 130-Unit Alternative was not included in the Phase One ESA and~~; therefore, the potential presence of hazardous materials in the soil is unknown in these areas. However, the 2014 search of state and federal databases did not indicate any known hazardous sites on the project ~~130-Unit Alternative~~ site.

Existing Conditions in Adjacent Areas

Adjacent parcels consist of a middle school and school bus maintenance facility, the remainder of the Rancho Cañada Golf Course with a clubhouse, the Carmel River, a church, and low- and high-density residential development. As shown in **Table 3.6-2**, the environmental database search of these off-site parcels listed the following parcels within the appropriate American Society for Testing and Materials (ASTM) search distance of the subject property.

None of the facilities identified in the database search are expected to affect the project area given the database information, topographic gradient, regional direction of groundwater flow and the distance from the subject property.

Table 3.6-2. Summary of Potential Hazardous Materials Near the Project Site

Name	Address	Distance (miles)	Direction	Elevation	Violation/Contamination
Carmel Middle School	4380 Carmel Valley Road	0.125–0.025	WSW	Equal/Higher	No reported violations
Pupil Transportation Facility	Carmel Valley Road	0.25–0.5	ENE	Equal/Higher	No reported violations
Carmel Center Cleaners	11 Cross Road Mall	0.25–0.05	WSW	Lower	No reported violations
Monterey Regional Waste Discharge System	4380 Carmel Valley Road	0.125–0.25	NNW	Equal/Higher	No reported violations
Rancho Cañada Maintenance	Carmel Valley Road	0.25–0.05	NE	Equal/Higher	LUST- case closed
Tosco Facility #4598	544 Carmel Rancho Blvd	0.5–1.0	WNW	Lower	LUST- case closed
Western Dealer Holding Company	544 Carmel Rancho Blvd[1]	0.44	NW	Higher	Active permitted UST Low risk to project area
Chevron Station	3645 Rio Road	0.43	W	Equal/Lower	Active permitted UST Low risk to project area
Carmel Shell	7 Carmel Center Place	0.41	W	Equal/Lower	Active permitted UST Low risk to project area

Source: ENGEO 2004; State Water Resources Water Quality Control Board 2014; California Department of Toxic Substances Control 2014.

[1] The State Water Board GeoTracker shows the same address as the Tosco Facility #4598, but different location for Western Dealers Holding Company site. The location shown for this site is used for distance, direction and elevation.

LUST = leaky underground storage tank.

UST = underground storage tank.

The Carmel Middle School was reported in the Facility Index System (FINDS), which contains both facility information and references to other sources of information that contain more detail. Listing in FINDS is not indicative of chemical contamination. The school was also listed on the HAZNET database, which compiles data that is extracted from the copies of hazardous waste manifests, received each year by the Department of Toxic Substances Control (DTSC). The HAZNET database reported that the disposal of wastes from this facility has included asbestos containing waste and other organic solids. No violations or chemical contamination resulting from improper disposal or storage has been reported.

The Pupil Transportation Facility, located adjacent to the middle school has been listed on the Hazardous Substance Storage Container Database (HIST UST). This database contains a historical listing of underground storage tanks (USTs). Historically, the facility has had a total of three underground storage tanks that contained unleaded and diesel fuels. No major leaks requiring clean up and listing on the leaky underground storage tank (LUST) database have been reported for this site. Furthermore, the USTs were removed in 1997, and aboveground storage tanks currently serve the facility.

Carmel Center Cleaners is a dry-cleaning facility that has been listed on the Resource Conservation and Recovery Act (RCRA) Info database (RCRAInfo). RCRAInfo database tracks events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. The facility has also been listed on the Drycleaners database, which lists drycleaner related facilities that have EPA identification numbers. The Carmel Center Cleaners has been listed on these two databases because of the chemicals involved in dry cleaning. No violations or chemical contamination resulting from improper disposal or storage has been reported for this facility on any of the listed databases.

The Monterey Regional Waste Management District facility located on the middle school property has been listed on the Waste Discharge System (WDS) and HAZNET databases. The WDS database lists Regional Water Quality Control Board (Regional Water Board) sites that have been issued waste discharge requirements. The facility has been issued a waste discharge requirement, but has no reported violations or chemical contamination resulting from improper disposal or storage for either database.

The Rancho Cañada Golf Course maintenance facility has been identified in the databases as a HAZNET, Cortese, and a LUST site. The Cortese Hazardous Waste and Substance Site List (CORTESE) lists sites that are designated by the State Water Board, Integrated Waste Board, and the DTSC. The LUST Information System is a database that contains an inventory of reported leaking underground storage tank incidents. The UST was installed on the maintenance facility in 1976 and removed in 1993 and contained a mixture of regular and unleaded gasoline. Impact on the surrounding soil was considered negligible and the facility received closure status in 1993. Currently the facility includes two above-ground storage tanks, yard maintenance equipment, and numerous pesticide and fungicide chemicals. No further investigations or violations have been reported.

The Tosco facility has also been listed on the LUST database. The UST located on this facility reported a leak in 1998 in which testing confirmed groundwater contamination. The site became eligible for closure March 2013, and the case was closed in January 2014 (State Water Resources Control Board 2014).

Three permitted UST sites are open within 0.5 mile of the Proposed Project ~~and 130-Unit Alternative~~ site~~s~~ (State Water Resources Control Board 2014). These sites include Western Dealer Holding Company, Chevron Station, and Carmel Shell. Based on the topography of the area and location of these three facilities, these facilities pose low to no hazardous risk to the Proposed Project ~~and 130-Unit Alternative~~ site~~s~~ in the event of an accident or leak.

Phase One Findings

The Phase One ESA reports conclude that there are no recognized environmental conditions associated with the use of the property that would require general cleanup or demolition in preparation of a changed land use. Furthermore, no documentation or physical evidence was discovered to indicate soil or groundwater contamination. Review of the State Water Board's GeoTracker database, the EPA's NEPAssist database and the DTSC's Envirostor database in 2014 show low to no risk for the potential of an accidental hazardous spill to contaminate the site.

Regulatory Setting

This section discusses the local, state, and federal policies and regulations that are relevant to the analysis of the hazardous materials issues of the Proposed Project ~~and 130-Unit Alternative~~.

Federal Policies and Regulations

The principal federal regulatory agency is the EPA. The two key federal regulations pertaining to hazardous wastes are described below.

Resource Conservation and Recovery Act (RCRA)

The RCRA enables the EPA to administer a regulatory program that extends from the manufacturing of hazardous materials to their disposal, regulating the generation, transportation, treatment, storage, and disposal of hazardous waste at all facilities and sites in the nation.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

The CERCLA, also known as Superfund, was passed to facilitate the cleanup of the nation's toxic-waste sites. In 1986, the CERCLA was amended by the Superfund Amendment and Reauthorization Act (SARA) Title III (community right-to-know laws), which states that past and present owners of land contaminated with hazardous substances can be held liable for the entire cost of the cleanup, even if the material was dumped illegally when the property was under different ownership.

Other applicable federal regulations are contained primarily in Titles 29, 40, and 49 of the Code of Federal Regulations (CFR).

State Policies and Regulations

In California, state regulations are equal to or more stringent than federal regulations. The state has been granted primary oversight responsibility by the EPA to administer and enforce hazardous waste management programs. State regulations have detailed planning and management requirements to ensure that hazardous wastes are handled, stored, and disposed of properly to reduce risks to human health and the environment. Several key laws pertaining to hazardous wastes are discussed below.

Hazardous Materials Release Response Plans and Inventory Act

The Hazardous Materials Release Response Plans and Inventory Act, also known as the Business Plan Act, requires businesses using hazardous materials to prepare a plan that describes their facilities, inventories, emergency response plans, and training programs. Hazardous materials are defined as raw or unused materials that are part of a process or manufacturing step and not considered hazardous wastes. Health concerns pertaining to the release of hazardous materials, however, are similar to those relating to hazardous wastes.

Hazardous Waste Control Act (HWCA)

The HWCA created the State Hazardous Waste Management Program, which is similar to, but more stringent than, the federal RCRA program. The HWCA is implemented by regulations contained in Title 26 of the CCR, which describes requirements for the proper management of hazardous wastes, including criteria for the following.

- Identification and classification
- Generation and transportation
- Design and permitting of recycling, treatment, storage, and disposal facilities
- Treatment standards
- Operation of facilities and staff training
- Closure of facilities and liability requirements

These regulations list more than 800 potentially hazardous materials and establish criteria for identifying, packaging, and disposing of such wastes. Under the HWCA and Title 26, the generator of hazardous waste must complete a manifest that accompanies the waste from the generator to the transporter to the ultimate disposal location. Copies of the manifest must be filed with the DTSC.

Uniform Codes

The Uniform Fire Code (UFC) (e.g., Fire Code, Building Code) regulates the site's storage and use of hazardous materials at commercial and industrial facilities. The UFC states the quantity of materials that can be stored and when additional protective measures are required to mitigate a hazard. The Uniform Building Code (UBC) regulates how protective measures within a structure will be built and/or implemented.

Emergency Services Act

Under the Emergency Services Act, the state developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Quick response to incidents involving hazardous materials or hazardous waste is a key part of the plan, which is administered by the California Office of Emergency Services (OES). The California OES coordinates the responses of other agencies, including the EPA, the California Highway Patrol, Regional Water Boards, air quality management districts, and county disaster response offices.

California Occupational Safety and Health Administration Standards

Worker exposure to contaminated soils, vapors that could be inhaled, or groundwater containing hazardous constituents would be subject to monitoring and personal safety equipment requirements established in Title 8 of the California Occupational Safety and Health Administration (Cal-OSHA) regulations. The primary intent of the Title 8 requirements is to protect workers, but compliance with some of these regulations would also reduce potential hazards to non-construction workers and project area occupants because required controls related to site monitoring, reporting, and other activities would be in place.

Other Laws and Regulations

Other laws pertaining to hazardous materials include the Safe Drinking Water and Toxic Enforcement Act (Proposition 65) and the California Government Code, Section 2.65962.5, which require the Office of Permit Assistance to compile a list of potentially contaminated sites throughout the state.

Local Policies and Regulations

Current County Plans and Policies

2010 Monterey County General Plan

The 2010 General Plan provides a general direction for future growth throughout the unincorporated areas of the County. The 2010 General Plan's objective is to protect the public from risks associated with hazardous materials throughout the County in a manner that promotes human safety. The following goals of the 2010 General Plan apply to the Proposed Project~~ and 130-Unit Alternative~~.

Fire Hazards

Goal S-4: Minimize the risks from fire.

Emergency Preparedness

Goal S-5: Assure the County is prepared to anticipate, respond, and recover from emergencies.

2013 Carmel Valley Master Plan

The 2013 CVMP is part of the 2010 General Plan. As such, the policies outlined in the 2013 CVMP and summarized below must be considered in conjunction with the 2010 General Plan.

Policy CV-4.4: The County shall require emergency road connections as necessary to provide controlled emergency access as determined by appropriate emergency service agencies (Fire Department, OES). The County shall coordinate with the emergency service agencies to periodically update the list of such connections.

Emergency Response Planning

The County has adopted a comprehensive plan dealing with emergency response, including response to emergency earthquake, major fire, and flooding situations. The current Monterey County Emergency Plan is reviewed and updated yearly

Prior County Plans and Policies

The relevant policies in prior County plans are summarized below for informational purposes only.

1982 Monterey County General Plan

The 1982 *Monterey County General Plan* (1982 General Plan) was adopted by the Monterey County Board of Supervisors (Board) in 1982 and is periodically amended. The 1982 General Plan provides a general direction for future growth throughout the unincorporated areas of the County. The 1982

General Plan's objective is to promote balanced growth throughout the County in a manner that protects the County's exquisite but fragile natural resources. Miscellaneous Hazards and Emergency Preparedness

Goal 18: to minimize risks from chemical usage

Objective 18.1: Reduce the risk from hazardous chemicals to an acceptable level by regulating the storage of hazardous chemicals.

Impact Analysis

Methods for Analysis

Assessment of the risks to the environment and workers from hazards and hazardous materials from the Proposed Project ~~and 130-Unit Alternative~~ are based on the following information.

- Review of the Phase One ESA and subsequent update reports (ENGEO 2004, 2006).
- Review of the GeoTracker database (State Water Resources Control Board 2014).
- Review of EPA's NEPAssist (U.S. Environmental Protection Agency 2014).
- Review of the DTSC's Envirostor Database (California Department of Toxic Substances Control 2014).
- Review of the Proposed Project ~~and 130-Unit Alternative~~ in regard to compliance with state and local ordinances and regulations pertaining to hazards and hazardous materials.

Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, 2010 General Plan's plans and policies, and2013 Carmel Valley Master Plan's plans and policies, and agency and professional standards, a project impact would be considered significant if it would:

A. Public Exposure

- Create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 that would create a significant hazard to the public or the environment as a result.

B. Airport Vicinity

- For a project located on a site which is included within an airport land use plan, within two miles of a public airport or public use airport, or private airstrip would the project result in a safety hazard for people residing or working in the project area.

Impacts and Mitigation Measures

A. Public Exposure

Impact HAZ-1: Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment (less than significant with mitigation)

~~**Proposed Project**~~

~~Although construction of the Proposed Project would require excavation and movement of large quantities of soils, the Phase One ESA and subsequent update performed on the project site by ENGEO (2004, 2006) and the 2014 environmental database searches did not indicate hazardous materials conditions on the site. While the original Phase One ESA report and the update did not include testing of soil samples from parcels on the northwest corner of the project area, the report update indicated that there are no Recognized Environmental Conditions (RECs) on the property that would create a hazard to the public and environment (ENGEO 2006).~~

~~The Proposed Project would include importation of up to 100,000 cubic yards of soil. As described in Chapter 2, *Project Description*. The source of the offsite fill is unknown at this time; and as a result, the following assumptions for the offsite fill will become conditions of approval for the Proposed Project.~~

- ~~Fill will be free of petroleum or any hazardous constituents that might otherwise pose a risk to people or the environment.~~
- ~~Fill will not be obtained from any location wherein substantial pollutant emissions will affect sensitive receptors.~~
- ~~Fill will not be obtained from the Odello site or any site in proximity or adjacent to the proposed housing location or near any sensitive receptor in lower Carmel Valley.~~

~~As a result, no hazardous material concerns are raised concerning the importation of fill. Construction of the Proposed Project could expose construction workers, the public or the environment to hazardous materials through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Small quantities of potentially toxic substances (e.g., petroleum and other chemicals used to operate and maintain construction equipment) would be used and disposed of at the project site and transported to and from the site during construction. Accidental releases of small quantities of these substances could contaminate soils and degrade the quality of surface water and groundwater, resulting in a public safety hazard.~~

~~In addition, if there are underground utility lines located within the project site, this could present a potential hazard to construction workers during excavation and construction. This impact would be *potentially significant*.~~ Implementation of the **Mitigation Measures HAZ-1, HAZ-2, and HAZ-3**, ~~described below, would reduce the impact to a *less-than-significant* level.~~ **Mitigation Measure PSU-2**, ~~described in Chapter 3.10, *Public Services, Utilities, and Recreation*, outlining procedures to avoid unintentional utility service disruptions during construction, would also contribute to the reduction of Impact HAZ-1.~~

~~130-Unit Alternative~~

The fill material for the Project ~~130-Unit Alternative site~~ would originate from the project site. Because the Phase One ESA prepared by ENGEO (2006) did not include the entire project ~~130-Unit Alternative~~ site, unknown contaminated soils could be encountered during earthmoving activities on ~~Lot 130and other~~ areas that were not included in the Phase One ESA. However, 2014 searches of environmental databases did not identify any areas of high concern for hazardous material and thus the potential to encounter hazardous materials on the site is low. Therefore, ~~as a precaution,~~ construction activities associated with the Project ~~130-Unit Alternative, including Lot 130,~~ could potentially expose workers or the environment to significant impacts from unknown hazardous substances in the soil.

~~Similar to the Proposed Project, construction~~ Construction activities associated with the Project ~~130-Unit Alternative, including Lot 130,~~ could expose construction workers, the public or environment to hazardous materials through a reasonably foreseeable upset and accident conditions involving the release of hazardous materials. During construction, toxic substances (e.g., petroleum) would be used to operate equipment. Therefore, the accidental release of small quantities of petroleum could pose a risk to the public and the environment. This would be a *potentially significant* impact. However, implementation of **Mitigation Measures HAZ-1, HAZ-2,** and **HAZ -3** would reduce this impact to a *less-than-significant* level.

~~Removal of the structures on Lot 130 could expose construction workers to asbestos and lead-based paints if the structures were built prior to 1970s. Because the construction date is unknown, this analysis assumes that there's potential to encounter asbestos and lead-based paint during demolition activities on Lot 130. Therefore, there is potential for workers to be accidentally exposed to asbestos and lead-based paint during demolition/construction activities on Lot 130. This impact would be *potentially significant*. However, with the implementation of **Mitigation Measure HAZ-4**, this impact would be reduced to a *less-than-significant* level.~~

~~Similar to the Proposed Project, t~~Additionally, the presence of unknown underground utility lines on the project site ~~130-Unit Alternative site, including Lot 130,~~ could present a potential hazard to construction workers and environment during the construction phase. This impact is *potentially significant*. However, with the implementation of **Mitigation Measures HAZ-1, HAZ-2,** and **HAZ-3**, the impact would be minimized to a *less-than-significant* level. **Mitigation Measure PSU-2**, described in Chapter 3.10, *Public Services, Utilities, and Recreation*, outlining procedures to avoid unintentional utility service disruptions during construction, would also contribute to the reduction of Impact HAZ-1.

Mitigation Measure HAZ-1: Follow the Cypress Fire Protection District and Other Guidelines for Storage and Handling of Hazardous Materials

The County will require that contractors transport, store, and handle hazardous materials required for construction in a manner consistent with relevant regulations and guidelines, including those recommended and enforced by the Cypress Fire Protection District (CFPD).

Mitigation Measure HAZ-2: Immediately Contain Spills, Excavate Spill-Contaminated Soil, and Dispose of Contaminated Soil at an Approved Facility

In the event of a spill of hazardous materials in an amount reportable to the CFPD (as established by fire department guidelines), the contractor will immediately control the source of

the leak and contain the spill. If required by the CFPD or other regulatory agencies, contaminated soils will be excavated and disposed of offsite at a facility approved to accept such soils.

Mitigation Measure HAZ-3: Develop and Implement Plans to Reduce Exposure of People and the Environment to Hazardous Conditions During Construction Activities

The County will require the applicant to develop plans to prevent the pollution of surface water and groundwater and to promote the health and safety of workers and other people in the project vicinity. These programs will include an operations and maintenance plan, a site-specific safety plan, and a fire prevention plan, in addition to the Storm Water Pollution Prevention Plan (SWPPP) required for hydrology impacts. The programs are required by law and will require approval by several responsible agencies. Required approvals are as follows: the SWPPP will be approved by the Regional Water Board; the site-specific safety plan and the operations and maintenance plan will be approved by Cal-OSHA; and the fire safety plan will be approved by the CFPD.

The County will also require the applicant to develop and implement a hazardous materials management plan that addresses public health and safety issues by providing safety measures, including release prevention measures; employee training, notification, and evacuation procedures; and adequate emergency response protocols and cleanup procedures.

Finally, the County will require the applicant and its designated contractors to comply with Cal-OSHA, as well as federal standards, for the storage and handling of fuels, flammable materials, and common construction-related hazardous materials and for fire prevention. Cal-OSHA requirements can be found in the California Labor Code, Division 5, Chapter 2.5. Federal standards can be found in Occupational Safety and Health Administration Regulations, Standards—29 CFR.

~~**Mitigation Measure HAZ-4: Test for the Presence of Asbestos or Lead-Based Paint and Remove in Accordance with OSHA and the Monterey Bay Unified Air Pollution Control District (MBUAPCD) procedures (130-Unit Alternative only)**~~

~~Before demolition begins, the contractor(s) will conduct sampling in locations where asbestos-containing materials or lead-based paint are anticipated, to identify whether potential hazards exist and whether special precautions to prevent workers from exposure to lead-based paint or asbestos are necessary during structure demolition. If friable asbestos materials are identified during structure inspections, these materials will be safely removed and properly disposed of using procedures established by OSHA and the MBUAPCD. Workers will be protected through the use of proper protective equipment. Standard procedures will be used for capturing lead-based paint during structure demolition and preventing it from being released into the environment.~~

Impact HAZ-2: Routine Transport, Use, or Disposal of Hazardous Materials (less than significant with mitigation)

~~**Proposed Project**~~

Upon build-out, the Proposed Project would include residential and open-space land uses. Residential land uses have the potential to create a hazard to the environment through the routine transport, use, or disposal of hazardous materials, in the form of household hazardous wastes.

Normal landscaping operation techniques for the active park and landscape areas may involve pesticides, fertilizers, and fungicides. However, the existing land use of the project area as a golf course involves a much higher level of landscape management. The creation of the proposed development would reduce the intensity and amount of area that would be actively landscaped. Thus, the Proposed Project would reduce the amount of landscape chemicals applied to the area compared to the existing baseline conditions. Impacts resulting from landscaping would be *less than significant*.

Under the Proposed Project, *potentially significant* impacts resulting from the routine, transport, use or disposal of hazardous materials could be associated with household hazardous wastes. However, implementation of **Mitigation Measure HAZ-4 ~~5~~** would reduce the impact to a *less-than-significant* level.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative would reduce the intensity and amount of area actively landscaped and use of landscaped chemicals applied to the area. The 130-Unit Alternative would have a *potentially significant* impact from the routine, transport, use or disposal of household hazardous waste. However, with implementation of **Mitigation Measure HAZ-5** the impact would be reduced to a *less-than-significant* level.~~

Mitigation Measure HAZ-4~~5~~: Participate in the Local Household Hazardous Waste Collection Program

The County will require residents living within the Rancho Cañada Village to participate in the Household Hazardous Waste Collection Program run by the Monterey Regional Waste Management District, to ensure that household hazardous wastes are disposed of appropriately. Details about the program can be found on the District's website, located at: www.mrwmd.org.

Impact HAZ-3: Hazardous Emissions or Hazardous Materials, Substances, or Waste Handling Within One-Quarter Mile of a School (less than significant with mitigation)

~~**Proposed Project**~~

The Carmel Middle School is located immediately adjacent to the project site. Hazardous emissions, use, and transport associated with the construction and operation of the Proposed Project could have a *potentially significant* impact on the nearby school. However, implementation of **Mitigation Measures HAZ-1, HAZ-2 HAZ-3,** and **HAZ-4~~5~~**, described above, would reduce this potential impact to a *less-than-significant* level.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, hazardous emissions, use, and transport associated with construction and operation of the 130-Unit Alternative could have a *potentially significant* impact on Carmel Middle School. Implementation of **Mitigation Measures HAZ-1 through HAZ-5** would minimize the potential risk to a *less-than-significant* level.~~

Impact HAZ-4: Location of the Project on a Known Hazardous Material Site (less than significant)

~~**Proposed Project**~~

~~According to the Phase One ESA and subsequent update reports prepared for the Project and the 2014 search of environmental databases, APNs 015-162-016, 015-162-017, 015-162-025, 015-162-026, 015-162-037, 015-162-039, and 015-162-040 have not been listed on any publicly available or practically reviewable standard local, state, or federal environmental records or databases. Therefore, the proposed development would not be located on a known hazardous materials site that would pose a hazard to the public or environment. Several nearby locations have been included on a list of hazardous materials sites, but are not expected to affect the Proposed Project parcels. Therefore, this impact would be *less than significant*. No mitigation is required.~~

~~**130-Unit Alternative**~~

Review of the State Water Board GeoTracker (2014), the EPA's NEPAssist (2014) and the DTSC's Envirostor database showed that the project site ~~130-Unit Alternative site, including Lot 130,~~ is not on a known hazardous material site list. The state and federal agency tools graphically show hazardous waste sites on the Toxic Substances Control Act list, brownfield sites, Superfund sites, and other RCRA site lists. The ~~130-Unit Alternative~~ site is not shown on the federal or state websites. ~~Similar to the Proposed Project, t~~There are several nearby locations on a list of hazardous materials sites that are not expected to affect the ~~130-Unit Alternative~~ site. Therefore, this impact would be *less than significant*. No mitigation is required.

B. Airstrip Vicinity

Impact HAZ-5: Potential Exposure of Hazardous Materials in the Vicinity of an Airport or Airstrip (less than significant)

~~**Proposed Project**~~

The Proposed Project is not located within 2 miles of any airport or private airstrip. The closest airport is the Monterey Peninsula Airport, which is located approximately 4 miles north of the project area. This impact would be *less than significant*. No mitigation is required.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative and Lot 130 are not located within 2 miles of an airport of private airstrip, and the closest airport is located 4 miles north of the site. This impact would be *less than significant*. No mitigation is required.~~

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Chapter 3.7
Transportation and Traffic

Introduction

This chapter provides a discussion of the transportation and traffic issues related to the Proposed Project ~~and 130-Unit Alternative~~ in the Carmel Valley. This chapter includes a review of existing conditions based on available literature and field surveys; a summary of local and state policies and regulations related to transportation and traffic; and an analysis of direct and indirect environmental impacts of the project. Where feasible, mitigation measures are recommended to reduce the level of impacts.

Impact Summary

The transportation and traffic impacts resulting from the Proposed Project ~~and the 130-Unit Alternative~~ are summarized in **Table 3.7-1**. As shown in **Table 3.7-1**, the Proposed Project ~~and the 130-Unit Alternative~~ would have certain significant impacts related to transportation and circulation within the project area. With the implementation of the mitigation measures described in this chapter, some of the potentially significant impacts listed would be reduced to less-than-significant levels but some impacts would remain significant and unavoidable.

Table 3.7-1. Transportation and Traffic Impact Summary

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
A. Signalized Intersections				
TR-1: LOS Decrease at Signalized County Intersections	~~LTS~~	LTS	None Required	–
B. Unsignalized Intersections				
TR-2: LOS Decrease at Unsignalized Intersections	~~Potentially Significant~~	Potentially Significant	TR-1: Contribute Fair-Share to Interchange Improvements of Laureles Grade and Carmel Valley Road through the CVTIP Traffic Impact Fee	Significant and Unavoidable

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
C. Roadway Segments				
TR-3: Peak Hour LOS Decrease for Two-Lane and Multi-Lane and/or exceed ADT Threshold for Portions of Carmel Valley Road, Rio Road and Carmel Rancho Boulevard	~~LTS~~	LTS	None Required	–
TR-4: Peak Hour Segment LOS Decrease for Portions of State Route 1	~~Potentially Significant~~	Potentially Significant	None Available ~~TR-2: Contribute Fair-Share Regional Impact Fee~~	Significant and Unavoidable
D. Access, Circulation and Safety				
TR-5: Adequate Sight Distance	~~LTS~~	LTS	None Required	–
TR-6: Adequate Project Access	~~LTS~~	LTS	None Required	–
E. Transit and Bicycle Travel				
TR-7: Changes to Transit and Bicycle Travel Access	~~LTS~~	LTS	None Required	–
F. Construction Traffic				
TR-8: Construction Traffic Decreases LOS	~~Potentially Significant~~	Potentially Significant	TR-2~~3~~. Develop and Implement a Construction Traffic Control Plan	Significant and Unavoidable

LTS = Less than Significant

Environmental Setting

Research Methods

A traffic impact study was conducted for the purpose of identifying the potential traffic impacts related to the Proposed Project ~~and 130-Unit Alternative~~. The impacts of the Project ~~and 130-Unit Alternative~~ were evaluated following the standards and methodologies set forth by Monterey County and the Transportation Agency for Monterey County (TAMC). The *Guide for the Preparation of Traffic Impact Studies* published by Monterey County was used to prepare the traffic study report. TAMC administers the Congestion Management Program (CMP) for Monterey County.

Data Sources

The following sources were reviewed for analysis of transportation and traffic found in the project area.

- California Department of Transportation. 2002. *Guide for the Preparation of Traffic Impact Studies.*
- California Department of Transportation. 2013. *Transportation Concept Report State Route 68.*
- Central Coast Transportation Consulting. 2015. *Rancho Cañada Village Draft Transportation Impact Study.* February.
- DKS Associates. 2007. *Carmel Valley Master Plan Traffic Study*.
- Hexagon Transportation Consultants. 2007. *Rancho Cañada Residential Development Traffic Study.* July 25.
- Monterey County. 1995. *Carmel Valley Road Improvement List.*
- Monterey County. 2009. *Carmel Valley Traffic Improvement Program Partial Revision of the Draft Subsequent Environmental Impact Report.*
- Monterey County. 2011. *Bicycle and Pedestrian Master Plan*.
- Monterey County. 2013. *Carmel Valley Master Plan*.
- Monterey County. 2014. *Guide for the Preparation of Traffic Impact Studies***.**
- Transportation Agency for Monterey County. 2014. *Regional Transportation Improvement Plan*.

The Traffic Study prepared by Central Coast Transportation Consulting (included in **Appendix E**) includes the methods, results, and conclusions summarized in this Second Revised Draft ~~Recirculated~~ EIR. The traffic study conducted for the Carmel Valley Master Plan (DKS Associates 2007) is incorporated by reference and is available on the Monterey County website.

Intersection Analysis Methodology

Traffic conditions at the intersections in the study area (defined below) were evaluated using Level of Service (LOS) calculations. LOS is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. Levels of service for study intersections were calculated using Synchro software package applying the 2010 Transportation Research Board's *Highway Capacity Manual* (HCM) methods.

LOS for the signalized intersections is based on average control delay per vehicle, where control delay includes all of the following: initial deceleration delay, running queue delay, stopped delay, and start-up acceleration delay. For the stop sign controlled intersections, which operate under two-way stop control, the reported average delay and associated level of service represent the worst conditions for any of the controlled movements. The unsignalized intersections were also evaluated using the California Department of Transportation (Caltrans) Peak-Hour Volume Warrant in order to determine if there would be justification for installing a traffic signal.

The correlation between average delay and level of service for signalized and stop sign controlled intersections is shown below in **Table 3.7-2**.

Table 3.7-2. Intersection Level of Service Thresholds

Signalized Intersections		Stop Sign Controlled Intersections	
Level of Service	Control Delay (seconds/vehicle)	Level of Service	Control Delay (seconds/vehicle)
A	≤ 10	A	≤ 10
B	> 10–20	B	> 10–15
C	> 20–35	C	> 15–25
D	> 35–55	D	> 25–35
E	> 55–80	E	> 35–50
F	> 80	F	> 50

Source: Central Coast Consulting 2015. (Appendix E)

Segment Analysis Methodology

In accordance with the 2013 Carmel Valley Master Plan (CVMP), traffic conditions on Carmel Valley Road are evaluated using two different methods. The first method is on the basis of average daily traffic (ADT) volumes using a volume-to-capacity methodology specific to Carmel Valley Road. This study includes an evaluation of Carmel Valley Road using the 2013 CVMP ADT thresholds. This method involves comparing the existing volumes on segments of Carmel Valley Road against the 2013 CVMP thresholds. The Carmel Valley ADT thresholds are shown in **Table 3.7-3.**

Table 3.7-3. Carmel Valley Road Average Daily Traffic Thresholds

Segment	CVMP ADT Threshold
1 CVR–Valle Vista to Holman	8,487
2 CVR–Holman to Esquiline	6,835
3 CVR–Esquiline to Ford	9,065
4 CVR–Ford to Laureles Grade	11,600
5 CVR–Laureles Grade to Robinson Canyon	12,752
6 CVR–Robinson Canyon to Shulte	15,499
7 CVR–Shulte to Rancho San Carlos	16,340
8 CVR–Rancho San Carlos to Rio	48,487
9 CVR–Rio to Carmel Rancho Blvd	51,401
10 CVR–Carmel Rancho Blvd to Highway 1	27,839
11 Carmel Rancho Blvd-CVR to Rio	33,495
12 Rio-Val Verde to Carmel Rancho	6,416
13 Rio-Carmel Rancho Blvd to Hwy 1	33,928

Source: Central Coast Consulting 2015.

The study also includes an evaluation of Carmel Valley Road using the industry-standard 2010 HCM methodology for multi-lane and two-lane highways (some segments of Carmel Valley Road are two lanes and some are four lanes). The methodology for two-lane highways is based on a parameter called "percent-time-spent-following" (PTSF). The LOS thresholds vary by the two-lane facility class. Three classes of two-lane facilities are defined in the 2010 HCM, each with different LOS thresholds. All the two lane-freeway segments in this study are categorized as Class II facilities consistent with

CVMP traffic study (Central Coast Transportation Consulting 2014). The multi-lane highway methodology is based on vehicle density—a measure of the length of roadway that is occupied by vehicles. Urban street segment LOS is based on a combination of the LOS score and volume to capacity ratio using planning-level default values where appropriate. The roadway segment LOS thresholds are shown in **Table 3.7-4**. The project impact on LOS and ADT is used for determining impact significance.

Table 3.7-4. Roadway Segment Level of Service Thresholds

Multi-lane Segments		Two-lane Highway Segments		Urban Streets Segments[3]	
Level of Service	Density (passenger car/mile/lane)	Level of Service	Percent Time Spent Following (passenger car/mile/lane)	Level of Service Score	Level of Service
A	≤ 11	A	≤ 40	≤ 2.00	A
B	> 11–18	B	> 40–55	> 2.00 – 2.75	B
C	> 18–26	C	> 55–70	> 2.75 – 3.50	C
D	> 26–35	D	> 70–85	> 3.50 – 4.25	D
E	> 35–45	E	> 85	> 4.25 – 5.00	E
F	> 45 (demand exceeds capacity)	F	See Note [1]	> 5.00 (Demand exceeds capacity)	F

Source: Central Coast Consulting 2015. (Appendix E)

Notes:

[1] LOS F is reached when the segment volume exceeds capacity.

[3] NCHRP Report 3-70 Multimodal Level of Service for Urban Streets Methodology. LOS F is demand exceeds capacity.

Study Area

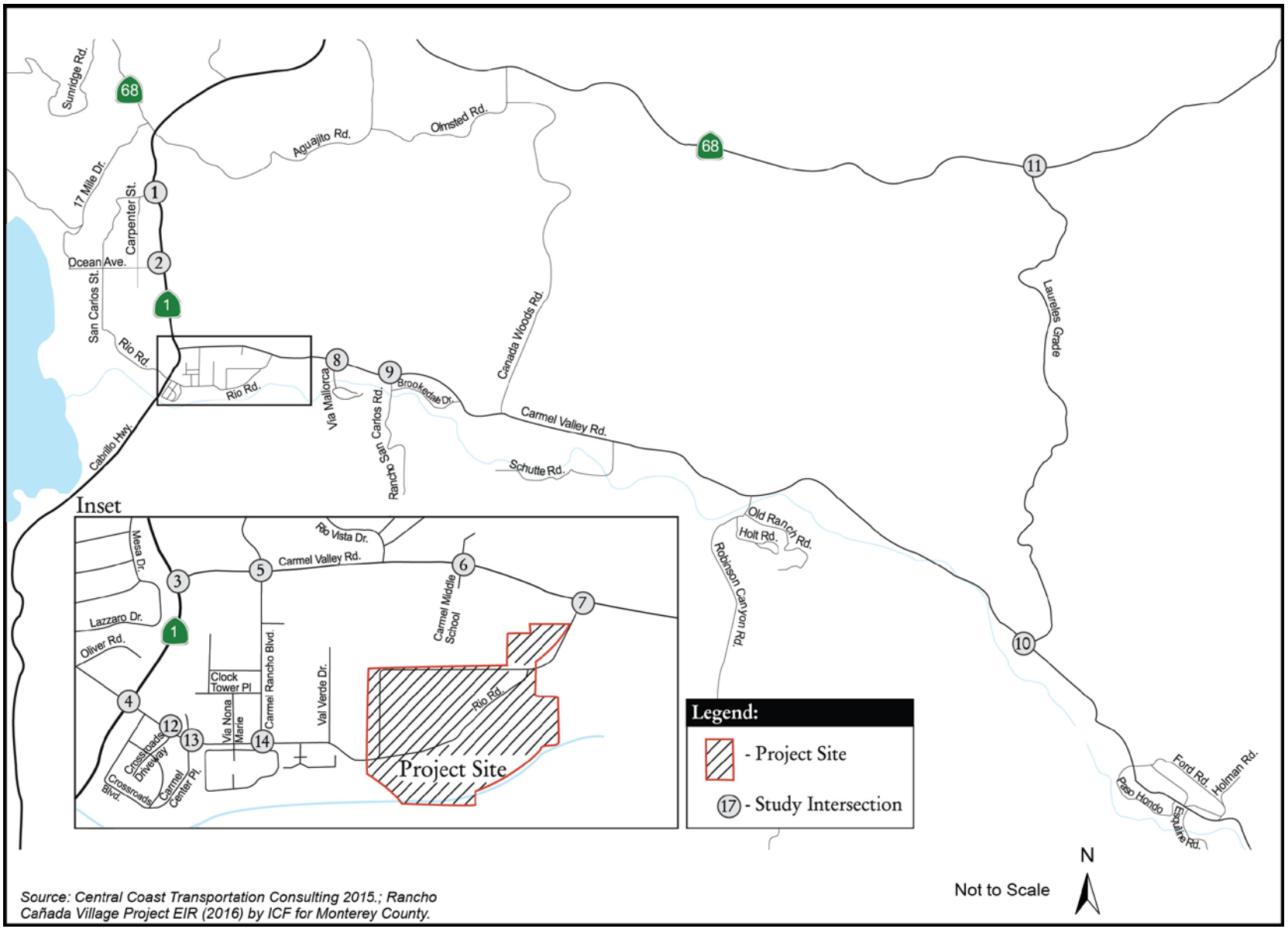
The 14 intersections, 10 roadway segments, and 4 segments of SR 1 included in the traffic study are identified below.

Study Intersections

The 14 study intersections are shown in **Figure 3.7-1**.

1. SR 1/Carpenter Street
2. SR 1/Ocean Avenue
3. SR 1/Carmel Valley Road
4. SR 1/Rio Road

Figure 3.7-1 Study Intersection Locations



Source: Central Coast Transportation Consulting 2015.; Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

5. Carmel Rancho Boulevard/Carmel Valley Road
6. Carmel Middle School/Carmel Valley Road
7. Rio Road/Carmel Valley Road
8. Via Mallorca/Carmel Valley Road
9. Rancho San Carlos/Carmel Valley Road
10. Laureles Grade/Carmel Valley Road
11. Laureles Grade/SR 68
12. Crossroads Driveway/Rio Road
13. Carmel Center Place/Rio Road
14. Carmel Rancho Boulevard/Rio Road

Carmel Valley Road Study Segments

Consistent with the 2013 CVMP, 13 segments of Carmel Valley Road were evaluated.

- Segment 1: East of Holman Road
- Segment 2: Holman Road to Esquiline Road
- Segment 3: Esquiline Road to Ford Road
- Segment 4: Ford Road to Laureles Grade
- Segment 5: Laureles Grade to Robinson Canyon Road
- Segment 6: Robinson Canyon Road to Schulte Road
- Segment 7: Schulte Road to Rancho San Carlos Road
- Segment 8: Rancho San Carlos Road to Rio Road
- Segment 9: Rio Road to Carmel Rancho Boulevard
- Segment 10: Carmel Rancho Boulevard to SR 1
- Segment 11: Carmel Rancho Boulevard-Carmel Valley Road to Rio Road
- Segment 12: Rio Road-Val Verde to Carmel Rancho Boulevard
- Segment 13: Rio Road-Carmel Rancho Boulevard to SR 1

SR 1 Study Segments

Four study segments of SR 1 were also considered.

- Segment 1: Ocean Avenue to Carpenter Street
- Segment 2: Carmel Valley Road to Ocean Avenue
- Segment 3: Rio Road to Carmel Valley Road
- Segment 4: Ribera Road to Rio Road

Traffic Conditions and Scenarios

Traffic conditions were analyzed for the weekday AM and PM peak hours of traffic. The AM peak hour of traffic is generally between 7:00 a.m. and 9:00 a.m., and the PM peak hour is typically between 4:00 p.m. and 6:00 p.m. It is during these periods that the most congested traffic conditions occur on an average day. Carmel Valley Road was analyzed based on peak-hour level of service and ADT. Traffic conditions were evaluated for the following scenarios.

- **Scenario 1:** *Existing Conditions.* This scenario includes 2014 traffic counts and the transportation network.
- **Scenario 2:** *Existing Plus Project Conditions.* This scenario includes existing traffic counts plus Proposed Project traffic.
- ~~**Scenario 3:** *Existing Plus 130-Unit Alternative Conditions.* This scenario includes Existing traffic counts plus the 130-Unit Alternative traffic.~~
- **Scenario 3~~4~~:** *Cumulative with Proposed Project Conditions.* This scenario includes cumulative conditions represented by future traffic conditions reflective of buildout in the area plus the Proposed Project and is discussed in Chapter 4, *Other CEQA-Required Sections*.
- ~~**Scenario 5:** *Cumulative with 130-Unit Alternative Conditions.* This scenario includes cumulative conditions represented by future traffic conditions reflective of buildout in the area plus the 130-Unit Alternative and is discussed in Chapter 4, *Other CEQA-Required Sections*.~~

Existing Conditions

Regional Access

State Route 1

SR 1 is a major north-south roadway that connects the Monterey Peninsula with San Luis Obispo County to the south, and with Santa Cruz County and the San Francisco Bay Area to the north. SR 1 has two northbound lanes and one southbound lane between Ocean Avenue and Carmel Valley Road. North of Ocean Avenue, SR 1 provides two northbound lanes and two southbound lanes. South of Carmel Valley Road, SR 1 is a two-lane roadway. The study area's portion of SR 1 has varying grades and residential driveway access.

State Route 68

SR 68 is a major east-west link for travel between the Monterey Peninsula and the Salinas area. Between SR 1 and the Toro Park area, it is a two-lane highway. It is a four-lane highway the remaining distance to the City of Salinas. SR 68 is part of the Monterey County CMP highway network. Within the study area, SR 68 provides one lane in each direction with an at-grade intersection at Laureles Grade.

Local Access

Carmel Valley Road

Carmel Valley Road is an east–west roadway major arterial extending from SR 1 to Arroyo Seco Road. In the study area, Carmel Valley Road is four lanes wide between SR 1 and Rancho San Carlos

Road and two lanes wide east of Rancho San Carlos Road, with posted speed limits varying from 25 miles per hour (mph) to 55 mph. Access to the site is provided via the unsignalized intersection at Rio Road.

Laureles Grade

Laureles Grade is a two-lane, north-south roadway that connects Carmel Valley Road with SR 68. It serves residential areas and traverses a mountainous area. It is classified as a major arterial roadway.

Rio Road

Rio Road consists of two discontinuous segments of roadway. The eastern part consists of a two-lane north–south segment that connects to Carmel Valley Road and would provide access to the site ~~(for the Proposed Project and the 130-Unit Alternative)~~. This portion of Rio Road currently provides access to the golf course and to the Community Church of the Monterey Peninsula (church). The western part consists of an east-west street two lanes wide between Junipero Street and SR 1 and four lanes wide between SR 1 and Val Verde Drive. The western section would provide the other potential point of access to the site ~~(for normal access for the Proposed Project and emergency access only for the 130-Unit Alternative)~~.

Carmel Rancho Boulevard

Carmel Rancho Boulevard Carmel Rancho Boulevard is a four-lane, north–south roadway that extends from Carmel Valley Road to Rio Road with a speed limit of 35 mph. It provides access to commercial developments along its frontage and serves through traffic between Carmel Valley Road and SR 1 south of Rio Road.

Other Roadways

Carmel Middle School, Rio Road, Via Mallorca, and Rancho San Carlos are two-lane local streets serving residential, educational, and light commercial areas along Carmel Valley Road. Their speed limits are 25 mph. Rio Road is stop controlled where it intersects with Carmel Valley Road, while Carmel Middle School, Via Mallorca and Rancho San Carlos have signalized intersections with Carmel Valley Road.

Crossroads Driveway and Carmel Center Place are two–lane local access roads to the Crossroads Shopping Center to the south of Rio Road. Their speed limits are 30 mph.

Bicycle and Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, multi-use paths, and pedestrian signals at signalized intersections. Laureles Grade, Carmel Rancho Road, Carmel Middle School, and Ocean Avenue have sidewalks on at least part of the road. In the study area, there are no paved sidewalks along Carmel Valley Road, SR 68, SR 1, Rio Road, and other minor roads.

Bicycle facilities in the study area consist of separated bicycle facilities (Class I paths) and on-street striped bike lanes (Class II). There is a Class I bike path that roughly parallels SR 1 from Cañada Court to a point just south of Carmel Valley Road. Class II bike lanes are provided along portions of Carmel Valley Road. While there are no designated bicycle facilities along the other study streets, many have wide paved shoulders used by cyclists.

Transit Service

The Monterey-Salinas Transit (MST) provides fixed-route transit service to the study area. Routes 22, 24, 91, 92, and 93 serve Carmel Valley Road and Carmel Rancho Boulevard, terminating in Monterey.

Route 22 serves SR 1 from Monterey to Big Sur. The nearest stop to the project site is located within the Crossroads Shopping Center on Crossroads Boulevard. An additional stop is located to the South of the Rio Road and SR 1 intersection headed Southbound. Both stops have 3.5-hour headways from Memorial Day Weekend through Labor Day, stopping three times a day every day, and 3.75-hour headways from Labor Day to Memorial Day, stopping twice a day on Saturdays and Sundays only.

Route 24 serves SR 1 and Carmel Valley Road from Monterey through Carmel Valley. Stops within the study area are located at Rio Road/Crossroads Driveway, Crossroads Shopping Center, Rio Road/Carmel Center Place, Rio Road/Via Nona Marie, along Carmel Rancho Boulevard, and multiple stops on Carmel Valley Road from Rio Vista Drive to Rippling River. Route 24 provides hourly service.

Routes 91, 92, and 93 serve SR 1 and Carmel Valley Road from Monterey to Pacific Meadows, with stops along Rio Road, Carmel Rancho Boulevard, and Carmel Valley Road. Route 91 runs on weekdays, with a 2-hour headway between the twice daily stops in the AM. Route 92 runs on weekdays, with 1.5-hour headways between the three daily stops in the PM. Route 93 runs on Saturdays and Sundays, twice at each stop, with 1.5-hour headways.

Traffic Condition and Lane Configurations

The lane configurations at the study intersections were determined by field reconnaissance. The existing peak hour volumes and intersection lane configurations are shown on **Figure 3.7-2.**

Traffic Volumes

Manual turning-movement counts of vehicular traffic were conducted at all study intersections during the weekday AM (7:00 a.m. to 9:00 a.m.) and PM (4:00 a.m. to 6:00 a.m.) peak periods. The study intersections were counted in late August 2014 after the school year had commenced. The existing average daily traffic volumes for Carmel Valley Road were derived from counts collected in June and October 2014. The existing peak-hour intersection volumes and traffic count data are included in **Appendix E**.

Intersection Levels of Service

Table 3.7-5 summarizes the results of the LOS analysis under existing conditions. With the exception of four locations, all intersections operated at LOS C or better. The results show that the intersections of SR 1/Carpenter Street and SR 1/ Rio Road operate at LOS D during the PM peak hour. This matches field observed conditions, where queuing was observed along the SR 1 corridor during the PM peak hour. The southbound approach to the Carmel Valley Road/Laureles Grade intersection operates at LOS F during the AM and PM peak hours, and the overall intersection operates at the LOS D/F during the AM/PM peak hour. The stop-signed control Carmel Rancho Blvd/Rio Road intersection operates overall at LOS B, but the worst approach operates at LOS F in the PM peak hour; however a signal warrant is not met at this location.

Table 3.7-5. Existing Intersection Levels of Service

Intersection	Peak Hour	Delay[1] (sec/veh)	LOS[2]
1 SR 1/Carpenter Street	AM	19.4	B
	PM	39.9	D
2 SR 1/Ocean Avenue	AM	27.7	C
	PM	20.7	C
3 SR 1/Carmel Valley Road	AM	11.2	B
	PM	21.6	C
4 SR 1/Rio Road	AM	25.1	C
	PM	41.4	D
5 Carmel Valley Road/Carmel Rancho Blvd	AM	15.7	B
	PM	21.1	C
6 Carmel Valley Road/Carmel Middle School	AM	16.4	B
	PM	7.6	A
7 Carmel Valley Road/Rio Road (unsignalized)	AM	0.5 (33.8)	A (D)
	PM	1.5 (65.8)	**A (F)**
8 Carmel Valley Road/Via Mallorca	AM	3.6	A
	PM	5.7	A
9 Carmel Valley Road/Rancho San Carlos Road	AM	9.0	A
	PM	12.1	B
10 Carmel Valley Road/Laureles Grade (unsignalized)	AM	34.2 (122.0)	**D (F)**
	PM	59.4 (>200)	**F (F)**
11 Laureles Grade/Highway 68	AM	16.4	B
	PM	21.3	C
12 Crossroads Driveway/Rio Road	AM	13.7	B
	PM	15.3	B
13 Carmel Center Place/Rio Road	AM	5.3	A
	PM	8.5	A
14 Carmel Rancho Blvd/Rio Road (unsignalized)	AM	10.1 (18.6)	B (C)
	PM	12.6 (53.6)	**B (F)**

Source: Appendix E

Notes:

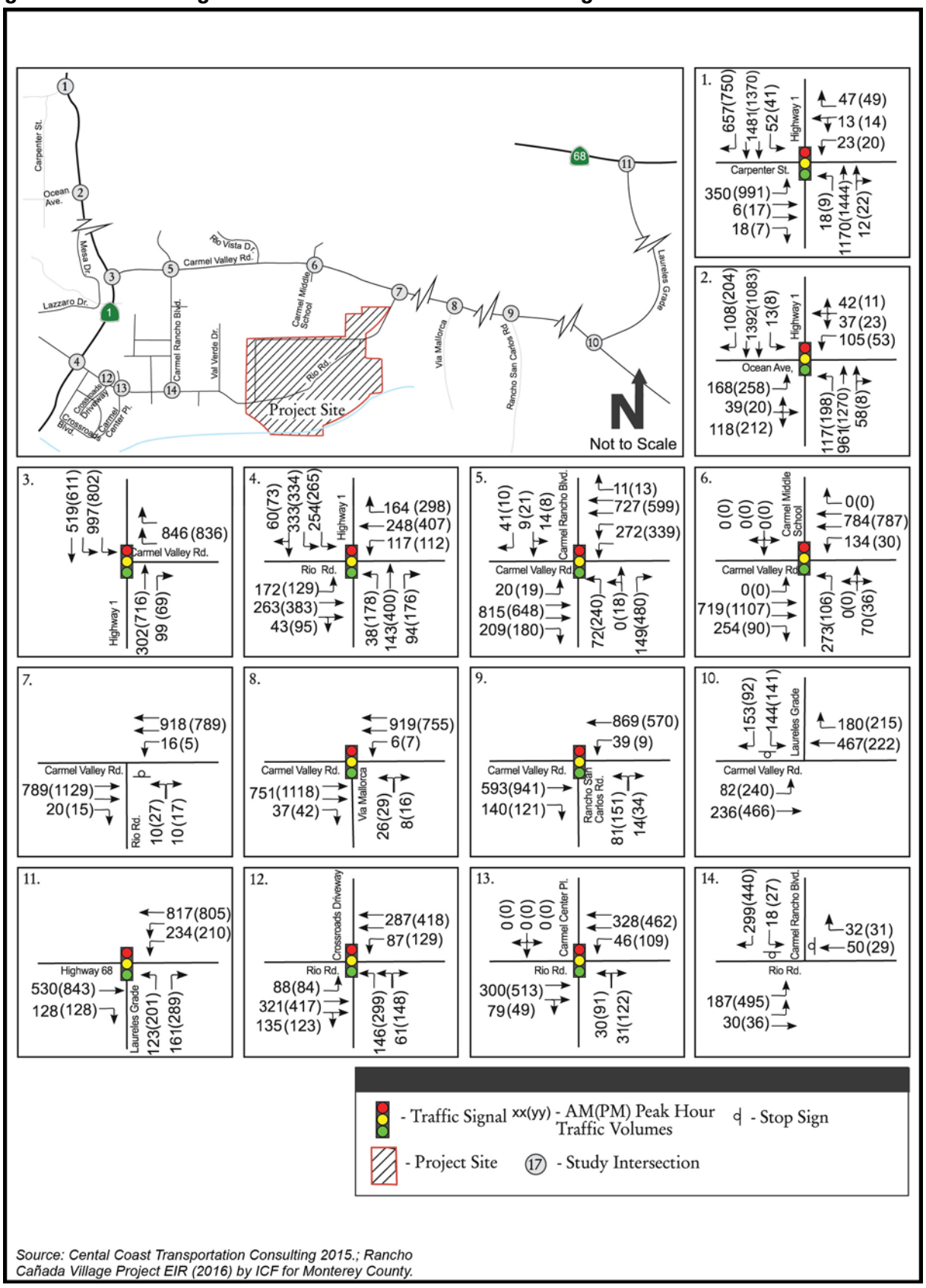
Bold text indicates threshold has been exceeded. See threshold discussion below.

[1] HCM 2010 average control delay in seconds per vehicle.

[2] For side-street-stop controlled intersections the worst approach's delay is reported in parenthesis next to the overall intersection delay.

The intersection LOS calculations are included in **Appendix E**.

Figure 3.7-2 Existing Peak Hour Volumes and Lane Configurations



Source: Cental Coast Transportation Consulting 2015.; Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Signal Warrant Analysis

Peak hour signal warrant checks (Manual on Uniform Traffic Control Devices 2003, Part 4, Warrant 3) were performed for the three currently unsignalized intersections to determine whether signalization would be justified on the basis of existing peak-hour volumes. The analysis showed that the peak-hour volume warrant is satisfied under existing conditions for the Laureles Grade and Carmel Valley Road intersection, but not for either of the other two unsignalized study intersections (Carmel Valley Road/Rio Road and Carmel Rancho Blvd/Rio Road). The signal warrant calculation sheets are included in **Appendix E**.

Roadway Segment Conditions

Carmel Valley ADT Monitoring

Existing ADT volumes for the 13 segments of Carmel Valley Road are shown in **Table 3.7-6**. The result shows that none of the 13 segments has exceeded its thresholds based on the 2013 Monterey County ADT counts.

Table 3.7-6. Existing Average Daily Traffic on Carmel Valley Road

Segment	24-Hour Threshold Volume	ADT	Threshold Exceeded
1. Carmel Valley Road–Valle Vista to Holman	8,487	3,200	No
2. Carmel Valley Road–Holman to Esquiline	6,835	3,700	No
3. Carmel Valley Road–Esquiline to Ford	9,065	8,200	No
4. Carmel Valley Road–Ford to Laureles Grade	11,600	10,600	No
5. Carmel Valley Road–Laureles Grade to Robinson Canyon	12,752	10,900	No
6. Carmel Valley Road–Robinson Cyn to Schulte	15,499	13,800	No
7. Carmel Valley Road–Schulte to Rancho San Carlos	16,340	15,600	No
8. Carmel Valley Road–Rancho Blvd to Rio	48,487	18,700	No
9. Carmel Valley Road–Rio to Carmel Rancho Blvd	51,401	24,100	No
10. Carmel Valley Road–Carmel Rancho to SR 1	27,839	21,900	No
11. Carmel Rancho Blvd-Carmel Valley Road to Rio	33,495	9,877	No
12. Rio Road-Val Verde to Carmel Rancho Blvd	6,416	702	No
13. Rio Road-Carmel Rancho Blvd to SR 1	33,928	11,398	No

Source: **Appendix E**.
ADT = average daily traffic

Segment Level of Service

Existing peak-hour LOS for the two-lane segments and multi-lane segments of Carmel Valley Road are shown in **Table 3.7-7**.

The results of the study indicate that the segments of SR 1 in the study area exceed the threshold. The SR 1-Carpenter to Ocean segment AM and PM northbound and southbound operate at LOS D. The SR 1–Carmel Valley Road to Rio segment AM and PM northbound and southbound lanes operate at LOS F and E.

Table 3.7-7. Existing Highway and Roadway Segments Level of Service

	Existing LOS Conditions			
	AM		PM	
Segment	NB/EB	SB/WB	NB/EB	SB/WB
SR 1–Carpenter to Ocean	C	**D**	**D**	C
SR 1–Ocean to Carmel Valley Road	C	C	C	C
SR 1–Carmel Valley Road to Rio	**F**	C	**F**	**E**
SR 1–Rio to Ribera	B	B	B	B
1. Carmel Valley Road–Valle Vista to Holman	A	C	B	B
2. Carmel Valley Road–Holman to Esquiline	A	C	C	B
3. Carmel Valley Road–Esquiline to Ford[1]	B	D	D	C
4. Carmel Valley Road–Ford to Laureles Grade[1]	C	D	D	C
5. Carmel Valley Road–Laureles Grade to Robinson Canyon[1]	C	D	D	C
6. Carmel Valley Road–Robinson Cyn to Schulte[1]	C	D	**E**	C
7. Carmel Valley Road–Schulte to Rancho San Carlos	C	**E**	**E**	D
8. Carmel Valley Road–Rancho Blvd to Rio	B	B	B	B
9. Carmel Valley Road–Rio to Carmel Rancho Blvd	A	B	B	B
10. Carmel Valley Road–Carmel Rancho to SR 1	B	B	B	B
11. Carmel Rancho Blvd-Carmel Valley Road to Rio	**D**	B	**D**	B
12. Rio-Val Verde to Carmel Rancho Blvd	**D**	**D**	**D**	**D**
13. Rio-Carmel Rancho Blvd to SR 1	B	**D**	B	C

Source: **Appendix E.**

Notes:

Bold text indicates threshold has been exceeded. See threshold discussion below.

[1] Interpretation of the 1986 CVMP would indicate a threshold LOS of C for this segment as discussed below. However, this Second Revised ~~Recirculated~~ Draft EIR utilizes the LOS Standards in the 2013 CVMP, which indicates a LOS D standard for this segment of Carmel Valley Road.

The results show that Carmel Valley Road segments 6, 7, 11, 12 and 13 currently exceed the threshold. Segments 6 and 7 eastbound lanes operate at LOS E during the PM peak hours. Segment 7 westbound lanes operate at LOS E during the AM peak hour. Segment 11 AM and PM northbound operates at LOS D. Segment 12 eastbound and westbound AM and PM lanes operate at LOS D. Segment 13 AM westbound operates at LOS D. The other eight segments operate within the threshold. The analysis is based on the following assumptions: for the two-lane highway segments, Carmel Valley Road is a Class II facility, and for the multi-lane highway segments, LOS is determined based on vehicle density in passenger cars per mile lane.

Regulatory Setting

State Policies and Regulations

Caltrans Level of Service Standards for State Highways

According to its *Guide for the Preparation of Traffic Impact Studies* (2002), Caltrans endeavors to maintain a target LOS at the transition between C and D on state highway facilities. However,

Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing state highway facility is operating below the appropriate target LOS, the existing LOS should be maintained. Definitions for LOS A–F for various facility types are provided under *Intersection Analysis Methodology* in the *Environmental Setting* section.

Caltrans Transportation Concept Report for State Route 68 in District 5

Caltrans' *Transportation Concept Report for SR 68 in District 5* identifies long-range improvements and establishes the concept (desired) LOS for specific corridor segments (California Department of Transportation 2013). The report identifies long-range improvements needed to bring an existing facility up to expected standards needed to adequately serve 20-year traffic forecasts. Additionally, it identifies the ultimate design concept for conditions beyond the immediate 20-year design period. The route concept for SR 68 is to maintain a two-lane conventional highway. Strategies to achieve the route concept are maintaining existing urbanized areas with signal control and, when appropriate or as part of land use development, considering operational improvements.

Local Policies and Regulations

Current County Plans and Policies

2010 Monterey County General Plan

The 2010 Monterey County General Plan (2010 General Plan) provides policy direction for the transportation systems that serve the unincorporated lands of Monterey County and describes how the County intends to serve transportation needs for the next 20 years as its population grows.

Circulation Element

The following goals and policies are from the Circulation Element.

Policy C-1.8. The County, in consultation with TAMC and Monterey County cities, shall, within 18 months of adoption of the General Plan, develop a County Traffic Impact Fee that addresses impacts of development in cities and unincorporated areas on major County roads. From the time of adoption of the General Plan until the time of adoption of a County Traffic Impact Fee, the County shall impose an ad hoc fee on its applicants based upon a fair share traffic impact fee study.

Policy C-4.3. The needs of bicyclists and pedestrians, as well as provisions for utilities and drainage, shall be considered and, where appropriate, provided in all public rights-of way in a manner that minimized impacts to adjacent land uses.

Goal C-9: Promote a safe, convenient bicycle transportation system integrated as part of the public roadway system.

2013 Carmel Valley Master Plan

The policies of the 2013 CVMP are relevant to the planning for County roadways adjacent to the Proposed Project~~ and 130-Unit Alternative~~.

The LOS standards and ADT thresholds for roadway standards from the 2013 CVMP are used for evaluation of traffic in this Second Revised ~~Recirculated~~ Draft EIR for consistency with other current traffic evaluations.

Policy CV-2.10. The following are policies regarding improvements to specific portions of Carmel Valley Road:

a) Via Petra to Robinson Canyon Road: Every effort should be made to preserve its rural character by maintaining it as a 2-lane road with paved shoulders and left turn channelizations at intersections where warranted.

b) Robinson Canyon Road to Laureles Grade: Every effort should be made to preserve its rural character by maintain it as a 2-lane road with paved shoulders and left turn channelizations at intersections where warranted.

c) Carmel Valley Road/Laureles Grade: A grade separation should be constructed at this location instead of a traffic signal. The grade separation needs to be constructed in a manner that minimizes impacts to the rural character of the road. An interim improvement of an all-way stop or stop signal is allowable during the process necessary to secure funding for the grade separation.

d) Laureles Grade to Ford Road: Shoulder improvements and widening should be undertaken here and extended to Pilot Road, and include left turn channelization at intersections as warranted.

e) East of Esquiline Road: Shoulder improvements should be undertaken to the sharper curves. Curves should be examines for spot realignment needs.

f) Laureles Grade Improvements: Improvements to Laureles Grade should consist of the construction of shoulder widening, spot realignments, passing lanes and/or paved turn-outs. Heavy vehicles should be discouraged from using this route.

Policy CV-2.17. To implement traffic standards to provide adequate streets and highways in Carmel Valley, the County shall conduct and implement the following: a) Twice yearly monitoring by Public Works (in June and October) of peak hour traffic volumes and daily traffic volumes at the following six (6) locations indicated in bold (at least one of the yearly monitoring periods will occur when local schools are in session). [Note: See Segments 3, 4, 5, 6, 7 and 10 in **Table 3.7-6** above for the referenced 6 locations.]

b) A yearly evaluation report shall be prepared by the Public Works Department in December that shall report on traffic along the six (6) indicated segments. The report shall evaluate traffic using the PTSF methodology (or such other methodology as may be appropriate for a given segment in the opinion of the Public Works Department), and the ADT methodology. ADT thresholds for each segment are listed above [See **Table 3.7-6** above], and the Public Works Department shall annually establish appropriate PTSF or other methodology thresholds for each of the six (6) segments listed above.

c) A public hearing before the Board of Supervisors shall be held in January immediately following the December report when only 100 or fewer ADT remain before the ADT count for a segment will equal or exceed the indicated threshold, or where the PTSF (or such other methodology as may be appropriate for a given segment in the opinion of the Public Works Department) for a segment exceeds or is within one percent (1%) of the value that would cause a decrease in the LOS.

d) At five year intervals the County shall monitor all segments listed in Policy CV-2.17(a) and the annual report described in Policy CV-2.17(b) shall include a report on all segments. If such periodic monitoring and reporting shows that any segment not previously part of the annual

report is within twenty percent (20%) of the listed ADT threshold, that segment shall thereafter be subject to the annual monitoring and reporting.

e) Also at five year intervals the County shall examine the degree to which estimates of changes in Levels of Service ("LOS") in the Carmel Valley Master Plan Area may be occurring earlier than predicted in the General Plan Environmental Impact Report. If the examination indicates that LOS are likely to fall to a lower letter grade than predicted for 2030, then the County shall consider adjustments to the cap on new residential units established in Policy CV-1.6 and/or the cap on new visitor serving units established in Policy CV-1.15 or other measures that may reduce the impacts, including, but not limited to, deferral of development that would seriously impact traffic conditions.

f) The traffic standards (LOS as measured by peak hour conditions) for the CVMP Area shall be as follows:

1) Signalized Intersections – LOS of "C" is the acceptable condition.

2) Unsignalized Intersections – LOS of "F" or meeting of any traffic signal warrant are defined as unacceptable conditions.

3) Carmel Valley Road Segment Operations:

a) LOS of "C" and ADT below its threshold specified in Policy CV-2.17(a) for Segments 1, 2, 8, 9, 10, 11, 12 and 13 is an acceptable condition;

b) LOS of "D" and ADT below its threshold specified in Policy CV-2.17(a) for Segments 3, 4, 5, 6, and 7 is an acceptable condition.

During review of development applications that require a discretionary permit, if traffic analysis of the proposed project indicates that the project would result in traffic conditions that would exceed the standards described above in Policy CV 2.17(f), after the analysis takes into consideration the Carmel Valley Traffic Improvement Program to be funded by the Carmel Valley Road Traffic Mitigation Fee, then approval of the project shall be conditioned on the prior (e.g., prior to project-generated traffic) construction of additional roadway improvements or an Environmental Impact Report shall be prepared for the project, which will include evaluation of traffic impacts based on the ADT methodology. Such additional roadway improvements must be sufficient, when combined with the projects programmed for completion prior to the project generated traffic in the Carmel Valley Traffic Improvement Program, to allow County to find that the affected roadway segments or intersections would meet the acceptable standard upon completion of the programmed plus additional improvements. Any EIR required by this policy shall assess cumulative traffic impacts outside the CVMP area arising from development within the CVMP area.

This policy does not apply to the first single family residence on a legal lot of record. The use of the ADT methodology as set forth in this Policy CV-2.17 shall be limited to the purposes described in the Policy, and the County may utilize any traffic evaluation methodology it deems appropriate for other purposes, including but not limited to, road and intersection design. This policy shall also not apply to commercial development in any Light Commercial Zoning ("LC") district within the CVMP area where the Director of Planning has determined that the requirement for a General Development Plan, or amendment to a General Development Plan, may be waived pursuant to Monterey County Code section 21.18.030 €.

(Amended by Board Resolution 13-029)

Policy CV-2.18. The County shall adopt a Carmel Valley Traffic Improvement Program (CVTIP) that:

a. Evaluates the conditions of Carmel Valley Road and identifies projects designed to maintain the adopted LOS standards for this roadway as follows:

1. In order to preserve the rural character of Carmel Valley, improvements shall be designed to avoid creating more than three through lanes along Carmel Valley Road.

2. Higher priority shall be given to projects that address safety issues and manage congestion.

3. The project list may include projects previously identified for inclusion in the CVTIP or their functional equivalent.

4. Priorities shall be established through community input via a Carmel Valley Road Committee, which shall be established by the Board of Supervisors and shall review and comment on proposed projects in the CVTIP, and review and comment on the annual report described in Policy CV-2.17 (b).

5. At a minimum, the project list shall be updated every five years unless a subsequent traffic analysis identifies that different projects are necessary.

b. Validates and refines the specific scope of all projects proposed by the CVTIP through preparation of a Project Study Report (PSR). The PSR will be reviewed and commented on by the Carmel Valley Road Committee prior to commencement of project design.

c. Establishes a fee program to fund the CVTIP. All projects within the Carmel Valley Master Plan (CVMP) area, and within the "Expanded Area" that contribute to traffic within the CVMP area, shall contribute a fair-share traffic impact fee to fund necessary improvements identified in the CVTIP, as updated at the time of building permit issuance. Fees will be updated annually as specified by the CVTIP to account for changes in construction costs and land values. The County shall adopt a CVTIP within one year of approval of the 2010 General Plan. The CVTIP does not apply to any roadways (including SR1) that are located outside the CVMP area.

(Amended by Board Resolution 13-029)

Policy CV-2.19. The County shall initiate proceedings for an abandonment of the Official Plan Line for the Rio Road Extension.

2014 Monterey County Regional Transportation Plan

The Regional Transportation Plan (RTP) (Transportation Agency for Monterey County 2014) for TAMC satisfies state and federal requirements to identify transportation projects that can be funded over the next 20 years to serve the county's transportation needs. This 20-year plan addresses all forms of transportation, and includes the priorities and actions embodied in the plans prepared by each of the county's 12 cities and the County of Monterey.

The RTP provides a list of transportation improvements throughout the County that support goals, objectives, and performance measures that are oriented toward achieving a balanced transportation system. The RTP identifies funding challenges created as revenues dedicated to transportation decrease while transportation needs increase. The RTP also introduces the Regional Development Impact Fee program that applies to development projects throughout the county based on their impact on the regional transportation system.

Regional Transportation Improvement Program

The Regional Transportation Improvement Program (RTIP) is a 4-year program of transportation projects for Monterey County that includes: (1) federally funded transportation projects, and (2)

projects nominated for inclusion in the State Transportation Improvement Program (STIP). The RTIP is adopted by TAMC and is submitted to Caltrans and the California Transportation Commission by December 15 of every odd year. Projects in the RTIP must be consistent with the adopted RTP to be programmed into the STIP.

Carmel Valley Transportation Improvement Program (CVTIP)

Monterey County has adopted an improvement program for Carmel Valley and a traffic impact fee for certain improvements to Carmel Valley Road and other locations in the CVMP. The current impact fee program includes the following improvements:

- Completed improvements:
  - Enforcement and signage program (Completed).
  - Sight Improvements, parking restrictions, and signage in Carmel Valley Village (Completed).
  - Class II bike striping was installed from Valley Greens to Dorris (Completed)
  - A Class III bike route was installed on Valley Greens to a point about 0.5 miles west of Rancho San Carlos (Completed)
  - Signal installed in lieu of widening refuge area at Via Mallorca (Completed)
- Improvements yet to be completed:
  - Left-turn channelization – West of Ford Road(left-turn pockets at Boronda and Country Club Drive presently in progress).
  - Sight distance improvements at Dorris Drive (a separate right-turn lane was recently installed, but the sight distance issue is still being monitored to see if additional improvements will be needed)
  - Shoulder widening between Laureles Grade and Ford Road
  - Paved turnouts on Laureles Grade and signs
  - Upgrades to Class 2 bike lanes (all road improvements in future to include shoulder widening to allow Class 2 bike lanes)
  - Shoulder improvement and spot realignments on Laureles Grade
  - Grade separation at Laureles Grade/Carmel Valley Road
  - Passing lane in front of September Ranch
  - Passing lane opposite Garland Park
  - Passing lane (climbing lane) on Laureles Grade

Prior County Plans and Policies

As stated in Chapter 1, *Introduction*, discussions pertaining to the 1982 General Plan and 1986 CVMP are provided for informational purposes only.

1982 Monterey County General Plan

According to Monterey County Public Works Guide for the Preparation of Traffic Impact Studies (Monterey County 2003), an acceptable level of service is LOS C for signalized intersections and LOS E for unsignalized intersections.

The current 1982 General Plan establishes a LOS standard of C for County road segments. However, the General plan allows Area Plans to set different standards than the General Plan. As described below, the LOS standards for Carmel Valley Road have been established in the CVMP and differ from the County road standards.

1986 Carmel Valley Master Plan

Within the CVMP area, the LOS standard for roadway segments was previously established by CVMP Policy 39.3.2.1.

> **Policy 39.3.2.1** To implement traffic standards to provide adequate streets and highways in Carmel Valley, the County shall conduct and implement the following:
>
> a.) Twice yearly monitoring by Public Works (in June and October) of average daily traffic at 12 locations identified in the Keith Higgins report in Carmel Valley on Carmel Valley Road, Carmel Rancho Boulevard and Rio Road.
>
> b.) A yearly evaluation report (December) prepared jointly by the Public Works and Planning Departments to indicate segments approaching a traffic volume which would lower existing level service and which would compare average daily traffic (ADT) counts with service volumes for levels of service.
>
> c.) Public hearings to be held in January immediately following a December report in (b) above in which only 100 or less ADT remain before a lower level of service would be reached for any of the 12 segments described on figure B-1 of EIR 85-002 on the Carmel Valley Master Plan.
>
> d.) With respect to those 12 identified road segments that are at level of service (LOS) C or below, approval of development will be deferred if the approval would significantly impact roads in [t]he Carmel Valley Master Plan area which are at level of service (LOS) C or below unless and until an EIR is prepared which includes mitigation measures necessary to raise the LOS to an acceptable level and appropriate findings as permitted by law are made which may include a statement of overriding considerations. For purposes of this policy, "acceptable level" shall mean, at a minimum, baseline LOS as contained in the Carmel Valley Master Plan EIR. To defer approval if there is significant impact means that, at a minimum, the County will not approve development without such an EIR where the traffic created by the development would impact the level of service along any segment of Carmel Valley Road (as defined in the Keith Higgins Traffic Report which is part of the Environmental Impact Report (EIR) for the Carmel Valley Master Plan (CVMP) to the point where the level of service would fall to the next lower level. As for those road segments which are at LOS C, D and E, this would, at a minimum, occur when the LOS F, this would occur when it would cause a significant impact and worsening of traffic conditions as compared with the present condition. Specific findings will be made with each project and may depend on the type and location of any proposed development. Cumulative traffic impacts from development in areas outside the CVMP area must be considered and will cause the same result as development within the plan area.

This policy establishes the roadway segment standard as LOS C, except for those segments that were LOS D or lower at the time of the traffic study for the EIR on CVMP. According to the 1990 Carmel Valley Transportation Improvement Plan EIR (Monterey County 1990), the 1986 baseline LOS along Carmel Valley Road was as follows:

- LOS of C: Segments 1, 2, 3, 8, and 9 operated at LOS C or better in 1986;
- LOS of D: Segments 4, 5, 6, and 7 operated at LOS D in 1986; and
- LOS of E: Segment 10 operated at LOS E in 1986.

Impact Analysis

Methodology

The location and magnitude of traffic produced by a new development are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the AM and PM peak hours. As part of the project trip distribution, the general origins and destination of these trips are identified. In the project trip assignment, the project trips are assigned to specific routes to reach the origin and destination. These procedures are described further in the following sections.

Trip Generation

Through empirical research, data have been collected that correlate to common land uses their propensity for producing traffic. Thus, for the most common land uses, there are standard trip generation rates that can be applied to help predict the future traffic increases that would result from a new development.

~~Proposed Project~~

The magnitude of traffic added to the roadway system by a particular development is estimated by applying the appropriate trip generation rates to the size of the development. The standard trip generation rates are published in the Institute of Transportation Engineers (ITE) manual entitled *Trip Generation, seventh edition,* 2012.

The ITE trip generation rates for single family detached units and condominium units were applied to the proposed residential development. The Proposed Project trip estimates were 101 ~~188~~ net new AM peak house trips and 133 ~~240~~ net new PM peak hour trips. The site also was credited for the trips generated by the existing 18 holes of golf that would be removed. Traffic counts were conducted in August 2014 (during the school year) at the intersection of Carmel Valley Road and Rio Road, which served only the Rancho Cañada Golf Course because the church was closed. The church north of the project site would have negligible traffic during peak hours. The August 2014 count showed the golf course generates 20 AM and 33 PM peak-hour trips per 18 holes. This compares with 40 AM and 50 PM peak-hour trips that are estimated using ITE trip generation rates per 18 holes. The more conservative trip generation estimate (20 AM and 33 PM trips) was used to credit the existing 18 holes that would be removed. No trip generation credits were given for the affordable and below market rate housing proposed for area workers.

The resultant net project trips are 81 ~~168~~ AM peak-hour trips and 100 ~~207~~ PM peak-hour trips.

~~130-Unit Alternative~~

~~Similar to the Proposed Project, the ITE trip generation rates for single family residential, assisted living and condominiums units were applied to the 130-Unit Alternative. The 130-Unit Alternative estimates are 101 AM peak hour trips and 133 PM peak hour trips. However, with the 18-hole golf course credit the trip generation estimates decrease. The resultant net 130-Unit Alternative trips are 81 new AM peak hour trips and 100 new PM peak hour trips.~~

Table 3.7-8 shows the estimated trip generation ~~for the existing uses onsite~~ for the Proposed Project ~~and the 130-Unit Alternative~~.

Table 3.7-8. Project Trip Generation for the Proposed Project ~~and 130-Unit Alternative~~

		Number of Trips						
			AM			PM		
Land Use	Size	Daily	In	Out	Total	In	Out	Total
~~**Proposed Project**~~								
~~Single Family Residential[1]~~	~~182 units~~	~~1,822~~	~~34~~	~~103~~	~~137~~	~~113~~	~~67~~	~~180~~
~~Condo/Townhouse[2]~~	~~99 units~~	~~638~~	~~9~~	~~42~~	~~51~~	~~40~~	~~20~~	~~60~~
~~Golf Course (Portion Removed)[3]~~	~~18 holes~~	~~-414~~	~~-19~~	~~-1~~	~~-20~~	~~-6~~	~~-27~~	~~-33~~
~~***Proposed Project Net New Trips***~~		~~***2,046***~~	~~***24***~~	~~***144***~~	~~***168***~~	~~***147***~~	~~***60***~~	~~***207***~~
~~**130-Unit Alternative**~~								
Single Family Residential[1]	118 units	1,223	23	69	92	77	45	122
Condo/Townhouse[2]	12 units	102	2	7	9	7	4	11
Golf Course (Portion Removed)[3]	18 holes	-414	-19	-1	-20	-6	-27	-33
~~130-Unit Alternative~~ Net New Trips		***911***	***6***	***75***	***81***	***78***	***22***	***100***

Source: Appendix E

Notes:

[1] ITE Land Use Code 210, Single Family Detached Housing. Regression equation used.

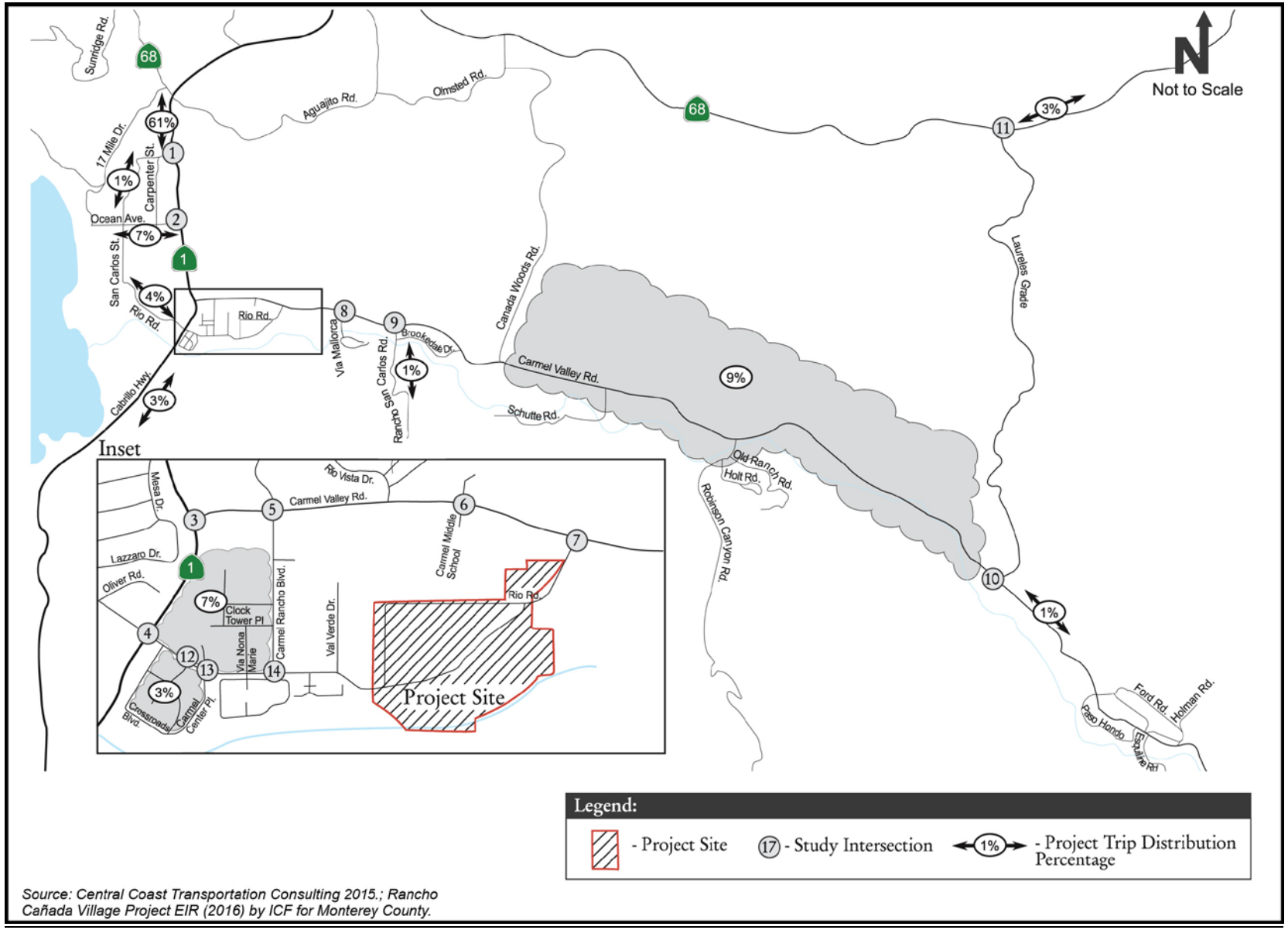
[2] ITE Land Use Code 230, Condominium/Townhouse Regression equation used.

[3] Golf course trip generation estimated using traffic counts at Rio Road.

Trip Distribution

The trips generated by the existing 18-hole golf course were distributed over the study area based upon the recent count data and engineering judgment. The golf course trip distribution is based upon the August 2014 count, with the existing golf course access via Carmel Valley Road. The residential trip distribution pattern used in this study was estimated using 2014 regional travel demand model (RTDM) developed by the Association of Monterey Bay Area Governments (AMBAG). The 2014 RTDM model was applied to estimate the directions of approach and departure for project trips using a select zone procedure, which tracks trips from to and from a specific Traffic Analysis Zone (TAZ) in the RTDM. The trip distribution percentages are shown in **Figure 3.7-3.**

Figure 3.7-3 Trip Distribution



Source: Central Coast Transportation Consulting 2015.; Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Trip Assignment

~~The trip assignment was made separately for both the Proposed Project and 130-Unit Alternative. The Proposed Project trip assignment was prepared with two project access one via Carmel Valley Road and Rio Road west.~~ The ~~130-Unit Alternative~~ trip assignment was developed with project site access via Carmel Valley Road only. As discussed, in Chapter 2, *Project Description*, Rio Road west is proposed for emergency, pedestrian and bicycle access ~~under the 130-Unit Alternative~~. ~~The trip assignments account for the different travel patterns under the Proposed Project and 130-Unit Alternative.~~ As discussed above, the existing golf course trips were subtracted from the roadway system at the intersection level. **Figures ~~3.7-4~~** ~~and 3.7-5~~ shows the trip assignments.

Project Traffic Volumes

Project trips, as represented in the above project trip assignments, were aggregated and added to existing traffic volumes to obtain existing plus project traffic volumes. The existing golf course trips were subtracted from the existing roadway system at the intersection level. Existing traffic volumes plus project trips are typically referred to simply as *Proposed Project traffic volumes ~~or 130-Unit Alternative traffic volumes~~*; this is contrasted with the term *Proposed Project ~~or 130-Unit Alternative~~ trips*, which is used to signify the traffic that is produced specifically by the Proposed Project ~~or 130-Unit Alternative~~. **Figure 3.7-5~~6~~** shows the existing and proposed project AM and PM peak hour volumes at the 14 studied intersections. ~~**Figure 3.7-7** shows the existing plus 130-Unit Alternative AM and PM peak hour volumes at the 14 studied intersections.~~

Vehicle Queuing and Storage

Vehicle queuing was evaluated qualitatively for the turning movements at the intersection of Carmel Valley Road and Rio Road, under conditions both with and without connection to Rio Road near Val Verde Drive.

Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, Monterey County plans and policies, CVMP plans and policies, and agency and professional standards, a project impact would be considered significant under the following conditions:

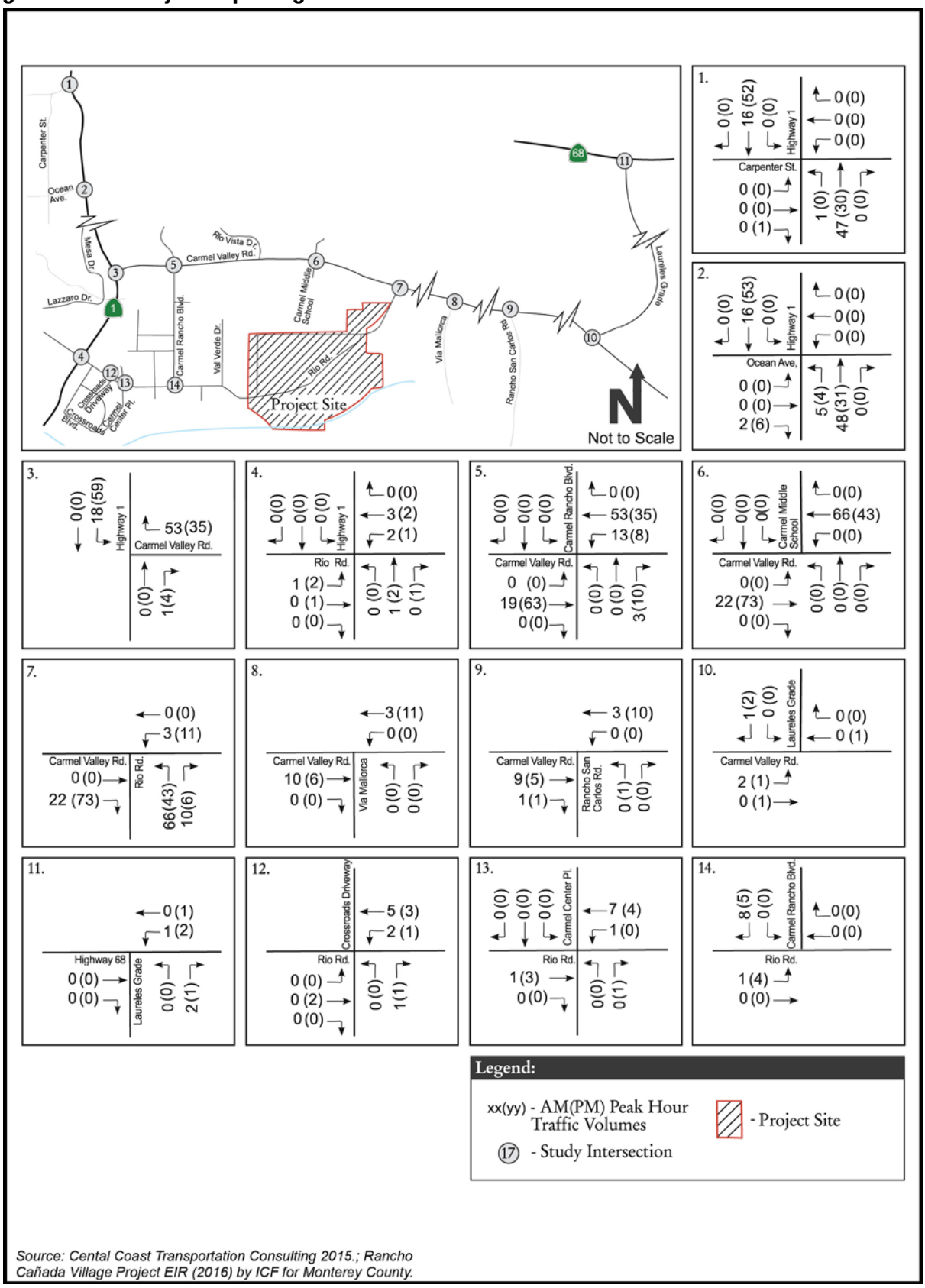
A. Signalized Intersections

- Degrade, at either peak hour, the LOS at an intersection to LOS F
- Add one or more trips to an intersection operating at an unacceptable LOS F under existing conditions.

B. Unsignalized Intersections

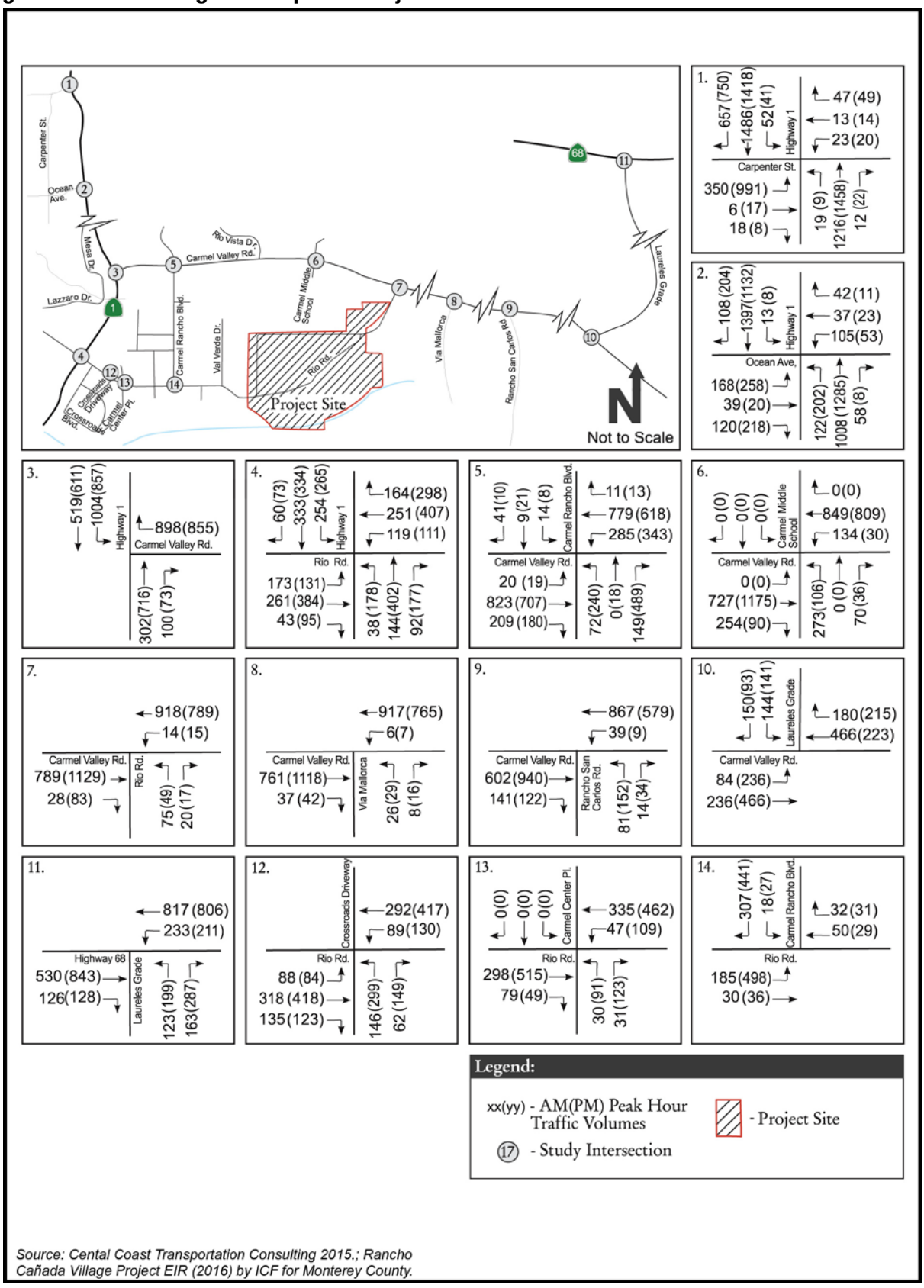
- Degrade the LOS intersection to operating at LOS F for an all-way stop controlled intersection, or cause any approach to degrade to LOS F for two-way stop controlled intersections or meet any traffic signal warrant.
- Add traffic to an intersection operating at LOS F under existing conditions and meet a signal warrant.

Figure 3.7-4 Project Trip Assignment



Source: Cental Coast Transportation Consulting 2015.; Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Figure 3.7-5 Existing Plus Proposed Project Volumes



Source: Cental Coast Transportation Consulting 2015.; Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

C. Roadway Segments

- Exceed, either individually or cumulatively, the LOS standard established by Monterey County for designated roadway segments or highways. This criterion is applied to Carmel Valley Road as follows.
    - The operating volume on a Carmel Valley Road, Rio Road, or Carmel Rancho Boulevard segments exceeds the 2013 CVMP ADT thresholds.
    - Operations on segments 1, 2, 8, 9, 10, 11, 12 and 13 degrade from LOS C or better to LOS D, E, or F; or the addition of project traffic worsens the LOS of a segment operating at LOS D or E; or project traffic is added to a segment operating at LOS F.
    - Operations on segments 3, 4, 5, 6, and 7 degrade from LOS D or better to LOS E or F; or the addition of project traffic worsens the LOS of a segment operating at LOS E; or project traffic is added to a segment operating at LOS F.
- For SR 1 segments only: Degrade operations from LOS C or better to LOS D, E, or F, or add project traffic to an intersection or segment operating at LOS D, E, or F.

D. Access, Circulation, and Safety

- Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Result in inadequate emergency access.

E. Transit and Bicycle Travel

- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks, pedestrian access).

F. Construction Traffic

- Cause short-term increases in traffic on roads or intersections causing existing LOS to drop to unacceptable levels or aggravating the operation of intersections previously identified as deficient.

Project Impacts and Mitigation Measures

A. Signalized Intersections

Impact TR-1: LOS Decrease at Signalized County Intersections (less than significant)

~~**Proposed Project**~~

~~The results of the LOS analysis for the Proposed Project are summarized in **Table 3.7-9**.~~

~~As shown in **Table 3.7-9**, the unsignalized intersection at Carmel Valley Road/Rio Road operates at LOS A, with the side-street operating at LOS F, under existing conditions. The Proposed Project would add traffic to this intersection, increasing the delay, but the intersection would be signalized with the project and would operate at LOS B. Because this intersection is operated by the county,~~

~~increasing the delay at this intersection does not exceed the County's signalized threshold for signalized intersections. The project would not exceed the County's signalized intersection threshold at any other County intersections. Therefore, the Proposed Project would have a *less than significant* impact on the signalized County intersections. Impacts to SR1 are discussed separately below.~~

~~130-Unit Alternative~~

The Project ~~130-Unit Alternative~~ would increase traffic at signalized County intersections. **Table 3.7-9 ~~10~~** shows the LOS at the signalized County intersections would not exceed the County's signalized threshold for signalized intersections with this alternative. Therefore, the impact would be *less than significant*. Impacts to SR1 are discussed separately below.

Table 3.7-9 Existing Plus Proposed Project Intersection Levels of Service

Intersection	Peak	Existing		Existing Plus Proposed Project	
		Delay[1] (sec/veh)	LOS[b]	Delay[2] (sec/veh)	LOS[2]
1. SR 1/Carpenter Street	AM	19.4	B	19.8	B
	PM	39.9	D	**43.3**	**D**
2. SR 1/Ocean Avenue	AM	27.7	C	29.6	C
	PM	20.7	C	25.3	C
3. SR 1/Carmel Valley Road	AM	11.2	B	11.9	B
	PM	21.6	C	23.9	C
4. SR 1/ Rio Road	AM	25.1	C	25.4	C
	PM	41.4	D	**42.6**	**D**
5. Carmel Valley Road/ Carmel Rancho Blvd	AM	15.7	B	15.5	B
	PM	21.1	C	21.6	C
6. Carmel Valley Road/Carmel Middle School	AM	16.4	B	16.3	B
	PM	7.6	A	8.0	A
7. Carmel Valley Road /Rio Road[3]	AM	0.5 (33.8)	A (D)	8.2	A
	PM	1.5 (65.8)	A (F)	10.7	B
8. Carmel Valley Road/ Via Mallorca	AM	3.6	A	3.6	A
	PM	5.7	A	5.7	A
9. Carmel Valley Road/Rancho San Carlos Road	AM	9.0	A	9.1	A
	PM	12.1	B	12.3	B
10. Carmel Valley Road/Laureles Grade (unsignalized)	AM	34.2 (122.0)	D (F)	35.2 (127.1)	E **(F)**
	PM	59.4 (>200)	F (F)	56.9 (>200)	**F (F)**
11. Laureles Grade/SR 68	AM	16.4	B	16.4	B
	PM	21.3	C	21.3	C
12. Crossroads Driveway/Rio Road	AM	13.7	B	13.4	B
	PM	15.3	B	15.1	B
13. Carmel Center Place/ Rio Road	AM	5.3	A	5.1	A
	PM	8.5	A	8.3	A
14. Carmel Rancho Blvd/ Rio Road (unsignalized)	AM	10.1 (18.6)	B (C)	11.5 (23.1)	B (C)
	PM	12.6 (53.6)	B (F)	17.9 (100.1)	C (F)

Source: Appendix E

Notes:

Bold text indicates project impact threshold has been exceeded.

[1] HCM 2010 average control delay in seconds per vehicle.

[2] For side-street stop controlled intersections the worst approach's delay is reported in parenthesis to the overall intersection delay.

[3] Unsignalized under Existing Conditions. Signalized under Existing Plus Proposed Project conditions.

sec/veh = seconds per vehicle

LOS = level of service

Table 3.7-9~~10~~. Existing and Existing Plus Project ~~130-Unit Alternative~~ Levels of Service

Intersection	Peak	Existing		Existing Plus Project ~~130-Unit Alternative~~	
		Delay[1] (sec/veh)	LOS[2]	Delay[1](sec/ veh)	LOS[2]
1. SR 1/Carpenter Street	AM	19.4	B	19.6	B
	PM	39.9	D	**41.2**	**D**
2. SR 1/Ocean Avenue	AM	27.7	C	28.4	C
	PM	20.7	C	22.9	C
3. SR 1/ Carmel Valley Road	AM	11.2	B	13.8	B
	PM	21.6	C	22.5	C
4. SR 1/ Rio Road	AM	25.1	C	25.2	C
	PM	41.4	D	**41.6**	**D**
5. Carmel Valley Road/ Carmel Rancho Blvd	AM	15.7	B	15.8	B
	PM	21.1	C	21.8	C
6. Carmel Valley Road/Carmel Middle School	AM	16.4	B	16.3	B
	PM	7.6	A	8.0	A
7. Carmel Valley Road /Rio Road[3]	AM	0.5 (33.8)	A (C)	7.7	A
	PM	1.5 (65.8)	A (F)	8.2	A
8. Carmel Valley Road/Via Mallorca	AM	3.6	A	3.6	A
	PM	5.7	A	5.7	A
9. Carmel Valley Road/Rancho San Carlos Road	AM	9.0	A	9.0	A
	PM	12.1	B	12.1	B
10. Carmel Valley Road/Laureles Grade (unsignalized)	AM	34.2 (122.0)	D (F)	34.7 (125)	D **(F)**
	PM	59.4 (>200)	F (F)	57.1 (>200)	**F (F)**
11. Laureles Grade/SR 68	AM	16.4	B	16.4	B
	PM	21.3	C	21.2	C
12. Crossroads Driveway/Rio Road	AM	13.7	B	13.8	B
	PM	15.3	B	15.3	B
13. Carmel Center Place/Rio Road	AM	5.3	A	5.3	A
	PM	8.5	A	8.5	A
14. Carmel Rancho Blvd/Rio Road (unsignalized)	AM	10.1 (18.6)	B (C)	10.1 (18.6)	B (C)
	PM	12.6 (53.6)	B (F)	12.7 (54.8)	B (F)

Source: Appendix E

Notes:

Bold text indicates project impact threshold has been exceeded.

[1] HCM 2010 average control delay in seconds per vehicle.

[2] For side-street stop controlled intersections the worst approach's delay is reported in parenthesis to the overall intersection delay.

[3] Unsignalized under Existing Conditions. Signalized under Existing Plus Proposed Project conditions.

sec/veh = seconds per vehicle

LOS = level of service

B. Unsignalized intersections

Impact TR-2: LOS Decrease at Unsignalized Intersections (significant and unavoidable with mitigation)

~~**Proposed Project**~~

~~Under existing conditions, as shown in **Table 3.7-9**, the unsignalized intersection at Carmel Rancho Boulevard and Rio Road operates at LOS F during PM peak hour. With the Proposed Project, the westbound side-street approach would continue to operate at LOS F. However, overall intersection LOS would not degrade to LOS F and the peak hour signal warrant would not be met. Therefore, this impact would be *less than significant*.~~

~~The unsignalized intersection at Laureles Grade and Carmel Valley Road currently operates at an unacceptable PM peak hour LOS F and AM peak hour LOS D. With the Proposed Project, the PM peak hour operations would be LOS F and the AM peak hour would operate at LOS E. The Proposed Project would add 5 AM and 8 PM trips to this intersection. This intersection meets the peak-hour volume signal warrant under existing and Proposed Project conditions. Since this intersection operates at a deficient level with or without the project, the project can only be required to contribute a fair-share to complete improvements and cannot be required to solely fund such improvements. **Mitigation Measure TR-1** would require the Project Applicant to make a fair-share contribution through the CVTIP traffic impact fee to help complete a grade separation as noted in policy CV-2.10 of the 2013 CVMP at the Laureles Grade/Carmel Valley Road intersection. With completion of proposed improvements, this impact would be *less than significant*. However, since this improvement relies on other sources of funds than just the Proposed Project (since existing operations are already failing, the Proposed Project is not the only source of impact), it may take some time to obtain full funding; in the interim, the impact at this location would be *significant and unavoidable* in the interim.~~

~~As shown in **Table 3.7-9**, all other unsignalized intersections would have acceptable LOS with the Proposed Project. Therefore, impacts on these intersections would be *less than significant*. No further mitigation is required.~~

~~**130-Unit Alternative**~~

Under existing conditions, as shown in **Table 3.7-9**, the unsignalized intersection at Carmel Rancho Boulevard and Rio Road operates at LOS F during PM peak hour. With the Proposed Project, ~~Similar to the Proposed Project, with the 130-Unit Alternative,~~ the westbound side-street approach at Carmel Rancho Boulevard and Rio Road would operate at LOS F during the PM peak hour. Overall the intersection LOS would not degrade to LOS F, and the peak hour signal warrant would not be met. Therefore, this impact would be *less than significant*. No mitigation is required.

With the Project ~~130-Unit Alternative~~, the AM peak hour LOS at the Laureles Grade and Carmel Valley Road intersection would remain at LOS D, and the PM peak hour LOS would remain at LOS F. As stated above, this intersection meets the peak hour-volume signal warrant under the existing condition and with the Project ~~130-Unit Alternative~~. Therefore, the Project ~~130-Unit Alternative~~ would have a *potentially significant* impact at this unsignalized intersection. **Mitigation Measure TR-1** would require the Project Applicant to make a fair-share contribution through the CVTIP traffic impact fee to help complete interchange improvements at the Laureles Grade/Carmel Valley Road intersection. With completion of proposed interchange improvements, this impact to a *less-*

than-significant level. However, since this improvement relies on other sources of funds than just the Proposed Project (since existing operations are already failing, the Proposed Project is not the only source of impact), it may take some time to obtain full funding; in the interim, the impact at this location would be *significant and unavoidable* in the interim.

As shown in **Table 3.7-9~~10~~**, all other unsignalized intersections would have acceptable levels of service with the 130-Unit Alternative. Therefore, impact on those intersections would be *less-than-significant.* No further mitigation is required.

Mitigation Measure TR-1: Contribute Fair-Share to Interchange Improvements of Laureles Grade and Carmel Valley Road through the CVTIP Traffic Impact Fee

Prior to construction, the Project Applicant will make a fair-share contribution toward the cost of improving traffic operations at the intersection of Laureles Grade and Carmel Valley Road. The nature of the improvement may include a grade separation. Installation of a grade separation as described in the *Carmel Valley Master Plan Traffic Study* (DKS Associates 2007) would improve traffic conditions to an acceptable LOS C or better during the peak hours. This fair-share contribution shall be through the CVTIP Traffic Impact Fee.

C. Roadway Segments

Impact TR-3: Peak Hour LOS Decrease for Two-Lane and Multi-Lane and/or exceed ADT Threshold for Portions of Carmel Valley Road, Rio Road or Carmel Rancho Boulevard (less than significant)

~~**Proposed Project**~~

Project traffic volumes on roadway segments were calculated by adding the estimated project trips to existing ADT volumes (**Table 3.7-10~~11~~**).

As shown in **Table 3.7-10~~11~~**, the Proposed Project would not generate enough traffic volume to exceed the 2013 CVMP threshold ADT for Carmel Valley Road, Rio Road or Rancho Carmel Boulevard segments.

As shown in **Table 3.7-10~~11~~**, segments 6, 7, 11, 12, and 13 have existing deficient LOS during peak hours. Segment 6 PM peak hour operates at LOS E. Segment 7 AM westbound and PM eastbound peak hour operate at LOS E. Segment 11 AM and PM peak hour operates at LOS D. Segment 12 AM and PM peak hour operate at LOS D, and segment 13 westbound AM operates at LOS D.

With the Proposed Project, Carmel Valley Road segments 6 and 7 would continue to operate at LOS E, and Carmel Rancho Boulevard segment 11 and Rio Road segments 12 and 13 would continue to operate at LOS D. Because the addition of traffic at these segments would not lower the LOS from the existing E or D to a LOS F, it would not exceed the significance threshold and the Proposed Project impact on segments 6, 7, 11, 12 and 13 would be *less than significant.*

Table 3.7-11. Proposed Project Level of Service and Average Daily Trips on Carmel Valley Road Segments

Segment	CVMP ADT Threshold	Existing LOS Conditions					Existing Plus Proposed Project LOS Conditions				
			AM		PM			AM		PM	
		ADT	NB/EB	SB/WB	NB/EB	SB/WB	ADT	NB/EB	SB/WB	NB/EB	SB/WB
1. Carmel Valley Road–Valle Vista to Holman	8,487	3,200	A	C	B	B	3,200	A	C	B	B
2. Carmel Valley Road–Holman to Esquiline	6,835	3,700	A	C	C	B	3,720	A	C	C	B
3. Carmel Valley Road–Esquiline to Ford	9,065	8,200	B	D	D	C	8,220	B	D	D	C
4. Carmel Valley Road–Ford to Laureles Grade	11,600	10,600	C	D	D	C	10,620	C	D	D	C
5. Carmel Valley Road–Laureles Grade to Robinson Canyon	12,752	10,900	C	D	D	C	10,961	C	D	D	C
6. Carmel Valley Road–Robinson Canyon to Schulte	15,499	13,800	C	D	E	C	13,964	C	D	E	C
7. Carmel Valley Road–Schulte to Rancho San Carlos	16,340	15,600	C	E	E	D	15,866	D	E	E	D
8. Carmel Valley Road–Rancho San Carlos to Rio Road	48,487	18,700	B	B	B	B	19,007	B	B	B	B
9. Carmel Valley Road–Rio to Carmel Rancho Blvd	51,401	24,100	A	B	B	B	25,491	A	B	B	B
10. Carmel Valley Road–Carmel Rancho to SR 1	27,839	21,900	B	B	B	B	23,291	B	B	B	B
11. Carmel Rancho Blvd-Carmel Valley Road to Rio	33,495	9,877	D	B	D	B	10,859	D	B	D	B
12. Rio-Val Verde to Carmel Blvd	6,416	702	D	D	D	D	968	D	D	D	D
13.Rio-Carmel Rancho Blvd to SR 1	33,928	11,398	B	D	B	C	11,644	B	D	B	C

Source: **Appendix E.**

Notes:

Bold text indicates project impact threshold has been exceeded.

[1] ADT – average daily traffic

[2] NB-northbound; SB-southbound; EB- eastbound; WB- westbound

Table 3.7-~~10~~12. Project ~~130-Unit Alternative~~ Level of Service and Average Daily Traffic on Carmel Valley Road Segments

Segment	CVMP ADT Threshold	Existing LOS Conditions					Existing Plus Project ~~130-Unit Alternative~~ LOS Conditions				
			AM		PM			AM		PM	
		ADT	NB/EB	SB/WB	NB/EB	SB/WB	ADT	NB/EB	SB/WB	NB/EB	SB/WB
1. Carmel Valley Road–Valle Vista to Holman	8,487	3,200	A	C	B	B	3,209	A	C	B	B
2. Carmel Valley Road–Holman to Esquiline	6,835	3,700	A	C	C	B	3,709	A	C	C	B
3. Carmel Valley Road–Esquiline to Ford	9,065	8,200	B	D	D	C	8,209	B	D	D	C
4. Carmel Valley Road–Ford to Laureles Grade	11,600	10,600	C	D	D	C	10,609	C	D	D	C
5. Carmel Valley Road–Laureles Grade to Robinson Canyon	12,752	10,900	C	D	D	C	10,927	C	D	D	C
6. Carmel Valley Road–Robinson Canyon to Schulte	15,499	13,800	C	D	E	C	13,873	C	D	E	C
7. Carmel Valley Road–Schulte to Rancho San Carlos	16,340	15,600	C	E	E	D	15,718	C	E	E	D
8. Carmel Valley Road-Rancho San Carlos to Rio Road	48,487	18,700	B	B	B	B	18,837	B	B	B	B
9. Carmel Valley Road–Rio to Carmel Rancho Blvd	51,401	24,100	A	B	B	B	24,874	A	B	B	B
10. Carmel Valley Road–Carmel Rancho to SR 1	27,839	21,900	B	B	B	B	22,519	B	B	B	B
11. Carmel Rancho Blvd-Carmel Valley Road to Rio	33,495	9,877	D	B	D	B	10,670	D	B	D	B
12. Rio-Val Verde to Carmel Rancho Blvd	6,416	702	D	D	D	D	820	D	D	D	D
13. Rio-Carmel Rancho Blvd to SR 1	33,928	11,398	B	D	B	C	11,507	B	D	B	C

Source: **Appendix E.**

Notes:

Bold text indicates project impact threshold has been exceeded.

[1] ADT – average daily traffic

[2] NB-northbound; SB-southbound; EB- eastbound; WB- westbound

~~**130-Unit Alternative**~~

~~**Table 3.7-12** shows the existing and existing plus 130-Unit Alternative LOS and ADT on Carmel Valley Road, Rio Road and Rancho Carmel segments.~~

~~Similar to the Proposed Project, the 130-Unit Alternative traffic volume along the 13 segments along Carmel Valley Road would not exceed the 2013 CVMP ADT thresholds.~~

~~Similar to the Proposed Project, under the 130-Unit Alternative, Carmel Valley Road segments 6 and 7 would operate at LOS E, and Carmel Rancho Boulevard segment 11 and Rio Road segments 12 and 13 would operate at LOS D. The eastbound direction of segment 6 operates at LOS E during PM peak hour. Segment 7 westbound AM peak hour and eastbound PM peak hour operates at LOS E. With the 130-Unit Alternative, these segments would continue to operate at LOS E. Like the Proposed Project, under the 130-Unit Alternative, segments 11 through 13 would operate at LOS D. The addition of traffic at these segments would not worsen the LOS from LOS of E and LOS D to an LOS of F and thus would not exceed the significance threshold. Therefore, this impact would be *less than significant*.~~

Impact TR-4: Peak Hour Segment LOS Decrease for Portions of State Route 1 (significant and unavoidable ~~with mitigation~~)

~~**Proposed Project**~~

~~The Proposed Project would contribute to traffic along SR 1 where current operations are deficient. **Table 3.7-13** shows the deficient segments that the Proposed Project would affect with LOS in bold. The existing southbound and northbound lanes from SR 1 between Carpenter and Ocean operate at LOS D in both AM and PM peak hours. The Proposed Project would add 16 southbound trips during the AM peak hour and 39 northbound trips during the PM peak hours. With the Proposed Project, these segments would continue to operate at the existing LOS D. However, adding traffic to an existing deficient roadway exceeds Caltrans' threshold. Therefore, this impact would be *significant.*~~

~~The Proposed Project would add 32 northbound trips during the AM peak hour and 19 northbound and 34 southbound PM peak hour on SR 1 from Carmel Valley Road to Rio Road. The LOS at SR from Carmel Valley Road to Rio Road would continue to operate at LOS F and LOS E with the Proposed Project. Because the Proposed Project would add trips to existing deficient segments, this impact would be *significant*.~~

~~In addition, as noted above in Table 3.7-9, the project would contribute traffic to existing LOS D PM peak hour operations at the SR1/Carpenter and SR1/Rio Road intersections, which would also be *significant.*~~

~~In response to anticipated traffic congestion, Monterey County has sponsored RTP Project CT008, SR-1 Carmel Operational Improvement Project which will begin construction in fiscal year 2016-2017. The project will construct a climbing lane on SR 1 between Rio Road and Carmel Valley Road. Although RTP Project CT008 would help alleviate the impact, it would not reduce this impact to a *less-than-significant* level because the TAMC regional fee program does not include any proposed widening of SR1 in the Carmel Area north of Carmel Valley Road or south of Rio Road. Proposed Improvements between Rio Road and Carmel Valley Road in the regional fee program would help to address current conditions for that segment. There is no other state, regional, or local planning or~~

~~support for widening these segments of SR 1 except between Rio Road and Carmel Valley Road. Thus, the Proposed Project would result in a *significant and unavoidable impact* to SR 1 segments.~~

~~Table 3.7-13. Existing Conditions and Existing Plus Proposed Project Level of Service on State Route 1~~

	~~Existing LOS Conditions~~				~~Existing Plus Proposed Project LOS Conditions~~			
	~~AM~~		~~PM~~		~~AM~~		~~PM~~	
~~Segment~~	~~NB/EB~~	~~SB/WB~~	~~NB/EB~~	~~SB/WB~~	~~NB/EB~~	~~SB/WB~~	~~NB/EB~~	~~SB/WB~~
~~SR 1- Carpenter to Ocean~~	~~C~~	~~**D**~~	~~**D**~~	~~C~~	~~C~~	~~**D**~~	~~**D**~~	~~C~~
~~SR 1- Ocean to Carmel Valley Road~~	~~C~~	~~C~~	~~C~~	~~C~~	~~C~~	~~C~~	~~C~~	~~C~~
~~SR 1- Carmel Valley Road to Rio Road~~	~~**F**~~	~~C~~	~~**F**~~	~~**E**~~	~~**F**~~	~~C~~	~~**F**~~	~~**E**~~
~~SR 1- Rio Road to Ribera Road~~	~~B~~	~~B~~	~~B~~	~~B~~	~~B~~	~~B~~	~~B~~	~~B~~

~~Source: **Appendix E.**~~

~~Notes:~~

~~NB-northbound; SB-southbound; EB- eastbound; WB- westbound~~

~~**Bold** text indicates threshold has been exceeded.~~

~~130-Unit Alternative~~

~~Similar to the Proposed Project, the 130-Unit Alternative~~The Project would add traffic to existing deficient segments of SR 1.

As shown in **Table 3.7-11~~14~~**, under existing conditions, the LOS for SR 1 from Carpenter to Ocean southbound AM and northbound PM peak hour is LOS D. The Project ~~130-Unit Alternative~~ would add 5 southbound trips during the AM peak hour and 14 northbound trips during the PM peak hours. Therefore, the Project ~~130-Unit Alternative~~ impact on this segment of SR 1 would be *significant*.

The Project ~~130-Unit Alternative~~ would add 1 northbound trips during the AM peak hour and 4 northbound PM peak hour on SR 1 from Carmel Valley Road to Rio Road. The Project ~~130-Unit Alternative~~ would contribute to the southbound PM peak hour trips. The LOS for this SR 1 segment would continue operate at LOS F and LOS E with the Project ~~130-Unit Alternative~~. Because the Project ~~130-Unit Alternative~~ would add trips to an existing deficient segment, this impact would be *significant*.

In addition, as noted above in **Table 3.7-10**, the Project ~~130-Unit alternative~~ would contribute traffic to existing LOS D PM peak hour operations at the SR1/Carpenter and SR1/Rio Road intersections, which would also be *significant.*

In response to anticipated traffic congestion, Monterey County has sponsored RTP Project CT008, SR-1 Carmel Operational Improvement Project which will begin construction in fiscal year 2016-17. The project will construct a climbing lane on SR 1 between Rio Road and Carmel Valley Road. Although RTP Project CT008 would help alleviate the impact, it would not reduce this impact to a *less-than-significant* level because the TAMC regional fee program does not include any proposed widening of SR1 north of Carmel Valley Road or south of Ribera Road. There is no other state, regional, or local planning or support for widening this roadway. Thus, the Project would result in a *significant and unavoidable impact* to SR 1 segments.

~~Implementation of Mitigation Measure TR-2, while required, would not reduce this impact to a less-than-significant level because the TAMC regional fee program does not include any proposed widening of SR1 north of Carmel Valley Road or south of Ribera Road. There is no other state, regional, or local planning or support for widening this roadway. Thus, the 130-Unit Alternative would result in a significant and unavoidable impact to SR 1 segments.~~

Table 3.7-11~~14~~. Existing Conditions and Existing Plus Project ~~130-Unit Alternative~~ Level of Service on State Route 1

	Existing LOS Conditions				Existing Plus Project ~~130-Unit Alternative~~ LOS Conditions			
	AM		PM		AM		PM	
Segment	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
SR 1–Carpenter to Ocean	C	**D**	**D**	C	C	**D**	**D**	C
SR 1–Ocean Avenue to Carmel Valley Road	C	C	C	C	C	C	C	C
SR 1–Carmel Valley Road to Rio Road	**F**	C	**F**	**E**	**F**	C	**F**	**E**
SR 1–Rio Road to Ribera Road	B	B	B	B	B	B	B	B

Source: **Appendix E.**

Notes:

NB-northbound; SB-southbound; EB- eastbound; WB- westbound

Bold text indicates threshold has been exceeded.

~~Mitigation Measure TR-2: Contribute Fair-Share Regional Impact Fee~~

~~The most recently adopted 2014 RTP and the TAMC 14-Year Investment Plan Transportation Plan both include the following improvement.~~

- ~~RTP Project CT008, SR1—Carmel Operational Improvement. This Project, sponsored by Monterey County, will construct a northbound climbing lane on SR 1 between Rio Road and Carmel Valley Road to relieve congestion on this facility.~~

~~The Project Applicant will be responsible for contributing its a fair-share impact fee for regional traffic improvements as determined by TAMC in concert with Caltrans and Monterey County.~~

D. Access, Circulation, and Safety

Impact TR-5: Adequate Sight Distance (less than significant)

~~Proposed Project~~

The speed limit is 55 mph on Carmel Valley Road at the project site entrance (Rio Road). A vehicle stopped on Rio Road at the intersection of Carmel Valley Road has a clear line of sight of 800 feet looking west and 900 feet looking east. The sight distance standards, as prescribed in the Caltrans *Highway Design Manual,* are presented as a function of vehicle speed. The Caltrans sight distance standards indicate that a vehicle traveling at 60 mph would require 590 feet to stop under normal operating conditions. Since the sight distance in both directions exceeds 590 feet, the sight distance

is satisfactory for the speeds prevailing on Carmel Valley Road. This impact would be *less than significant.* No mitigation is required.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative sight distance from Rio Road at Carmel Valley has a clear line of sight of 800 feet looking west and 900 feet looking east. The speed limit on Carmel Valley Road is 55 mph. Traveling at 60 mph would require 590 feet. Therefore, the sight distance would be satisfactory for the speeds on Carmel Valley Road. This impact would be *less than significant.* No mitigation is required.~~

Impact TR-6: Adequate Project Access (less than significant)

~~**Proposed Project**~~

~~*Eastbound right turn from Carmel Valley Road onto southbound Rio Road*—this movement would be made by 21 vehicles in the AM peak hour and 73 vehicles in the PM peak hour. The existing turn pocket is approximately 100 feet long. Since this movement has no conflicting movement at the intersection, it can be made unimpeded, and there is no reason for queues to develop. The right-turn pocket serves principally as a deceleration lane, allowing vehicles to exit the traffic stream before slowing to a near stop. The existing 100 feet of space is adequate for this purpose.~~

~~*Westbound left turn from Carmel Valley Road onto southbound Rio Road*—this movement would be made by 6 vehicles in the AM peak hour and 20 vehicles in the PM peak hour. The existing turn pocket is approximately 400 feet long, which is enough space to accommodate 20 vehicles at once. However, the Project's proposed traffic signal at Carmel Valley Road and Rio Road would ensure adequate access and traffic flow at this intersection. Therefore, with the proposed traffic signal, access to the project site would be adequate to accommodate all of the future AM and PM peak-hour traffic volumes for this movement.~~

~~*Northbound left turns from Rio Road onto westbound Carmel Valley Road*—this movement would be made by 70 vehicles in the AM peak hour and 42 vehicles in the PM peak hour. The northbound approach of the existing road is 800 feet long and wide enough to accommodate two lanes—a left-turn lane and a right-turn lane. The northbound left-turn pocket would therefore provide 800 feet of storage, which is enough space to accommodate 40 vehicles at once. However, the proposed traffic signal at Carmel Valley Road and Rio Road would ensure adequate access and traffic flow at this intersection. Therefore, with the proposed traffic signal, access to the site would be adequate to accommodate all of the future AM and PM peak-hour traffic volumes for this movement.~~

~~*Northbound right turns from Rio Road onto eastbound Carmel Valley Road*—this movement would be made by 19 vehicles in the AM peak hour and 11 vehicles in the PM peak hour. The existing 800 feet of storage is therefore sufficient to accommodate all of the future AM and PM peak-hour traffic volumes for this movement.~~

~~Access to Rancho Cañada Village from the west would be by a small-scale extension of Rio Road west. The portion of Rio Road west of the proposed development is currently in private ownership, and the proposed improvements to Rio Road outside of the project area would require permission of the property owners or purchase of the right-of-way needed for the proposed improvements. Rio Road would be developed as a through road.~~

~~A through road would allow access to all vehicles. However, as discussed in Section 3.2, *Hydrology and Water Quality*, the Rio Road west is within the 100-year floodplain that would be inaccessible during a flood event. However, Rio Road east is outside the 100-year floodplain and would provide Project site access and egress during a flood event affecting Rio Road west.[1]~~

~~Since Carmel Valley Road would provide adequate access into the project area from the east (at all times) and Rio Road west would provide access outside of flood conditions, this impact would be *less than significant.* No mitigation is required.~~

~~130-Unit Alternative~~

Eastbound right turn from Carmel Valley Road onto southbound Rio Road—this movement would be made by 22 vehicles in the AM peak hour and 73 vehicles in the PM peak hour. The existing turn pocket is approximately 100 feet long. Since this movement has no conflicting movement at the intersection, it can be made unimpeded, and there is no reason for queues to develop. The right-turn pocket serves principally as a deceleration lane, allowing vehicles to exit the traffic stream before slowing to a near stop. The existing 100 feet of space is adequate for this purpose.

Westbound left turn from Carmel Valley Road onto southbound Rio Road—this movement would be made by 3 vehicles in the AM peak hour and 11 vehicles in the PM peak hour. The existing turn pocket is approximately 400 feet long, which is enough space to accommodate 20 vehicles at once. Therefore, there is sufficient storage to accommodate all future AM peak and PM peak hour traffic volumes.

Northbound left turns from Rio Road onto westbound Carmel Valley Road—this movement would be made by 66 vehicles in the AM peak hour and 43 vehicles in the PM peak hour. The northbound approach of the existing road is 800 feet long and wide enough to accommodate two lanes—a left-turn lane and a right-turn lane. The northbound left-turn pocket would therefore provide 800 feet of storage, which is enough space to accommodate 40 vehicles at once. However, the proposed traffic signal at Carmel Valley Road and Rio Road would ensure adequate access and traffic flow at this intersection. Therefore, with the proposed traffic signal, access to the site would be adequate to accommodate all of the future AM and PM peak-hour traffic volumes for this movement.

Northbound right turns from Rio Road onto eastbound Carmel Valley Road—this movement would be made by 10 vehicles in the AM peak hour and 6 vehicles in the PM peak hour. The existing 800 feet of storage is therefore sufficient to accommodate all of the future AM and PM peak-hour traffic volumes for this movement.

Access to Rancho Cañada Village from the west would be by a small-scale extension of Rio Road west. The portion of Rio Road west of the proposed development is currently in private ownership, and the proposed improvements to Rio Road outside of the project area would require permission of the property owners or purchase of the right-of-way needed for the proposed improvements. Rio Road west would be developed for pedestrians, bicycles, and emergency vehicles only.

Under the <u>Project</u> ~~130-Unit Alternative~~, Rio Road west would allow access to emergency vehicles only. The emergency access road would have a gate that would be employed to prevent through traffic with the exception of emergency vehicles possessing the appropriate code or key. As noted

~~[1] Refer to Chapter 3.10, *Public Services, Utilities and Recreation*, for a discussion of emergency vehicle access.~~

above, Rio Road west would not provide emergency access under flood conditions, but Carmel Valley Road would still be available.

Since Carmel Valley Road would provide adequate access into the project site from the east (at all times) and Rio Road west would provide emergency access except during flooding events, this impact is considered *less than significant*. No mitigation is required.

E. Transit and Bicycle Travel

Impact TR-7: Changes to Transit and Bicycle Travel Access (less than significant)

~~**Proposed Project**~~

~~The Proposed Project would incorporate features that would encourage the use of alternative modes of transportation and would contribute to a reduction in vehicle trips from what otherwise would occur. The Proposed Project would build a road connection to Rio Road to the west that would provide vehicle access to the Crossroads Shopping Center Construction of Rio Road west would connect Carmel Valley Road to Highway. This roadway connection has the potential to serve as a cut-through route for drivers seeking to avoid congestion on Carmel Valley Road. However, as shown in **Figure 2-5**, the cut through drivers would be discouraged by multiple turns required to cut through the project site. Extension of Rio Road would also provide a convenient route for pedestrians and bicycles to access shopping and other services without using Carmel Valley Road.~~

~~The Proposed Project would develop a network of multi-use public trails that would be constructed to channel users through the habitat preserve across an existing golf bridge that would provide access to the Palo Corona Ranch Regional Park. This would provide another pedestrian and bicycle route for the Proposed Project and the general public in Carmel Valley. Trail access would be provided to Carmel Valley Middle School adjacent to the property. The project entry roads have included bicycle paths in their design.~~

~~Thus, the Project's impacts on transit and bicycle travel would be *less-than-significant*. No mitigation is required.~~

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative~~ The Project would extend Rio Road west and would provide a multi-use public trail that would provide access to Rio Road west and Palo Corona Ranch Regional Park across the proposed habitat preserve and existing golf bridge. Similarly, trail access would be provided to Carmel Valley Middle School. ~~However, unlike with the Proposed Project, with the 130-Unit Alternative,~~ Rio Road west would provide bicycle, pedestrian and emergency vehicle access only. The Project ~~130-Unit Alternative~~ would not provide a link between Carmel Valley Road and SR 1 with the potential to encourage drivers to cut through the project site. Therefore, the Project's impact on transit and bicycle travel would be *less than significant*. No mitigation is required.

~~As shown in **Figure 2-9**, access to Lot 130 would continue to be off of Carmel Valley Road. Therefore, the 130-Unit Alternative impact on transit and bicycle travel would be *less than significant*. No mitigation is required.~~

F. Construction Traffic

Impact TR-8: Construction Traffic Decreases LOS (significant and unavoidable with mitigation)

~~**Proposed Project**~~

~~Construction-related traffic is estimated to be most intensive during the grading stage of project construction. During other stages of construction, the project-related traffic is projected to be less than during this stage. According to the Project Applicant, the Proposed Project's three phases will be graded together in one single effort. It is estimated that during this grading stage approximately 100,000 cubic yards of dirt would be imported to the project site. Using typical truck capacities, the total number of truckloads for this construction stage is estimated to be approximately 7,200 truckloads. The schedule for this hauling activity is estimated to be 28 working days, based on a 9-hour workday. This schedule equates to 257 trucks per day or 29 trucks per hour traveling to the site (514 trips/day total, 58 trips/hour total) during the 28 working days. These trip totals are less than the estimated project trip generation (**Table 3.7-8)** for daily trips (2,046 trips/day total) and for AM or PM peak-hour trips (168 and 207 trips/hour total, respectively) once the Project is completed and occupied.~~

~~With more limited trip generation, construction is not expected to lower LOS levels on any affected roadway. However, given that there are failing operations under existing conditions at certain locations (such as along SR1 and at the Laureles/SR 68 intersection), the addition of construction traffic would result in a significant impact. **Mitigation Measure TRA-3** would reduce construction period impacts, but would not avoid all contributions to locations with existing failing traffic operations so the impact would be *significant and unavoidable*.~~

~~**130-Unit Alternative**~~

~~Unlike the Proposed Project, the 130-Unit Alternative~~ The Project would not import fill to the project site to develop the building pad for the housing development, thus minimizing truck trips required for construction. ~~Because the 130-Unit Alternative would not require the import of soil, truck traffic would be less for that part of construction.~~ Construction-related traffic would be temporary and would involve bringing construction materials (e.g., wood, concrete, sheet, gravel) to the site. ~~In addition, because the 130-Unit Alternative would have fewer housing units, the trips associated with delivering building materials would also be fewer.~~

~~With more limited trip generation, c~~ Construction is not expected to lower LOS levels on any affected roadway. However, given that there are failing operations under existing conditions at certain locations (such as along SR 1 and at the Laureles/SR 68 intersection), the addition of construction traffic would result in a significant impact. **Mitigation Measure TR~~A-~~2~~3~~** would reduce construction period impacts, but would not avoid all contributions to locations with existing failing traffic operations, and the impact would be *significant and unavoidable*.

Mitigation Measure TR~~A-~~2~~3~~. Develop and Implement a Construction Traffic Control Plan

A traffic control plan, including a comprehensive set of traffic control measures, will be prepared by the construction contractor and submitted to Monterey County for review and approval, before issuance of grading or building permits. The plan will be implemented throughout the

course of Project construction and may include, but will not be limited to, the following elements.

- Limit construction activities to between 8 a.m. and 6 p.m., Monday through Saturday. No work will be permitted on Sundays or holidays. Workers may be on-site before 8 a.m. and after 6 p.m., but no work will be performed that will disturb neighboring residents. (The Project Applicant's proposed construction hours are consistent with this measure.)
- Require that written notification be provided to contractors regarding appropriate routes to and from the Project site, and the weight and speed limits on local roads used to access the Project site. Wherever possible, construction truck travel will occur on collector and arterial roads, not on local or resident streets.
- Repair or restore any damage attributable to haul trucks on haul routes to the satisfaction of the appropriate agency.
- Require traffic controls on Rio Road east and the Project entrance driveway, including flag persons wearing bright orange or red vests and using a "Stop/Slow" paddle to control oncoming traffic.
- Lane closure procedures, including signs, cones, and other warning devices for drivers, will be identified as appropriate.
- Use of steel plates to maintain through-traffic on roads will be considered, and construction access routes will be identified.
- Construction staging is anticipated to occur on-site for all Project components and will be verified by the County.

  Provide adequate on-site parking for all construction workers to minimize the impact on area roads. When on-site parking cannot be provided, alternative parking and shuttle systems will be developed and verified by the County.

Chapter 3.8
Air Quality

Introduction

This chapter provides a discussion of the air quality issues related to the Proposed Project ~~and the 130-Unit Alternative in Carmel Valley~~. This chapter provides a review of existing conditions based on available literature; a summary of applicable federal, state, and local policies and regulations related to air quality; and an analysis of direct and indirect environmental impacts that could result from the Proposed Project ~~and the 130-Unit Alternative~~. Where feasible, mitigation measures are recommended to reduce the level of impacts.

Impact Summary

Table 3.8-1 provides a summary of the potential air quality impacts of the Proposed Project ~~and the 130-Unit Alternative~~. As shown in **Table 3.8-1**, the Proposed Project ~~and the 130-Unit Alternative~~ would result in potentially significant impacts related to air quality within the project area. However, implementation of mitigation measures described in this Second Revised ~~Recirculated~~ Draft EIR, would reduce the impacts to less-than-significant levels.

Table 3.8-1. Air Quality Impact Summary

Impact	~~Proposed Project Level of Significance Before Mitigation~~	~~130-Unit Alternative~~ Level of Significance ~~Before Mitigation~~	Mitigation Measure	Level of Significance After Mitigation
A. Air Quality Plan Consistency				
AIR-1: Conflict with the 2012 Air Quality Management Plan	~~LTS~~	LTS	None Required	–
B. Long-Term Emissions				
AIR-2: Result in a Long-Term Increase in ROG, NO_X, CO, and PM10 Emissions from Vehicular Traffic and Area Sources	~~Potentially Significant~~	Potentially Significant	AIR-1: Prohibit Wood-Burning Fireplaces	LTS
C. Construction Emissions				
AIR-3: Result in a Short-Term Increase in PM10 Emissions due to Grading and Construction	~~LTS~~	LTS	None Required	–

Impact	~~Proposed Project Level of Significance Before Mitigation~~	~~130-Unit Alternative~~ Level of Significance ~~Before Mitigation~~	Mitigation Measure	Level of Significance After Mitigation
D. Sensitive Receptors				
AIR-4: Result in the Emission of Toxic Air Contaminants from Diesel Truck and Equipment Use during Construction	~~LTS~~	LTS	None Required	–
AIR-5: Expose Sensitive Receptors to Substantial CO Concentrations from Project-Related Traffic	~~LTS~~	LTS	None Required	–
E. Odors				
AIR-6: Expose New Sensitive Receptors to Objectionable Odors	~~LTS~~	LTS	None Required	–
LTS = Less than Significant, – = not applicable.				

Environmental Setting

Research Methods

The following literature was reviewed to assess air quality conditions in the project area.

- California ambient air quality standards (CAAQS) (California Air Resources Board 2013a).
- Air Designation Maps/state and national (California Air Resources Board 2013b).
- iADAM air quality data statistics (California Air Resources Board 2012).
- CEQA Air Quality Guidelines (Monterey Bay Unified Air Pollution Control District 2008a).
- *2012 Triennial Update to the Air Quality Management Plan for the Monterey Bay Region* (Monterey Bay Unified Air Pollution Control District 2013).
- The California Emissions Estimator Model (CalEEMod) (South Coast Air Quality Management District 2013).
- Central Coast Transportation Consulting. 2015. *Rancho Cañada Draft Transportation Impact Study*. September.

Existing Conditions

Regional Setting

Topography

The project area is located within the North Central Coast Air Basin (NCCAB), which comprises Monterey, Santa Cruz, and San Benito Counties. The regional air quality district is the Monterey Bay Unified Air Pollution Control District[1] (MBUAPCD), which has jurisdiction over air quality issues throughout the three-county NCCAB. The NCCAB lies along the central coast of California and covers an area of 5,159 square miles. The northwest sector of the basin is dominated by the Santa Cruz Mountains. The Diablo Range marks the northeastern boundary and, together with the southern extent of the Santa Cruz Mountains, forms the Santa Clara Valley, which reaches into the northeastern tip of the basin. Farther south, the Santa Clara Valley extends into the San Benito Valley, which runs northwest-southeast and has the Gabilan Range as its western boundary. To the west of the Gabilan Range is the Salinas Valley, which extends from Salinas at its northwestern end to south of King City at its southeastern end. The western side of the Salinas Valley is formed by the Sierra de Salinas, which also forms the eastern side of the smaller Carmel Valley. The coastal Santa Lucia Range defines the western side of Carmel Valley (Monterey Bay Unified Air Pollution Control District 2008a).

Climate

The semi-permanent high-pressure cell in the eastern Pacific, known as the Pacific High, is the basic controlling factor in the climate of the NCCAB. In the summer, the high-pressure cell is dominant and causes persistent west and northwest winds over the entire California coast. Air descends in the Pacific High, forming a stable temperature inversion of hot air over a cool coastal layer of air. The onshore air currents pass over cool ocean waters to bring fog and relatively cool air into the coastal valleys. The warmer air above acts as a lid to inhibit vertical air movement. The generally northwest-southeast orientation of mountainous ridges tends to restrict and channel the summer onshore air currents. Surface heating in the interior portion of the Salinas and San Benito Valleys creates a weak low pressure that intensifies the onshore airflow during the afternoon and evening (Monterey Bay Unified Air Pollution Control District 2008a).

In the fall, the surface winds become weak, and the marine layer grows shallow, dissipating altogether on some days. The airflow is occasionally reversed in a weak offshore movement, and the relatively stationary air mass is held in place by the Pacific High, which allows pollutants to build up over a period of a few days. It is most often during this season that north or east winds develop and transport pollutants from either the San Francisco Bay Area or the Central Valley into the NCCAB. During the winter, the Pacific High migrates southward and has less influence on the air basin. Air frequently flows in a southeasterly direction out of the Salinas and San Benito Valleys, especially during night and morning hours. Northwest winds are nevertheless still dominant in winter, but easterly flow is more frequent. The general absence of deep, persistent inversions and the

[1] Baseline conditions for analysis in this Second Revised Draft EIR are the existing conditions at the time of issuance of the Notice of Preparation for the original EIR (2006). Since that time, MBUAPCD changed its name to Monterey Bay Air Resources District (MBARD). The name in use at the time of baseline conditions is retained for the analysis in this Second Revised Draft EIR.

occasional storm systems usually result in good air quality for the basin as a whole in winter and early spring (Monterey Bay Unified Air Pollution Control District 2008a).

Weather

According to data recorded by the Monterey station (COOP ID 045795), the project area experiences moderate temperatures and humidity. Temperatures average 57 °F annually. Summer afternoon high temperatures average 68 °F, decreasing to an average 52 °F overnight. Winter temperatures average 61°F during the day and 44 °F at night. Temperature extremes, above 90 °F or below 32 °F, occur only in unusual weather conditions (Western Regional Climate Center 2014). Because of the moderating marine influence, which decreases with distance from the ocean, monthly and annual spreads between temperatures are greatest inland and smallest at the coast. Temperature has an important influence on basin wind flow, dispersion along mountain ridges, vertical mixing, and photochemistry.

According to data recorded from the Monterey station (COOP ID 045795), precipitation is highly variable seasonally. Rainfall at the Monterey station area averages 19.73 inches annually, ranging from 8.63 inches during the driest year on record (2014) to 41.01 inches during the wettest year on record (1998) (Western Regional Climate Center 2014). Summers are often completely dry, with frequent periods of no rain through early fall. Annual rainfall is lowest in the coastal plain and inland valleys, higher in the foothills, and highest in the mountains.

Criteria Air Pollutants

Air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. These regulated air pollutants, known as *criteria air pollutants*, are categorized as primary and secondary pollutants. Air quality studies generally focus on the five pollutants of greatest concern as directed by the local air quality management district. These criteria air pollutants are ozone, carbon monoxide (CO), inhalable particulate matter (PM) (PM10 and PM2.5), NO_2, and sulfur dioxide (SO_2). Because ozone, a photochemical oxidant, is not emitted into the air directly from sources, emissions of ozone precursors, specifically, nitrogen oxides (NO_X) and volatile organic compounds (VOC),[2] are regulated with the aim of reducing ozone formation in the lowermost region of the troposphere.

Ozone and NO_2 are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. NO_2 reacts photochemically with reactive organic gases (ROG) to form ozone, and this reaction occurs at some distance downwind of the source of pollutants. Pollutants such as CO, PM_{10}, and $PM_{2.5}$ are considered local pollutants because they tend to disperse rapidly with distance from the source.

The principal characteristics surrounding these pollutants are discussed below. Toxic air contaminants (TACs) are also discussed below, although no air quality standards exist for TACs.

Ozone

Ozone is an oxidant that attacks synthetic rubber, textiles, and other materials and causes extensive damage to plants by leaf discoloration and cell damage. It is also a severe eye, nose, and throat

[2] There are several subsets of organic gases, including reactive organic gases (ROGs) and VOCs. Generally, the terms ROGs and VOCs are used interchangeably.

irritant and increases susceptibility to respiratory infections. Ozone is not emitted directly into the air, but rather it forms from a photochemical reaction in the atmosphere. Ozone precursors, including ROG and NO_X, are emitted by mobile sources and stationary combustion equipment and react in the presence of sunlight to form ozone. Because reaction rates depend on the intensity of ultraviolet light and air temperature, ozone conversion occurs primarily in the summertime.

Carbon Monoxide

CO is essentially inert to most materials and to plants, but it can significantly affect human health because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. Effects on humans range from slight headaches to nausea to death. Motor vehicles are the dominant source of CO emissions in most areas. High CO levels develop primarily during winter, when periods of light wind combine with the formation of ground-level temperature inversions—typically from evening through early morning. These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

Particulate Matter

Particulate matter suspended in the atmosphere can reduce visibility, retard plant growth, corrode materials, and affect human health. Health concerns focus on particles small enough to reach the lungs when inhaled (inhalable PM). National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for PM apply to two classes of inhalable particulates: PM_{10} and $PM_{2.5}$. Those less than 10 micrometers in diameter (PM_{10}) are so small that they can get into the lungs, potentially causing serious health problems. Ten micrometers is smaller than the width of a single human hair. Those less than 2.5 micrometers in diameter ($PM_{2.5}$) are called fine particles.

Nitrogen Dioxide

NO_2 is a brownish gas that contributes to the formation of ground-level ozone pollution. NO_2 increases respiratory disease and irritation and may reduce resistance to certain infections. The majority of ambient NO_2 is not directly emitted, but rather it is formed rather quickly from the reaction of nitric oxide (NO) and oxygen (O_2) in the atmosphere. NO and NO_2 are the primary pollutants that make up the group of pollutants referred to as NO_X. In the presence of sunlight, complex reactions of NO_X with ozone and other air pollutants produce the majority of NO_2 in the atmosphere. NO_2 is one of the NO_X emitted from high-temperature combustion processes, such as those occurring in trucks, cars, and power plants. Indoors, home heaters and gas stoves also produce substantial amounts of NO_2.

Sulfur Dioxide

SO_2 is a colorless, irritating gas with a rotten-egg smell formed primarily by the combustion of sulfur-containing fossil fuels. SO_2 is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives and off-road diesel equipment. SO_2 also is emitted from several industrial processes, such as petroleum refining and metal processing.

Toxic Air Contaminants

TACs are pollutants that may result in an increase in mortality or serious illness, or that may pose a present or potential hazard to human health. Health effects of TACs include cancer, birth defects, neurological damage, damage to the body's natural defense system, and diseases that lead to death.

In 1998, following a 10-year scientific assessment process, California Air Resources Board (ARB) identified PM from diesel-fueled engines—commonly called diesel particulate matter (DPM)—as a TAC. Compared to other air toxics ARB has identified, DPM emissions are estimated to be responsible for about 70 percent of the total ambient air toxics risk (California Air Resources Board 2000).

Site-Specific Conditions

The existing air quality conditions in the vicinity of a project site are typically characterized by the monitoring data collected in the region. The nearest monitoring stations in Monterey County are selected to present air quality of the project vicinity. The nearest monitoring stations to the project site ~~Proposed Project and 130-Unit Alternative sites~~ are the Carmel Valley-Ford Road Station, which monitors ozone and is located approximately 10 miles southeast of the project site; the Salinas station, which monitors CO and $PM_{2.5}$ and is located approximately 18 miles northeast of the project site; and King City, which monitors ozone, PM_{10}, and $PM_{2.5}$ and is located approximately 49 miles southeast of the project site.

Table 3.8-2 summarizes air quality monitoring data from the Carmel Valley, Salinas, and King City monitoring stations for the most recent 3 years for which complete data are available (2012–2014). The monitoring stations have not recently experienced violations of the NAAQS and CAAQS for any pollutants (refer to **Table 3.8-4**). Data from these monitoring stations are used because the stations are the closest monitoring stations to the project site. However, they are in Carmel Valley and other inland portions of Monterey County near transit corridors. The project site is near ~~Proposed Project and the 130-Unit Alternative sites are on~~ the coast and would likely have better air quality conditions because of the dominance of onshore breezes and because the project site is not downwind of large urban or agricultural areas.

Air Quality Attainment Status

Local monitoring data (**Table 3.8-2**) are used to designate areas as nonattainment, maintenance, attainment, or unclassified for the NAAQS and CAAQS. The four designations are further defined as follows.

- Nonattainment—assigned to areas where monitored pollutant concentrations consistently violate the standard in question.
- Maintenance—assigned to areas where monitored pollutant concentrations exceeded the standard in question in the past, but are no longer in violation of that standard.
- Attainment—assigned to areas where pollutant concentrations meet the standard in question over a designated period.
- Unclassified—assigned to areas where data are insufficient to determine whether a pollutant is violating the standard in question.

Table 3.8-3 summarizes the attainment status of Monterey County with regard to the NAAQS and CAAQS.

Table 3.8-2. Ambient Air Quality Monitoring Data from the Carmel Valley-Ford Road, King City, and Salinas Stations (2012–2014)

	Monitoring Data		
Pollutant Standards	2012	2013	2014
1-Hour Ozone (ppm) (Carmel Valley)			
Maximum concentration	0.072	0.072	0.078
Number of days standard exceeded [a]			
CAAQS 1-hour (>0.09 ppm)	*0*	*0*	*0*
8-Hour Ozone (ppm) (Carmel Valley)			
National maximum concentration	0.060	0.068	0.070
National 4th-highest concentration	0.054	0.059	0.063
State maximum 8-hour concentration	0.060	0.068	0.070
Number of days standard exceeded [a]			
NAAQS 8-hour (>0.075 ppm)	*0*	*0*	*0*
CAAQS 8-hour (>0.070 ppm)	*0*	*0*	*0*
Carbon Monoxide (ppm) (Salinas)			
Maximum 8-hour concentration	1.39	--	--
Maximum 1-hour concentration	--	--	--
Number of days standard exceeded [a]			
NAAQS 8-hour (≥9 ppm)	*0*	*0*	*0*
CAAQS 8-hour (≥9.0 ppm)	*0*	*0*	*0*
NAAQS 1-hour (≥35 ppm)	*0*	*0*	*0*
CAAQS 1-hour (≥20 ppm)	*0*	*0*	*0*
Particulate Matter (PM_{10}) (µg/m³) (King City)			
National maximum 24-hour concentration	97.4	78.2	99.2
State maximum 24-hour concentration	--	--	--
Annual average concentration (CAAQS = 20 µg/m³)	24.3	27.7	25.9
Number of days standard exceeded [a]			
NAAQS 24-hour (>150 µg/m³) (expected)	*0.0*	*0.0*	*0.0*
CAAQS 24-hour (>50 µg/m³)	--	--	--
Particulate Matter ($PM_{2.5}$) (µg/m³) (King City)			
National maximum 24-hour concentration	16.5	18.3	20.9
24-hour Standard 98th Percentile	14.3	14.0	11.1
National annual average concentration	6.0	6.7	3.6
State annual average concentration	--	6.7	3.6
Number of days standard exceeded [a]			
NAAQS 24-hour (>35 µg/m³)	*0*	*0*	*0*

Sources: California Air Resources Board 2014; U.S. Environmental Protection Agency 2014.

Notes:

[a] An exceedance is not necessarily a violation.

-- = Insufficient data available to determine the value.

CAAQS = California ambient air quality standards.

NAAQS = national ambient air quality standards.

ppm = parts per million.

µg/m³ = micrograms per cubic meter.

Table 3.8-3. Federal and State Attainment Status for the Monterey County Portion of the North Central Coast Air Basin

	Monterey County	
Pollutant	NAAQS	CAAQS
O_3	Unclassified/Attainment	Nonattainment
CO	Unclassified/Attainment	Attainment
$PM_{2.5}$	Unclassified/Attainment	Attainment
PM_{10}	Unclassified	Nonattainment
NO_2	Unclassified/Attainment	Attainment
SO_2	Unclassified	Attainment
Pb	Unclassified/Attainment	Attainment

Source: California Air Resources Board 2013b.

Notes:

– = No applicable standard.

CAAQS = California ambient air quality standards.

CO = carbon monoxide.

NAAQS = national ambient air quality standards.

NO_2 = nitrogen dioxide.

O_3 = ozone.

PM_{10} = particulate matter less than 10 microns in diameter.

$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter.

Pb = lead.

SO_2 = sulfur dioxide.

Sensitive Receptors

MBUAPCD generally defines sensitive receptors as residences including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade 12 (K–12) schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes. Sensitive receptors also include residents of long-term care hospitals, hospices, prisons, and dormitories or similar live-in housing (Monterey Bay Unified Air Pollution Control District 2008a).

There are sensitive receptors located in the vicinity of the project site. Sensitive receptors in the project area that could be affected include those listed below.

- Single-family residences located along Carmel Valley Road and connecting roadways.
- Multi-family residences and condominiums located along Carmel Valley Road and Rio Road.
- The Community Church of the Monterey Peninsula and the Carmel Middle School located to the north of the project site.
- Rural residential housing development located to the west of the project site.
- Single-family residences located along Via Mallorca.

Regulatory Setting

The project site and surrounding areas are subject to air quality regulations developed and implemented at the federal, state, and local levels. At the federal level, the U.S. Environmental Protection Agency (EPA) is responsible for implementation of the Clean Air Act (CAA). Some portions of the CAA (e.g., certain mobile-source and other requirements) are implemented directly by EPA. Other portions of the CAA (e.g., stationary-source requirements) are implemented by state and local agencies.

Responsibility for attaining and maintaining air quality in California is divided between ARB and regional air quality districts. Areas of control for the regional districts are set by ARB, which divides the state into air basins. These air basins are defined by topography that limits airflow access or by county boundaries. The regional air quality district is the MBUAPCD.

This section discusses the federal, state, and local policies and regulations that are relevant to the analysis of air quality impacts of the Proposed Project ~~and 130-Unit Alternative~~.

Federal Policies and Regulations

Clean Air Act and National Ambient Air Quality Standards

The CAA, promulgated in 1963 and amended several times thereafter, including the 1990 amendments, establishes the framework for modern air pollution control. The act directs EPA to establish NAAQS for six criteria pollutants: ozone, CO, lead (Pb), NO_2, SO_2, and PM (PM_{10} and $PM_{2.5}$). The NAAQS are divided into primary and secondary standards; the former are set to protect human health within an adequate margin of safety, and the latter are set to protect valued environmental resources, such as plant and animal life. **Table 3.8-4** summarizes the NAAQS.

The CAA requires states to submit a state implementation plan (SIP) for areas in nonattainment for federal standards. The SIP, which is reviewed and approved by EPA, must demonstrate how the federal standards would be achieved. Failing to submit a plan or secure approval could lead to denial of federal funding and permits. In cases where the SIP is submitted by the state, but fails to demonstrate achievement of the standards, EPA is directed to prepare a federal implementation plan.

Federal Tailpipe Emission Standards

To reduce emissions from off-road diesel equipment, on-road diesel trucks, and harbor craft, EPA established a series of increasingly strict emission standards for new engines. New construction equipment used for the Project, including heavy-duty trucks and off-road construction equipment, would be required to comply with the emission standards.

Table 3.8-4. National and California Ambient Air Quality Standards

Pollutant	Symbol	Average Time	Standard (parts per million [ppm])		Standard (micrograms per cubic meter [µg/m³])		Violation Criteria	
			California	National	California	National	California	National
Ozone[a]	O_3	1 hour	0.09	–	180	–	If exceeded	–
		8 hours	0.070	0.075	137	147	If exceeded	If fourth-highest 8-hour concentration in a year, averaged over 3 years, is exceeded at each monitor in an area
Carbon monoxide	CO	8 hours	9.0	9	10,000	10,000	If exceeded	If exceeded on more than 1 day per year
		1 hour	20	35	23,000	40,000	If exceeded	If exceeded on more than 1 day per year
Nitrogen dioxide	NO_2	Annual arithmetic mean	0.030	0.053	57	100	If exceeded	If exceeded on more than 1 day per year
		1 hour	0.18	0.100	339	188	If exceeded	–
Sulfur dioxide	SO_2	24 hours	0.04	–	105	–	If exceeded	If exceeded on more than 1 day per year
		1 hour	0.25	0.075	655	196	If exceeded	–
		3 hour	–	0.50[a]	–	1300[a]–		
Hydrogen sulfide	H_2S	1 hour	0.03	–	42	–	If equaled or exceeded	–
Vinyl chloride	C_2H_3Cl	24 hours	0.01	–	26	–	If equaled or exceeded	–
Inhalable particulate matter	PM_{10}	Annual arithmetic mean	–	–	20	–	–	–
		24 hours	–	–	50	150	If exceeded	If exceeded on more than 1 day per year
	$PM_{2.5}$	Annual arithmetic mean	–	–	12	12.0	–	If 3-year average from single or multiple community-oriented monitors is exceeded
		24 hours	–	–	–	35	–	If 3-year average of 98th percentile at each population-oriented monitor in an area is exceeded
Sulfate particles	SO_4	24 hours	–	–	25	–	If equaled or exceeded	–
Lead Particles	Pb	Calendar quarter	–	–	–	1.5	–	If exceeded no more than 1 day per year
		30-day average	–	–	1.5	–	If equaled or exceeded	–
		Rolling 3-month average	–	–	–	0.15	If equaled or exceeded	Averaged over a rolling 3-month period

Source: California Air Resources Board 2013a.

Notes:

[a] Secondary standard.

– = [not applicable].

State Policies and Regulations

California Clean Air Act and California Ambient Air Quality Standards

In 1988, the state legislature adopted the California Clean Air Act (CCAA), which established a statewide air pollution control program. The CCAA requires all air districts in the state to endeavor to meet the CAAQS by the earliest practical date. Unlike the NAAQS under the federal CAA, the CAAQS under the CCAA do not set precise attainment deadlines. Instead, the CCAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. The CAAQS are generally more stringent than the NAAQS and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The CAAQS and NAAQS are listed together in **Table 3.8-4**.

ARB and local air districts bear responsibility for achieving California's air quality standards, which are to be achieved through district-level air quality management plans that would be incorporated into the state implementation plan. In California, EPA has delegated authority to prepare state implementation plans to ARB, which, in turn, has delegated that authority to individual air districts. ARB traditionally has established State air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving state implementation plans.

The CCAA substantially adds to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The CCAA also emphasizes the control of "indirect and area-wide sources" of air pollutant emissions. The CCAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and to establish traffic control measures.

Toxic Air Contaminant Regulations

California regulates TACs primarily through the Toxic Air Contaminant Identification and Control Act (Assembly Bill [AB] 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). AB 1807 created California's program to reduce exposure to air toxics. AB 2588 supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks. In August 1998, ARB identified particulate emissions from diesel-fueled engines as TACs. In September 2000, ARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. As an ongoing process, ARB reviews air contaminants and identifies those that are classified as TACs. ARB also continues to establish new programs and regulations for the control of TACs, including DPM.

Title 13 California Code of Regulations Section 2485

This section applies to diesel-fueled commercial motor vehicles that operate in the State of California with gross vehicular weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. This section requires that after February 1, 2005, the driver of any vehicle subject to this section: (1) shall not idle the vehicle's primary diesel engine for greater than 5 minutes at any location and (2) shall not operate a diesel-fueled auxiliary power system

(APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5 minutes at any location when within 100 feet of a restricted area.

Local Policies and Regulations

At the local level, responsibilities of air quality districts include overseeing stationary-source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA. The air quality districts are also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws and for ensuring that NAAQS and CAAQS are met.

Monterey Bay Unified Air Pollution Control District

In Monterey County, the MBUAPCD has local air quality jurisdiction. Under the CCAA, the MBUAPCD is required to develop an air quality plan for nonattainment criteria pollutants in the air district. The most recent air quality plan adopted by the MBUAPCD is the *Triennial Update to the Air Quality Management Plan for the Monterey Bay Region* (2012 Triennial Plan Revision), which updates the 2008 Air Quality Management Plan (AQMP) for the Monterey Bay Region and documents progress toward attaining the ozone CAAQS.

MBUAPCD has adopted CEQA emission thresholds, identified in their *CEQA Air Quality Guidelines* (Monterey Bay Unified Air Pollution Control District 2008a), to determine the level of significance of project-related emissions. Emissions that exceed the designated threshold levels are considered potentially significant impacts that should be mitigated.

Through the attainment planning process, MBUAPCD has developed rules and regulations for sources of air pollution. All projects located in Monterey County are subject to the MBUAPCD regulations in effect at the time of construction. Specific regulations applicable to the Project may involve diesel construction equipment emissions, fugitive dust, on-road haul truck emissions, and general permit requirements. Listed below are the MBUAPCD rules that would be applicable to the Proposed Project~~ and 130-Unit Alternative~~.

- Rule 400, Visible Emissions.
- Rule 402, Nuisances.
- Rule 403, Particulate Matter.
- Rule 424, National Emission Standards for Hazardous Air Pollutants.
- Rule 425, Use of Cutback Asphalt.
- Rule 426, Architectural Coatings.
- Rule 439, Building Removals.
- Rule 1003, Air Toxics Emissions Inventory and Risk Assessments.

Current County Plans and Policies

2010 Monterey County General Plan

The 2010 Monterey County General Plan applies to the inland area of Monterey County, including the project site. The Monterey County General Plan presents goals and policies that guide the general distribution and intensity of land uses, including residential, agricultural, commercial and industrial, public facilities, and open space uses, in the County. Policies in the 2010 General Plan open space element included under Goal OS-10 provide for the protection and enhancement of air quality without constraining agricultural activities. The policies include the integration of land use and development policies; encouraging the use of transit, bicycles, and pedestrian alternatives to automobile travel; concentrating commercial development in designated centers that can be better served by transit; and the promotion of mixed land uses.

Policy OS-10.7. The Monterey Bay Unified Air Pollution Control District's air pollution control strategies, air quality monitoring and enforcement activities shall be supported.

Policy OS-10.9. The County of Monterey shall require that future development implement applicable Monterey Bay Unified air Pollution Control District control measures. Applicants for discretionary projects shall work with the Monterey Bay Unified air Pollution Control District to incorporate feasible measures that assure that health-based standards for diesel particulate emissions are met. The County of Monterey will require that future construction operate and implement MBUAPCD PM10 control measures to ensure that construction-related PM10 emissions do not exceed the MBUAPCD's daily threshold for PM10. The County shall implement MBUAPCD measures as conditions of approval for future development to ensure that construction-related NOx emissions from non-typical construction equipment do not exceed the MBUAPCD's daily threshold for NO_X.

2013 Carmel Valley Master Plan

The 2013 CVMP presents supplemental policies that guide development in Carmel Valley in addition to the goals and policies within the 2010 Monterey County General Plan. Relevant policies include

Policy CV-2.1: Public transit should be explored as an alternative to the use of private automobiles and to help preserve air quality. Wherever feasible all new development shall include a road system adequate not only for its internally generated automobile traffic but also for bus (both transit and school), pedestrian, and bicycle traffic, which should logically pass through or be generated by the development.

Policy CV-3.14: Wherever possible a network of shortcut trails and bike paths should interconnect neighborhoods, developments, and roads. These should be closed to motor vehicles and their intent is to facilitate movement within the Valley without the use of automobiles.

Monterey County Standard Conditions of Approval

The Proposed Project ~~and 130-Unit Alternative~~ would be required to comply with Monterey County's Standard Conditions of Approval PD047: Demolition/Deconstruction of Structures (MBUAPCD Rule 439) and other Standard Conditions of Approval. ~~Refer to Chapter 2, *Project Description*, for the full text of the Standard Conditions of Approval.~~

Prior County Plans and Policies

As stated in Chapter 1, *Introduction*, discussion pertaining to the 1982 Monterey County General Plan is provided for informational purposes only.

1982 Monterey County General Plan

The 1982 Monterey County General Plan (1982 General Plan) includes a goal of providing for the protection and enhancement of Monterey County's air quality. The following local policies are relevant to the Proposed Project ~~and 130-Unit Alternative~~, but not applicable.

Policy 20.1.1: The County's land use and development policies shall be integrated and consistent with the natural limitations of the County's air basins.

Policy 20.1.2: The County should encourage the use of mass transit, bicycles and pedestrian modes of transportation as an alternative to automobiles in its land use plans.

Policy 38.1.4: The County shall encourage transportation alternatives such as bicycles, car, pools, transit and compact vehicles.

Policy 20.1.3: The County should develop and implement, where appropriate, a roadside tree program and should encourage and maintain vegetated/forested areas to the maximum extent feasible, for their air purifying functions.

Policy 20.2.2: The County shall adopt and support, as a minimum, the Air Quality Plan for the Monterey Bay Region as prepared by AMBAG.

Policy 20.2.5: The County shall encourage the use of the best available control technology as defined in the most current Monterey Bay Unified Air Pollution Control District rules and

Policy 38.1.1: The County shall support the implementation of measures for reducing air pollution from transportation sources.

Policy 41.1.2: Developers of major traffic generating activities shall provide fixed transit facilities such as bus shelters and pullouts, consistent with anticipated demand.

1986 Carmel Valley Master Plan

The 1986 Carmel Valley Master Plan (1986 CVMP) is a component of the 1982 General Plan. The major function of the 1986 CVMP is to guide the future development of the valley using goals and policies that reflect an understanding of the physical, cultural, and environmental setting of the area.

Policy 3.1.5: The amount of land cleared at any one time shall be limited to the area that can be developed during one construction season. This prevents unnecessary exposure of large areas of soil during the rainy season. [This also prevents additional exposure of PM10 to the sensitive receptors at the Carmel Valley Middle School.]

Policy 20.2.7.1: At least one station to monitor air quality shall be maintained in Carmel Valley. Whenever records for August, September and October of a given year include 15 hours (or more) of 0.1 ppm (or more) of oxidants (ozone), the County shall immediately hold public hearings to consider limitation of further development in the Master Plan area.

Policy 37.4.1: The County shall encourage overall land use patterns which reduce the need to travel.

Policy 38.1.4.1: Public transit should be explored as an alternative to the use of private automobiles and to help preserve air quality. (Whenever feasible all new development shall include a road system adequate not only for its internally generated automobile traffic but also

for bus - both transit and school - pedestrian and bicycle traffic which should logically pass through or be generated by the development.)

Impact Analysis

Methods of Analysis

Construction-Related Emissions

Anticipated construction-related emissions that could affect ambient air quality in the area include ROG, NO_X, CO, $PM_{2.5}$, and PM_{10}. The primary emissions sources include mobile and stationary construction equipment exhaust, employee vehicle exhaust, dust from clearing the land, exposed soil eroded by wind, and ROG from architectural coatings and asphalt paving. Construction-related emissions would vary substantially depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content.

Construction emissions of PM_{10} were estimated using a combination of emission factors within the CalEEMod emissions model (version 2013.2.2), emission factors from EMFAC 2014, a detailed inventory of construction phasing information for the Proposed Project from the Project Applicant, and default assumptions for building construction and fugitive dust within CalEEMod. While construction emissions are assumed to start in 2015 in the air quality analysis, construction may not actually start until 2016 or later. Because the CalEEMod emission factors improve every year with the fleet turnover to newer equipment and vehicles due to state and federal equipment and vehicle regulations, the use of a 2015 construction start date is a conservative approach that, if anything, would slightly overstate construction period emissions.

~~**Proposed Project**~~

~~Construction of the Proposed Project and 130-Unit Alternative would occur in four phases, and construction of each phase would depend on market conditions. Thus, all four plan phases could be developed concurrently. This analysis assumes all construction associated with the Proposed Project and the 130-Unit Alternative would occur concurrently for the most conservative construction scenario.~~

~~In addition, for the Proposed Project, PM10 emissions estimates are based on 220,000 cubic yards (CY) of cut, 100,000 CY of soil import, and 76.7 acres disturbed during the grading phase. It was assumed that activity associated with the removal of the existing golf course, including any structures, is included in the material removal and equipment activity accounted for within the grading and site preparation phases for the Proposed Project. A detailed inventory of data used to estimate construction-related emissions for the Proposed Project is shown in **Appendix F**.~~

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative~~ The Project's residential element would occur in four phases and construction of each phase would depend on market conditions. Thus, all four plan phases could be developed concurrently. This analysis assumes all construction associated

with the Project ~~130-Unit Alternative~~ would occur concurrently for the most conservative construction scenario.

With respect to the Project's ~~130-Unit Alternative~~ residential element, PM_{10} emissions estimates are based on 168,000 CY of onsite cut and approximately 76 ~~83~~ acres disturbed during the grading phase; no soil importation is expected. It was assumed that activity associated with the removal of the existing golf course, including any structures, included the material removal and equipment activity accounted for within the grading and site preparation phases for the Project ~~130-Unit Alternative~~. A detailed inventory of data used to estimate construction-related emissions for the Project ~~130-Unit Alternative~~ is shown in **Appendix F**.

Health Risk Assessment

ICF performed a human health risk assessment (HRA) for the Rancho Cañada Village Project (former Rancho Cañada Village Specific Plan) in 2011, which analyzed exposure to toxic air contaminants, including DPM, associated with construction-related off-road construction equipment and on-road haul trucks. The HRA assumed a 2011 construction start date, whereas the analysis herein assumes a 2015 construction start date. Therefore, to assess the potential health risk associated with construction on nearby sensitive receptors, the DPM-related risks shown in the 2011 HRA were scaled based on the difference in DPM emissions between the mass emissions used in the 2011 HRA and the emissions presented herein.

Off-road emissions were scaled from the 2011 HRA based on emission estimates specific for both alternatives. With respects to truck hauling, the Proposed Project would include similar truck hauling activities that were evaluated in the 2011 HRA; therefore, pollutant concentrations associated with truck hauling that were estimated in the 2011 HRA were incorporated directly into this analysis. However, the Project ~~130-unit Alternative~~ would not include truck hauling; therefore, pollutant concentrations associated with truck hauling that were estimated in the 2011 HRA were assumed to be zero and not included in the analysis.

In addition, the Office of Environmental Health Hazard Assessment (OEHHA) ~~recently~~ updated its Risk Assessment Guidelines in March 2015, which included updated exposure assessment factors (Office of Environmental Health Hazard Assessment 2015). The 2011 HRA included various exposure assessment factors that were updated in the OEHHA 2015 update, including age sensitivity factors (ASFs) to take into account the increased sensitivity to carcinogens during early-in-life exposure. However, the OEHAA 2015 guidance updated additional factors, specifically daily breathing rates (DBR). Therefore, risks that were estimated in the 2011 HRA were adjusted to reflect the revised DBR guidance issued by OEHHA in 2015 before applying the scaling factors described above. The 2011 HRA included risk calculations for non-DPM pollutants, including acrolein.[3] However, DPM accounts for the majority of cancer risk from construction activities. For example, the DPM in the 2011 HRA accounted for approximately 99.7 percent of the cancer risk. Further, the MBUAPCD suspended the requirement to assess risk from acrolein in July 2008 and has yet to reissue the requirement. Therefore, the HRA herein only includes a scaling of DPM-related emissions and associated risk and does not include the effects of acrolein emissions as it is no longer required by MBUAPCD guidance. The 2011 HRA and scaled calculations are provided in **Appendix F**.

[3] The EPA has identified a group of 92 airborne compounds emitted from mobile sources as substances known to cause human health effects. Acrolein is among the seven compounds EPA has highlighted as a priority air toxic.

Operation-Related Emissions

Implementation of ~~either~~ the Proposed Project ~~or the 130-Unit Alternative~~ would result in emissions at the project site that would replace existing emissions associated with one of the existing 18-hole golf courses.

Existing Operation-Related Emissions

Existing conditions at the project site include one of two 18-hole golf courses. Existing emission sources associated with the golf course include visitor vehicle trips, water consumption, waste generation, and landscaping. According to the Traffic Impact Study (TIS) (**Appendix E**), the existing golf course attracts 414 daily trips. An estimate of daily criteria pollutant emissions associated with existing (baseline) activity at the project site is shown in **Table 3.8-5**. It is assumed that existing (baseline) emissions would be replaced with implementation of either the Proposed Project ~~or 130-Unit Alternative~~.

Table 3.8-5. Existing (Baseline) Operational Criteria Pollutant Emissions (pounds per day)

Category	ROG	NO_X	CO	Fugitive PM_{10}	Exhaust PM_{10}	PM_{10} Total	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$	$PM_{2.5}$ Total
Area	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mobile	2.3	4.7	23.8	1.6	0.1	1.6	0.4	0.1	0.5
Existing Emissions from Golf Course Operations	2.3	4.7	23.8	1.6	0.1	1.6	0.4	0.1	0.5

Source: CalEEMod Emissions Modeling (**Appendix F** to this Second Revised ~~Recirculated~~ Draft EIR).

Notes:

CO = carbon monoxide.

NA = not applicable.

NO_X = nitrogen oxides.

PM_{10} = particulate matter less than 10 microns in diameter.

$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter.

ROG = reactive organic gases.

Project Operation-Related Emissions

Anticipated operation-related emissions that could affect ambient air quality in the area are ROG, NO_X, CO, $PM_{2.5}$, and PM_{10}. The primary emissions sources include residential motor vehicle travel, natural gas combustion for space heating, area sources associated with consumer products (e.g., cleaning supplies, kitchen aerosols, cosmetics, toiletries), architectural coatings, and landscaping.

Criteria pollutant emissions associated with the operation of ~~both~~ the Proposed Project ~~and the 130-Unit Alternative~~ were estimated using the CalEEMod model, based on motor vehicle trip generation data from the TIS (**Appendix E**) and on the CalEEMod defaults for natural gas, electricity, and water consumption; wastewater and solid waste generation; and area sources (hearths, landscaping, etc.) for the proposed land uses. It was assumed that ~~both~~ the Proposed Project ~~and the 130-Unit Alternative~~ would be fully constructed and operational by 2016. Assuming an earlier operational year represents a conservative assumption, in that emissions per rate of activity (e.g., per vehicle

mile traveled) decline over time through fleet turnover and modernization. Thus, operational emissions from 2016 would be slightly higher than assuming a later operational year. Emissions are presented at the daily time scale and are compared with the MBUAPCD thresholds discussed below.

Carbon Monoxide Hot Spot Analysis

With respect to localized CO (CO hot spots) emissions analysis, MBUAPCD recommends conducting CO dispersion modeling when one or more of the following conditions exist: level of service (LOS) at affected intersections or road segments degrades from D or better to E or F; volume-to-capacity (V/C) ratio at intersections or road segments at LOS E or F increases by 0.05 or more; delay at intersection at LOS E or F increases by 10 seconds or more; or reserve capacity at unsignalized intersection at LOS E or F decreases by 50 vehicles or more (Monterey Bay Unified Air Pollution Control District 2008a). In the event any of these conditions are not met, CO dispersion modeling is not required, and the Project is ~~and 130-Unit Alternative are~~ not presumed to result in elevated CO concentrations in excess of ambient air quality standards. Intersection data from the traffic analysis was screened based on the above criteria. As explained under Impact AIR-5, in *Project Impacts and Mitigation Measures*, the Proposed Project ~~and 130-Unit Alternative~~ does not warrant quantitative CO hot spot modeling.

Refer to **Appendix F** for modeling results.

Criteria for Determining Significance

In accordance with CEQA, the State CEQA Guidelines, the 2010 Monterey County General Plan plans and policies, the MBUAPCD's 2008 CEQA guidelines and agency and professional standards, a project impact would be considered significant if it would:

A. Air Quality Plan Consistency

- Conflict with or obstruct implementation of the AQMP.

B. Long-Term Emissions

- Result in generation of emissions of or in excess of (Monterey Bay Unified Air Pollution Control District 2008a).
    - 137 pounds per day for volatile organic compounds (VOC) (direct and indirect[4]).
    - 137 pounds per day for NO_X (direct and indirect).
    - 550 pounds per day of CO (direct).
    - CAAQS violation for CO.
    - 82 pounds per day of PM_{10}.

[4] Indirect emissions come from mobile sources that access the project site but generally emit offsite; direct emissions are emitted onsite (e.g., stationary sources, onsite mobile equipment) (Monterey Bay Unified Air Pollution Control District 2008a).

C. Construction Emissions

- Result in generation of emissions of 82 pounds or more per day of PM_{10} due to construction (direct).
- Result in a short-term increase in TACs.

D. Sensitive Receptors

- Expose sensitive receptors (e.g., residents, schools, hospitals) to substantial pollutant concentrations (i.e., CO levels in excess of the CAAQS or NAAQS or cancer risks in excess of 10 in 1 million).
- Result in a non-cancer (i.e., chronic or acute) hazard index greater than 1.0.

E. Odors

- Create objectionable odors in substantial concentrations, which could result in injury, nuisance, or annoyance to a considerable number of persons or could endanger the comfort, health, or safety of the public.

Project Impacts and Mitigation Measures

A. Air Quality Plan Consistency

Impact AIR-1: Conflict with the 2012 Air Quality Management Plan (less than significant)

~~**Proposed Project**~~

MBUAPCD's most recent air quality plan is the 2012 Triennial Plan Revision (Monterey Bay Unified Air Pollution Control District 2013), which was based on the Association of Monterey Bay Area Governments (AMBAG) and Department of Finance (DOF) forecast of 45,406 dwelling units for unincorporated Monterey County in 2020 (Association of Monterey Bay Area Governments 2008). The estimated current housing stock within unincorporated Monterey County is 38,971 dwelling units (Association of Monterey Bay Area Governments 2014). Planned housing that is approved but not constructed is an estimated 2,856 dwelling units. These units include up to 100 single-family residential lots in Pebble Beach (as part of the Pebble Beach Company Project), approximately up to 2,400 dwelling units in two large development projects outside of Pebble Beach and other approved but not yet construction projects (Sidor pers. comm.)[5]. When combined with the Proposed Project's estimated increase of 130 ~~281~~ dwelling units, there would be a total of 41,957 ~~42,108~~[6] dwelling units in 2020, which is 3,449 ~~3,298~~ fewer dwelling units than AMBAG's previous 2020 forecast of 45,406. Therefore, this impact would be *less than significant*. No mitigation is required.

~~130-Unit Alternative~~

[5] The two approved large development projects are East Garrison with 1,142 units and Rancho San Juan (Butterfly Village) with 1,240 units, for a total of 2,382 total units (rounded to 2,400 units).

[6] 38,971 existing dwelling units (Associated Monterey Bay Area Governments 2014) + 2,856 approved but not built dwelling units + 130 ~~281~~ Proposed Project dwelling units = 41,957 ~~42,108~~ units. 45,406 units (Associated Monterey Bay Area Governments 2008) – 41,957 ~~42,108~~ units = 3,449 ~~3,298~~ fewer units than the 2020 air quality plan forecast.

~~Similar to the Proposed Project, the 130-Unit Alternative is not anticipated to result in exceedance of AMBAG's 2020 forecast.~~

~~As discussed above, the estimated current housing stock within unincorporated Monterey County is 38,971 dwelling units (Association of Monterey Bay Area Governments 2014) and planned housing that is approved but not constructed is an estimated 2,856 dwelling units. When combined with the 130-Unit Alternative's estimated increase of 130 dwelling units, there would be a total of 41,957[7] dwelling units in 2020, which is 3,449 fewer dwelling units than AMBAG's previous 2020 forecast of 45,406. Therefore, this impact would be *less than significant*. No mitigation is required.~~

B. Long-Term Emissions

Impact AIR-2: Result in a Long-Term Increase in ROG, NO_X, CO, and PM_{10} Emissions from Vehicular Traffic and Area Sources (less than significant with mitigation)

~~Proposed Project~~

~~The primary operational emissions associated with the Proposed Project would be ozone precursors (ROG and NO_x), CO, and PM10, emitted as area sources (e.g., consumer products, coatings, natural gas, fireplace use, landscaping) and vehicle exhaust.~~

~~**Table 3.8-6** presents area, energy, and mobile source emissions associated with Project operations in opening year 2016. As shown in **Table 3.8-6**, operation of the Proposed Project would exceed MBUAPCD's daily emissions thresholds for Project operations for ROG, CO, and PM10 due to the emissions associated with wood-burning fireplaces. Therefore, this impact is *potentially significant* and mitigation is required.~~

[7] ~~38,971 existing dwelling units (Associated Monterey Bay Area Governments 2014) + 2,856 approved but not built dwelling units + 130-Unit Alternative dwelling units = 41,957 units. 45,406 units (Associated Monterey Bay Area Governments 2008) – 41,957 units = 3,449 fewer units than the 2020 air quality plan forecast.~~

Table 3.8-6. Proposed Project Unmitigated Operational Emissions (pounds per day)

Category	ROG	NO_X	CO	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Area	446.6	6.1	553.3	0.0	74.6	74.6	0.0	74.6	74.6
Energy	0.2	2.1	0.9	0.0	0.2	0.2	0.0	0.2	0.2
Mobile	14.5	42.0	185.9	19.6	0.5	20.1	5.2	0.5	5.7
Maximum Daily	461.3	50.2	740.1	19.6	75.2	94.9	5.2	75.2	80.4
Existing Golf Course	2.3	4.7	23.8	1.6	0.1	1.6	0.4	0.1	0.5
Net New over Existing	**459.0**	**45.5**	**716.3**	**18.1**	**75.2**	**93.2**	**4.8**	**75.1**	**79.9**
MBUAPCD threshold	*137*	*137*	*550*	-	-	*82*	-	-	-
Above MBUAPCD threshold?	Yes	No	Yes	NA	NA	Yes	NA	NA	NA

Source: CalEEMod Emissions Modeling (**Appendix F** to this Recirculated Draft EIR).

Notes:

NA = not applicable.

CO = carbon monoxide.

NO_X = nitrogen oxides.

ROG = reactive organic gases.

PM10 = particulate matter less than 10 microns in diameter.

PM2.5 = particulate matter less than 2.5 microns in diameter.

MBUAPCD = Monterey Bay Unified Air Pollution Control District.

Implementation of **Mitigation Measure AIR-1** would prohibit wood-burning fireplaces within the proposed residential units. For purposes of analysis, it was assumed wood-burning fireplaces would be replaced by natural-gas fireplaces. As shown in **Table 3.8-7**, implementation of **Mitigation Measure AIR-1** would reduce ROG, CO, and PM10 emissions to below MBUACPD thresholds. Impacts would be *less- than-significant* with mitigation incorporated.

Mitigation Measure AIR-1: Prohibit Wood-Burning Fireplaces

To reduce operational ROG, CO, and PM10 emissions, the Project Applicant will ensure that no wood-burning fireplaces will be permitted in any proposed residential units.

130 Unit Alternative

Similar to the Proposed Project, t The primary operational emissions associated with the Project 130 Unit Alternative, including Lot 130, would be ozone precursors (ROG and NO_X), CO, and PM_{10} emitted as area sources (i.e., consumer products, coatings, natural gas, fireplace use, landscaping) and vehicle exhaust, but in quantities different from those for the Proposed Project.

~~Table 3.8-7. Proposed Project Mitigated Operational Emissions (pounds per day)~~

~~Category~~	~~ROG~~	~~NO_x~~	~~CO~~	~~Fugitive PM10~~	~~Exhaust PM10~~	~~PM10 Total~~	~~Fugitive PM2.5~~	~~Exhaust PM2.5~~	~~PM2.5 Total~~
~~Area~~	~~16.7~~	~~0.2~~	~~17.8~~	~~0.0~~	~~0.4~~	~~0.4~~	~~<0.01~~	~~0.4~~	~~0.4~~
~~Energy*~~	~~0.2~~	~~1.8~~	~~0.7~~	~~0.0~~	~~0.1~~	~~0.1~~	~~0.0~~	~~0.1~~	~~0.1~~
~~Mobile~~	~~14.2~~	~~40.1~~	~~179.3~~	~~18.7~~	~~0.5~~	~~19.1~~	~~5.0~~	~~0.4~~	~~5.4~~
~~Maximum Daily~~	~~31.1~~	~~42.1~~	~~197.9~~	~~18.7~~	~~1.0~~	~~19.7~~	~~5.0~~	~~1.0~~	~~6.0~~
~~Existing Golf Course~~	~~2.3~~	~~4.7~~	~~23.8~~	~~1.6~~	~~0.1~~	~~1.6~~	~~0.4~~	~~0.1~~	~~0.5~~
~~**Net New over Existing**~~	~~**28.8**~~	~~**37.4**~~	~~**174.1**~~	~~**17.1**~~	~~**1.0**~~	~~**18.1**~~	~~**4.6**~~	~~**0.9**~~	~~**5.5**~~
~~*MBUAPCD threshold*~~	~~*137*~~	~~*137*~~	~~*550*~~	~~-~~	~~-~~	~~*82*~~	~~-~~	~~-~~	~~-~~
~~Above MBUAPCD threshold?~~	~~No~~	~~No~~	~~No~~	~~NA~~	~~NA~~	~~No~~	~~NA~~	~~NA~~	~~NA~~

~~Source: CalEEMod Emissions Modeling (**Appendix F** to this Recirculated Draft EIR).~~

~~Notes:~~

~~* Energy emissions also show reductions associated with **Mitigation Measure GHG-2**. See *Section 3.13*, Greenhouse Gas Emissions.~~

~~NA = not applicable.~~

~~CO = carbon monoxide.~~

~~NOx = nitrogen oxides.~~

~~ROG = reactive organic gases.~~

~~PM10 = particulate matter less than 10 microns in diameter.~~

~~PM2.5 = particulate matter less than 2.5 microns in diameter.~~

~~MBUAPCD = Monterey Bay Unified Air Pollution Control District.~~

Table 3.8-<u>6</u> ~~8~~ presents area, energy, and mobile source emissions associated with operation of the <u>Project</u> ~~130-Unit Alternative, including Lot 130~~, assuming an opening year of 2016. As shown in **Table 3.8-8**, operations would exceed MBUAPCD's air quality standards of daily emissions thresholds for project operations for ROG due to wood-burning fireplaces. Therefore, this impact is *potentially significant* and mitigation is required.

<u>Mitigation Measure AIR-1: Prohibit Wood-Burning Fireplaces</u>

<u>To reduce operational ROG, CO, and PM_{10} emissions, the Project Applicant will ensure that no wood-burning fireplaces will be permitted in any proposed residential units.</u>

Mitigation Measure AIR-1 would prohibit wood-burning fireplaces within the proposed residential units. For purposes of analysis, it was assumed wood-burning fireplaces would be replaced by natural-gas fireplaces. As shown in **Table 3.8-<u>7</u> ~~9~~**, implementation of **Mitigation Measure AIR-1** would reduce ROG emissions to below MBUACPD thresholds. Impacts would be *less than significant* with mitigation incorporated.

Table 3.8-6~~8~~. ~~130-Unit Alternative~~ Unmitigated Operational Emissions (pounds per day)

Category	ROG	NO_X	CO	Fugitive PM_{10}	Exhaust PM_{10}	PM_{10} Total	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$	$PM_{2.5}$ Total
~~**130-Unit Alternative**~~									
Area	208.1	2.8	256.0	0.0	34.5	34.5	0.0	34.5	34.5
Energy	0.1	1.1	0.5	0.0	0.1	0.1	0.0	0.1	0.1
Mobile	7.8	22.6	100.1	10.6	0.3	10.8	2.8	0.2	3.1
Maximum Daily	*216.0*	*26.5*	*356.6*	*10.6*	*34.8*	*45.4*	*2.8*	*34.8*	*37.7*
Existing Golf Course	2.3	4.7	23.8	1.6	0.1	1.6	0.4	0.1	0.5
Net New over Existing	**213.7**	**21.8**	**332.8**	**9**	**34.7**	**43.8**	**2.4**	**34.7**	**37.2**
MBUAPCD threshold	*137*	*137*	*550*	-	-	*82*	-	-	-
Above MBUAPCD threshold?	Yes	No	No	NA	NA	No	NA	NA	NA

Source: CalEEMod Emissions Modeling (**Appendix F** to this Second Revised ~~Recirculated~~ Draft EIR).

Notes:

NA = not applicable.

CO = carbon monoxide.

NOx = nitrogen oxides.

ROG = reactive organic gases.

PM_{10} = particulate matter less than 10 microns in diameter.

$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter.

MBUAPCD = Monterey Bay Unified Air Pollution Control District.

Table 3.8-79. ~~130-Unit Alternative~~ Mitigated Operational Emissions (pounds per day)

.	ROG	NO_X	CO	Fugitive PM_{10}	Exhaust PM_{10}	PM_{10} Total	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$	$PM_{2.5}$ Total
~~**130-Unit Alternative**~~									
Area	9.2	0.1	8.3	0.0	0.2	0.2	0.0	0.2	0.2
Energy	0.1	0.9	0.4	0.0	0.1	0.1	0.0	0.1	0.1
Mobile	7.8	22.4	99.4	10.5	0.2	10.7	2.8	0.2	3.0
Maximum Daily	*16.9*	*22.6*	*105.0*	*10.0*	*0.3*	*10.7*	*2.8*	*0.2*	*30.*
Existing Golf Course	2.3	4.7	23.8	1.6	0.1	1.6	0.4	0.1	0.5
Net New over Existing	**14.6**	**17.9**	**81.2**	**8.4**	**0.4**	**8.9**	**2.3**	**0.4**	**2.7**
MBUAPCD threshold	*137*	*137*	*550*	*-*	*-*	*82*	*-*	*-*	*-*
Above MBUAPCD threshold?	No	No	No	NA	NA	No	NA	NA	NA

Source: CalEEMod Emissions Modeling (**Appendix F** to this Second Revised ~~Recirculated~~ Draft EIR).

Notes:

* Energy emissions also show reductions associated with **Mitigation Measure GHG-2**. See *Section 3.13*, Greenhouse Gas Emissions.

CO = carbon monoxide.

MBUAPCD = Monterey Bay Unified Air Pollution Control District.

NA = not applicable.

NO_X = nitrogen oxides.

PM_{10} = particulate matter less than 10 microns in diameter.

$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter.

ROG = reactive organic gases.

C. Construction Emissions

Impact AIR-3: Result in a Short-Term Increase in PM_{10} Emissions due to Grading and Construction (less than significant)

~~**Proposed Project**~~

~~Construction of the Proposed Project could result in the temporary generation of PM10 emissions associated with earthmoving and site grading, construction worker commute trips, and mobile and stationary construction equipment exhaust. According to the MBUAPCD CEQA guidelines, construction projects that temporarily emit precursors of ozone (i.e., ROG or NO_X) are accommodated in the emission inventories of state and federally required air plans and would not have a significant impact on the attainment and maintenance of ozone NAAQS or CAAQS (Monterey Bay Unified Air Pollution Control District 2008). The MBUAPCD guidelines have an exception if a project uses "non-typical equipment, e.g., grinders, and portable equipment." The Proposed Project would use standard construction equipment for residential construction.~~

~~Sources of construction-related PM10 emissions include construction equipment and vehicle exhaust, fugitive dust from site grading and trenching, and re-entrained paved road dust from vehicle travel on streets. The Proposed Project would involve grading and up to approximately~~

220,000 cubic yards of cut and fill onsite, 100,000 cubic yards of imported fill, 7,200 haul truck trips, and up to 76.7 acres of disturbance.

As discussed above in *Construction-Related Emissions* in the *Methodology* section, analysis of the construction-related PM10 emissions for the Proposed Project is based on CalEEMod construction default data. All construction phases are expected to occur concurrently, and construction of each phase would depend on market conditions. As shown in **Table 3.8-10**, the Proposed Project's direct construction PM10 emissions are not expected to exceed MBUAPCD's PM10 significance threshold of 82 pounds per day during construction.

Table 3.8-10. Proposed Project Direct Construction PM10 Emissions (pounds per day)

Category	Fugitive PM10	Exhaust PM10	Total PM10
Site Preparation	10.7	17.8	28.5
Building Construction	3.1	2.3	5.4
Haul Trucks	11.4	2.6	14.1
Maximum Daily	**25.2**	**22.7**	**47.9**
MBUAPCD threshold	--	--	*82*
Above MBUAPCD threshold?	--	--	No

Source: CalEEMod Emissions Modeling (**Appendix F** to this Recirculated Draft EIR).

Notes:

Emissions shown are uncontrolled and do not account for County's Standard Conditions of Approval PD047.

MBUAPCD = Monterey Bay Unified Air Pollution Control District.

NA = not applicable.

PM10 = particulate matter less than 10 microns in diameter.

Additionally, as described in the *Regulatory Setting* section, all projects located in Monterey County are subject to the MBUAPCD regulations in effect at the time of construction including Rule 400 (Visible Emissions). Specific regulations applicable to the Proposed Project would be determined by the County at the time of construction. The County's Standard Condition of Approval PD047 (per MBUAPCD Rule 439) would also apply to any site demolition activities. Although emissions would not exceed the significance threshold and mitigation is not required, the following dust control measures from the MBUAPCD 2008 CEQA Guidelines would be implemented during grading activities, as described in Chapter 2, *Project Description:*

- Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure.
- Prohibit all grading activities during periods of high wind (more than 15 miles per hour).
- Cover all trucks hauling dirt, sand, or loose materials.
- Cover inactive storage piles.

Consequently, this impact would be *less than significant*. No mitigation is required.

~~130-Unit Alternative~~

~~Similar to the Proposed Project, construction of the 130-Unit Alternative~~ Project construction could result in the temporary generation of PM_{10} emissions associated with earthmoving and site grading, construction worker commute trips, and mobile and stationary construction equipment exhaust. Sources of construction-related PM_{10} emissions include construction equipment and vehicle exhaust, fugitive dust from site grading and trenching, and re-entrained paved road dust from vehicle travel on streets. The Project ~~130-Unit Alternative, including Lot 130,~~ would involve grading and up to approximately 168,000 CY of cut and fill onsite and up to approximately 76 ~~83~~ acres of disturbance. It was assumed there would be no import of fill.

As discussed above in *Construction-Related Emissions* in the *Methodology* section, analysis of the construction-related PM_{10} emissions for the residential elements of the Project ~~130-Unit Alternative, including Lot 130,~~ is based on CalEEMod construction default data.

All residential element construction phases are expected to occur concurrently, and construction of each phase would depend on market conditions. Since the residences will likely be built one by one over an extended period, building phase emissions will be attenuated over time, but during actual building construction may approach the levels shown below.

As shown in **Table 3.8-~~8~~11**, the Project's ~~130-Unit Alternative's~~ direct construction PM_{10} emissions from the residential element are not expected to exceed MBUAPCD's PM_{10} significance threshold of 82 pounds per day during construction. ~~Similar to the Proposed Project, a~~ All projects located in Monterey County are subject to the MBUAPCD regulations in effect at the time of construction. Specific regulations applicable to the residential element of the Project ~~130-Unit Alternative, including Lot 130,~~ would be determined by the County at the time of construction. The County's Standard Condition of Approval PD047 (per MBUAPCD Rule 439) would also apply to any site demolition activities. Although emissions would not exceed the significance threshold and mitigation is not required, the following dust control measures from the MBUAPCD 2008 CEQA Guidelines would be implemented during grading activities, as described in Chapter 2, *Project Description:*

- Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure.
- Prohibit all grading activities during periods of high wind (more than 15 miles per hour).
- Cover all trucks hauling dirt, sand, or loose materials.
- Cover inactive storage piles.

Consequently, this impact would be *less than significant*. No mitigation is required.

Table 3.8-8~~11~~. ~~130-Unit Alternative~~ Direct Construction PM_{10} Emissions (pounds per day)

Category	Fugitive PM_{10}	Exhaust PM_{10}	Total PM_{10}
Site Preparation	10.7	17.8	28.5
Building Construction	1.5	1.1	2.7
Maximum Daily	**12.2**	**18.3**	**30.5**
MBUAPCD threshold	--	--	*82*
Above MBUAPCD threshold?	--	--	No

Source: CalEEMod Emissions Modeling (**Appendix F** to this Second Revised ~~Recirculated~~ Draft EIR)

Notes:

Emissions shown are uncontrolled and do not account for County's Standard Conditions of Approval PD047.

MBUAPCD = Monterey Bay Unified Air Pollution Control District.

NA = not applicable.

PM_{10} = particulate matter less than 10 microns in diameter.

D. Sensitive Receptors

Impact AIR-4: Result in the Emission of Toxic Air Contaminants from Diesel Truck and Equipment Use during Construction (less than significant)

~~**Proposed Project**~~

Construction of some Proposed Project elements would require diesel truck and equipment use. DPM in exhaust is considered a TAC and could pose a risk to human health. Construction projects typically involve the use of diesel-powered equipment such as trucks, dozers, graders, scrapers, rollers, and tractors. Construction of the Proposed Project would require the use of construction trucks and equipment onsite that would result in localized concentrations of exhaust and possible exposure of sensitive receptors to that exhaust. MBUAPCD does not have a specific threshold of significance for diesel exhaust, so a risk threshold of 10 cancer cases per million is used to determine if the Proposed Project would result in a significant risk to human health. Further, MBUAPCD's Rule 1003, which establishes air toxics and health risk assessment criteria, states that a Hazard Index score greater than one (for non-cancer health effects) would constitute a significant risk to human health.

As noted above, ICF performed a~~n~~ Health Risk Assessment for the Rancho Cañada Village Project (formerly referred to as the Rancho Cañada Village Specific Plan Project) in 2011 which analyzed exposure to TACs, including DPM, associated with construction-related off-road construction equipment and on-road haul trucks. The ~~and the~~ 2011 HRA was updated to reflect a 2015 assumed construction start date and to reflect updates in methodology from OEHHA. In addition, the 2011 HRA was updated to account for the correct amount of on-site cut and fill[8]. Sensitive receptors were

[8] As described in the HRA in Appendix F, the 2011 HRA emissions were based on activity data from the Applicant's air quality consultant (Chapin 2007). This activity data only included 100,000 CY of on-site cut and fill, whereas the current project description includes 120,000 CY of on-site cut and fill. As part of the revisions to the RDEIR, ICF revised the emissions estimate for that activity to account for the corrected amount of on-site cut and fill. The activity data (Chapin 2007) correctly used 100,000 CY for the imported fill activity.

analyzed at the Carmel Middle School at two locations, a residential receptor along Carmel Valley Road and three residential receptor locations along Rio Road west of the project site.

As shown in **Table 3.8-9~~12~~**, worst-case construction activities are expected to result in a maximum risk of 8.63 cases of cancer per million and a chronic Health Index score of 0.03 at the most affected receptor. This level is of exposure and risk is below MBUAPCD's cancer risk and hazard thresholds. Therefore, this impact would be *less than significant*. No mitigation is required.

~~Table 3.8-12. Proposed Project Potential Health Risks to Air Quality Sensitive Receptors near the Project Site~~

		~~Cancer Risk (risk per million)~~	~~Chronic Non-Cancer Health Index Score~~
~~Proposed Project Risk~~	~~Off-road~~	~~8.33~~	~~0.02~~
	~~On-road~~	~~0.70~~	~~0.02~~
	~~Total~~	~~8.63~~	~~0.03~~
~~*MBUAPCD Threshold*~~		~~10~~	~~1.0~~
~~Above MBUAPCD Threshold?~~		~~No~~	~~No~~

~~Notes: The most affected sensitive receptor modeled for total DPM cancer risk was a residential receptor along Rio Road, assuming haul trucks were to import soil using Rio Road. The most affected sensitive receptor modeled for total non-cancer health effects for DPM was for a residential receptor along Carmel Valley Road assuming haul trucks were to import soil using Carmel Valley Road. The total risk shown is the total highest risk to a single receptor and thus does not reflect the addition of risks to different receptors (e.g. the off-road and on-road numbers will not necessarily add up to the total risk because they are for different receptors). The risk numbers shown in the RDEIR were pulled from a prior worksheet that was not finalized and the total risk numbers shown in the RDEIR were additive of risks from different receptors, which would have overstated impacts to the most affected receptor. The risk numbers shown in these revisions to the RDEIR were pulled from the final work sheet and adjusted for the corrected amount of on-site cut and fill.~~

~~HRA = health risk assessment.~~

~~MBUAPCD = Monterey Bay Unified Air Pollution Control District.~~

~~Public comments received on the 2008 Draft Environmental Impact Report for the Rancho Cañada Village Specific Plan requested an analysis of the potential health risks associated with construction generation of fugitive dust containing crystalline silica and aspergillus spores. Crystalline silica is a basic component of soil, sand, granite, and many other minerals. Aspergillus is a common mold (type of fungus), the spores of which are present in the air, which lives outdoor and indoors. Construction associated with the Proposed Project would be subject to the MBUAPCD regulations in effect at the time of construction. As described above, the project will include dust control best management practices include watering all active construction areas at least twice daily; prohibiting all grading activities during period of high wind; covering all trucks hauling dirt, sand, or loose material; and covering inactive storage piles. These best management practices would minimize fugitive dust impacts, including dust containing crystalline silica and aspergillus spores, to a *less-than-significant* level.~~

~~130-Unit Alternative~~

~~Similar to the Proposed Project, results from the 2011 HRA were adjusted to a 2015 assumed construction start date, for the correct amount of on-site cut and fill, and due to updates in~~

~~methodology from OEHHA. Additionally, construction of the 130-Unit Alternative would include no soil import, so the risk presented in the 2011 HRA for truck hauling is not applicable to the 130-unit Alternative.~~

~~As shown in **Table 3.8-13**, worst-case construction activities are expected to result in a maximum risk of 5.38 cases of cancer per million and a chronic Health Index score of 0.01 at the closest receptor. This level of exposure and risk is below MBUAPCD's cancer risk and hazard thresholds. Therefore, this impact would be *less than significant*. No mitigation is required.~~

Table 3.8-9~~13~~. ~~130-Unit Alternative~~ Potential Health Risks to Air Quality Sensitive Receptors near the Project Site

		Cancer Risk (risk per million)	Chronic Non-Cancer Health Index Score
~~130-Unit Alternative~~ Proposed Project Risk	Off-road	5.38	0.01
	On-road	0.00	0.00
	Total	5.38	0.01
MBUAPCD Threshold		10	1.0
Above MBUAPCD Threshold?		No	No

Notes: The most affected sensitive receptor modeled for total DPM cancer risk was a residential receptor along Rio Road. The most affected sensitive receptor modeled for total non-cancer health effects for DPM was for a school receptor along Carmel Valley Road. The Proposed Project ~~130-unit alternative~~ would not include importation of soil and thus no soil haul truck emissions were included in the HRA. ~~for this alternative (unlike the Proposed Project).~~ The total risk shown is the total highest risk to a single receptor and thus does not reflect the addition of risks to different receptors (e.g. the off-road and on-road numbers will not necessarily add up to the total risk because they are for different receptors). The risk numbers shown in the Second Revised Draft EIR ~~RDEIR~~ were pulled from a prior worksheet that was not finalized and the total risk numbers shown in the Second Revised Draft EIR ~~RDEIR~~ were additive of risks from different receptors, which would have overstated impacts to the most affected receptor. The risk numbers shown in these revisions to the Second Revised Draft EIR ~~RDEIR~~ were pulled from the final work sheet and adjusted for the corrected amount of on-site cut and fill.

HRA = health risk assessment.

MBUAPCD = Monterey Bay Unified Air Pollution Control District.

Public comments received on the 2008 Draft Environmental Impact Report for the Rancho Cañada Village Specific Plan requested an analysis of the potential health risks associated with construction generation of fugitive dust containing crystalline silica and aspergillus spores. Crystalline silica is a basic component of soil, sand, granite, and many other minerals. Aspergillus is a common mold (type of fungus), the spores of which are present in the air, which lives outdoor and indoors. Construction associated with the Proposed Project would be subject to the MBUAPCD regulations in effect at the time of construction. As described above, the project will include dust control best management practices, including ~~As with the Proposed Project, potential health risks associated with construction generation of fugitive dust containing crystalline silica and aspergillus spores would be *less than significant*, as construction associated with the 130-Unit Alternative would comply with best management practices to minimize fugitive dust impacts described above.~~

Impact AIR-5: Expose Sensitive Receptors to Substantial CO Concentrations from Project-Related Traffic (less than significant)

~~**Proposed Project**~~

The traffic analysis (**Appendix E**) for the Proposed Project analyzed peak-hour intersection operations at nearby intersections under existing (2014) and existing plus Proposed Project conditions.

The MBUAPCD CEQA guidelines (2008) provide screening guidelines to identify roadway locations where there is a potential for significant impacts related to operational CO concentrations and where site-specific CO modelling may be warranted as follows:

- Intersections or road segments that operate at LOS D or better that would operate at LOS E or F with the project's traffic, or
- Intersections or road segments that operate at LOS E or F where the volume-to-capacity (V/C) ratio would increase 0.05 or more with the project's traffic, or
- Intersections that operate at LOS E or F where delay would increase by 10 seconds or more with the project's traffic, or
- Unsignalized intersections which operate at LOS E or F where the reserve capacity would decrease by 50 or more with the project's traffic. This criterion is based on the turning movement with the worst reserve capacity, or
- Project would generate substantial heavy duty truck traffic or generate substantial traffic along urban street canyons or near a major stationary source of CO.

Results from the traffic analysis indicate the following relative to intersection conditions:

- Study intersections currently operating at LOS C or better would continue to operate at LOS C or better with Project conditions and would not exceed the MBUAPCD screening criteria.
- Two signalized study intersections, State Route (SR) 1/Carpenter Street (PM), SR 1/Rio Road (PM), currently operate at LOS D (see Section 3.7, *Traffic*). The project would not degrade existing LOS to a lower level at these two intersections and would not exceed the MBUAPCD screening criteria.
- One unsignalized study intersection~~s~~, Carmel Valley Road/Laureles Grade currently operates at LOS D in the AM peak period (with the worst turning movement at LOS F) and LOS F in the PM peak period (see Section 3.7, Traffic). With project conditions:
    - AM peak conditions would <u>remain at LOS D.</u> ~~degrade overall operations from LOS D to LOS E, triggering the MBUAPCD screening criteria for suggested CO hot spot quantitative modeling. The increased delay experienced at this intersection would be 1 second with Project conditions overall (and 5 seconds for the worst turning movement).~~
    - PM Peak conditions would remain LOS F, but the intersection is in overflow conditions (>200 seconds delay under existing and existing + project conditions) in which the traffic model does not produce precise results for the change in delay. Thus, it is possible that PM peak conditions may also exceed the MBUAPCD criteria.

Results from the traffic analysis indicate the following relative to road segments:

- Roadway study segments currently operating at LOS D or better would continue to operate at LOS D or better with Project conditions and would not exceed the MBUAPCD screening criteria.
- The project would add traffic to three roadway segments with current LOS E or LOS F conditions: SR 1 b/w Ocean and Carmel Valley Road, Carmel Valley Road between Robinson Canyon and Schulte, and Carmel Valley Road between Schulte and Rancho San Carlos (see Section 3.7, *Traffic*). However, project would not increase the volume to capacity ratio at any of these segments by more than 0.05 and thus would not exceed the MBUAPCD screening criteria (project volume increases for these segments only range from 1 to 3 percent).

Thus, using the MBUAPCD screening criteria, the only intersection of potential concern relative to CO concentrations is the Carmel Valley Road/Laureles Grade intersection.[9]

Quantitative CO hot spot modeling was performed for the Pebble Beach Company EIR in 2011 (Monterey County 2011). The CO modeling results indicated that CO concentrations at the intersections most affected by the PBC Buildout Project were not expected to contribute to any localized violation of the 1- or 8-hour ambient standard (see Table 3.2-11 of the Pebble Beach Company EIR). The highest intersection volumes for the PBC Buildout Project were much higher than the with-project volumes at the Carmel Valley Road/Laureles Grade intersection affected by the Proposed Project. For example, the SR 68/SR 1 off-ramp intersection[10] would have a 2015 PM peak-hour volume of 2,952 compared to the 1,377 with-project PM peak-hour volume for the Carmel Valley Road/Laureles Grade intersection. CO modeling conducted as part of the Pebble Beach Company EIR at the SR 68/SR 1 off-ramp intersection concluded that the worst-case 1-hour CO concentration at 100 feet from the intersection would be 5.03 ppm for existing conditions, whereas the federal and State 1-hour standards are 35 and 20 ppm, respectively. The Carmel Valley Road/Laureles Grade intersection, which has far lower peak-hour traffic volume than the SR 68/SR 1 intersection and the nearest receptors are more than 200 feet from the intersection would have much lower CO concentrations than the SR 68/SR 1 intersection. Furthermore, the Carmel Valley Road/Laureles Grade intersection will experience only a 0.5 ~~1~~-second increase in delay with the Rancho Cañada Village Project. Thus, the Project is not expected to result in CO concentrations that would contribute to any localized violation of the 1- or 8-hour ambient standard.

As explained above, quantitative CO hot spot modeling is not warranted due to the minor increase in delay with the Project and the comparatively lower peak-hour volumes that have been shown by prior study to be less than significant. The Proposed Project is not expected to contribute to any localized violations of the 1- or 8-hour ambient standards. This impact would be *less than significant*. No mitigation is required.

~~130-Unit Alternative~~

~~The TIS (**Appendix E**) for the 130-Unit Alternative analyzed peak-hour intersection operations at nearby intersections under both existing (2014) and existing plus 130-Unit Alternative conditions and project impacts would be less than the Proposed Project given the lower trip generation. As discussed above, traffic operations under the Proposed Project are not expected to result in CO concentrations that would contribute to any localized violation of the 1- or 8-hour ambient standard~~

[9] The project would not generate substantial operational heavy duty truck traffic or generate substantial operational traffic along urban street canyons or near a major stationary source of CO.

[10] The 2011 Pebble Beach EIR identified that PM peak-hour conditions at the intersections would be LOS F, indicating highly congested conditions.

~~as nearby intersections with greater project-level impacts were well within the standard when CO concentrations were modeled. The same conclusion holds true for the 130-Unit Alternative which would result in lower traffic volumes.~~

~~Thus, quantitative CO hot spot modeling is not warranted. The 130-Unit Alternative is not expected to contribute to any localized violations of the 1- or 8-hour ambient standards. This impact would be *less than significant*.~~ No mitigation is required.

E. Odors

Impact AIR-6: Expose New Sensitive Receptors to Objectionable Odors (less than significant)

~~Proposed Project~~

According to the MBUAPCD, typical sources of odors include landfills, rendering plants, chemical plants, agricultural uses, wastewater treatment plants, and refineries. Odor impacts on residential areas and other sensitive receptors, such as hospitals, daycare centers, and schools, warrant the closest scrutiny. Consideration also should be given to other land uses where people may congregate, such as recreational facilities, work sites, and commercial areas.

Potential sources of odor during construction activities include diesel exhaust, asphalt paving, and the use of architectural coatings and solvents. These construction activities would be temporary, and the existing forested buffer between the development site and the closest existing sensitive receptors to the north and east would diffuse odors. Construction activities would not be likely to result in nuisance odors that would violate MBUAPCD's Nuisance Rule, Rule 402.

Once constructed, the Proposed Project would not involve odor-generating land uses. Any odors emitting from residential use would be limited to periodic trash pick-up and the use of architectural coatings and solvents during routine maintenance. However, these sources would be minimal and limited to travel routes and the area immediately adjacent to homes within the development site. Therefore, this impact would be *less than significant*. No mitigation is required.

~~130-Unit Alternative~~

~~Similar to the Proposed Project, the 130-Unit Alternative, including Lot 130, is not expected to result in odor impacts on nearby receptors. Construction activities would not be likely to result in nuisance odors that would violate MBUAPCD's Nuisance Rule, Rule 402, and once constructed, the 130-Unit Alternative, including Lot 130, would not involve odor-generating land uses. Any odors emitting from residential use would be limited to periodic trash pick-up and the use of architectural coatings and solvents during routine maintenance. Therefore, this impact would be *less than significant*.~~ No ~~mitigation is required.~~

Chapter 3.9
Noise

Introduction

This chapter provides a discussion of the noise impacts associated with the Proposed Project ~~and the 130-Unit Alternative~~ in the Carmel Valley. The chapter includes a review of existing conditions; a summary of applicable noise policies and regulations; and an analysis of direct and indirect environmental impacts of the Proposed Project ~~and the 130-Unit Alternative~~. Where feasible, mitigation measures are recommended to reduce the level of impacts.

Impact Summary

Table 3.9-1 below provides a summary of the potential environmental impacts of the Proposed Project ~~and the 130-Unit Alternative~~. As shown in **Table 3.9-1**, the Proposed Project ~~and the 130-Unit Alternative~~ would result in significant noise impacts. However, with the implementation of the mitigation measures described in this Second Revised ~~Recirculated~~ Draft EIR, all of the impacts listed would be reduced to less-than-significant levels.

Table 3.9-1 Noise Impact Summary

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measures	Level of Significance After Mitigation
A. Long-Term Increases in Noise				
NOI-1: Exposure of Onsite Noise-Sensitive Land Use to Noise	~~Potentially Significant~~	Potentially Significant	NOI-1: Implement Noise-Reducing Treatments at Residences Located Near the Batting Practice Area ~~and Lot 130~~	LTS
NOI-2: Exposure of Offsite Noise-Sensitive Land Uses to Increased Noise	~~LTS~~	LTS	None Required	–
B. Short-Term Increases in Noise				
NOI-3: Exposure of Noise-Sensitive Land Uses to Construction Noise	~~Potentially Significant~~	Potentially Significant	NOI-2: Employ Noise-Reducing Construction Practices	LTS
C. Vibration				
NOI-4: Exposure of Sensitive Land Uses to Vibration from Construction Activity	~~LTS~~	LTS	None Required	–
LTS = Less than Significant				

Environmental Setting

Information in the following sections describes existing noise conditions in the project area. This information was derived from the project noise study and supplemental noise monitoring and modeling conducted by ICF International (ICF).

Research Methods

Information in this chapter is based partially on information in the *Revised Noise Assessment Study for the Planned Rancho Cañada Village Specific Plan Monterey County* (project noise study) prepared by Edward L. Pack Associates, Inc. dated October 15, 2014 (**Appendix G**), which is available for review at the Monterey County Resource Management Agency, Salinas Permit Center, 168 West Alisal Street, 2nd Floor, Salinas, California. ICF also conducted supplemental noise monitoring and modeling to use instead of the some of the information provided in the 2014 Pack study to better represent current conditions. Noise monitoring was conducted on August 20th and 21st, 2015 and the results are presented in this section. Documentation of ICF supplemental modelling is also provided in **Appendix G**.

Noise Terminology

Sound, Noise, and Acoustics

Sound is a disturbance that is created by a moving or vibrating source in a gaseous or liquid medium or the elastic stage of a solid—it is the mechanical energy of a vibrating object transmitted by pressure waves through a medium to a hearing organ, such as a human ear. For traffic sound, for example, the medium of concern is air.

Sound is actually a process that consists of three components: the sound source, the sound path, and the sound receiver. All three components must be present for sound to exist. Without a source to produce sound or a medium to transmit sound pressure waves, there is no sound. Sound must also be received; a hearing organ, sensor, or object must be present to perceive, register, or be affected by sound. In most situations, there are many different sound sources, paths, and receivers, not only one of each.

Noise is defined as loud, unpleasant, unexpected, or undesired sound. *Acoustics* is the field of science that deals with the production, propagation, reception, effects, and control of sound.

Frequency and Hertz

A continuous sound can be described by its frequency (pitch) and its amplitude (loudness). *Frequency* relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch, like the low notes on a piano, whereas high-frequency sounds are high in pitch, like the high notes on a piano. Frequency is expressed in terms of oscillations, or cycles, per second. Cycles per second are commonly referred to as Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hz. The human ear can generally hear frequencies ranging from 20 Hz on the low end, to about 20,000 Hz (20 kHz) on the high end.

Sound Pressure Levels and Decibels

The *amplitude* of a sound determines its loudness. Loudness of sound increases and decreases as amplitude increases and decreases. Sound-pressure amplitude is measured in units of micro-Newtons per square meter (FN/m2), also called micro-Pascals (µPa). One µPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. The pressure of a very loud sound may be 200 million µPa, or 10 million times the pressure of the weakest audible sound (20 µPa). Because expressing sound levels in terms of µPa would be cumbersome, sound pressure level (SPL) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called bels, named after Alexander Graham Bell. To provide finer resolution, a bel is divided into 10 decibels (dB).

Addition of Decibels

Because decibels are logarithmic units, SPL cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces an SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. When two sounds of equal SPL are combined, they produce a combined SPL 3 dB greater than the original individual SPL. In other words, sound energy must be doubled to produce a 3 dB

increase. If two sound levels differ by 10 dB or more, the combined SPL is equal to the higher SPL; the lower sound level would not increase the higher sound level.

A-Weighted Decibels

SPL alone is not a reliable indicator of loudness. The frequency of a sound also has a substantial effect on how humans respond. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, the healthy human ear is most sensitive to sounds from 1,000 to 5,000 Hz and perceives a sound within that range as being more intense than a sound of higher or lower frequency with the same magnitude. To approximate the frequency response of the human ear, a series of SPL adjustments is usually applied to the sound measured by a sound level meter. The adjustments, referred to as a weighting network, are frequency-dependent.

The A-scale weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-, C-, and D-scales), but these scales are rarely used in conjunction with highway traffic noise. Noise levels for environmental noise studies are typically reported in terms of A-weighted decibels (dBA). In environmental noise studies, A-weighted SPLs are commonly referred to as *noise levels*. **Table 3.9-2** shows typical A-weighted noise levels.

Table 3.9-2. Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 300 meters (1000 feet)		
	— 100 —	
Gas lawn mower at 1 meter (3 feet)		
	— 90 —	
Diesel truck at 15 meters (50 feet) at 80 kilometer per hour (50 miles per hour)		Food blender at 1 meter (3 feet)
	— 80 —	Garbage disposal at 1 meter (3 feet)
Noisy urban area, daytime		
Gas lawn mower, 30 meters (100 feet)	**— 70 —**	Vacuum cleaner at 3 meters (10 feet)
Commercial area		Normal speech at 1 meter (3 feet)
Heavy traffic at 90 meters (300 feet)	**— 60 —**	
		Large business office
Quiet urban daytime	**— 50 —**	Dishwasher next room
Quiet urban nighttime	**— 40 —**	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night, concert
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	**— 0 —**	Lowest threshold of human hearing

Source: California Department of Transportation 2013.
dBA = A-weighted decibel

Human Response to Changes in Noise Levels

Under controlled conditions in an acoustics laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels when exposed to steady, single-frequency ("pure-tone") signals in the midfrequency range. Outside such controlled conditions, the trained ear can detect 2-dB changes in normal environmental noise. However, it is widely accepted that the average healthy ear can barely perceive 3-dB noise level changes. A 5-dB change is readily perceptible, and a 10-dB change is perceived as being twice or half as loud. As discussed above, doubling sound energy results in a 3-dB increase in sound; therefore, doubling sound energy (e.g., doubling the volume of traffic on a highway) would result in a barely perceptible change in sound level.

Noise Descriptors

Noise in our daily environment fluctuates over time. Some fluctuations are minor, but some are substantial. Some noise levels occur in regular patterns, but others are random. Some noise levels fluctuate rapidly, but others slowly. Some noise levels vary widely, but others are relatively constant. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors most commonly used in traffic noise analysis.

- Equivalent Sound Level (Leq): Leq represents an average of the sound energy occurring over a specified period. In effect, Leq is the steady-state sound level that in a stated period would contain the same acoustical energy as the time-varying sound that actually occurs during the same period. The 1-hour A-weighted equivalent sound level (Leq[h]), is the energy average of the A-weighted sound levels occurring during a 1-hour period.
- Percentile-Exceeded Sound Level (Lx): Lx represents the sound level exceeded for a given percentage of a specified period (e.g., L10 is the sound level exceeded 10% of the time, L90 is the sound level exceeded 90% of the time).
- Maximum Sound Level (Lmax): Lmax is the highest instantaneous sound level measured during a specified period.
- Day-Night Level (L_{dn}): Ldn is the energy average of the A-weighted sound levels occurring during a 24-hour period with 10 dB added to the A-weighted sound levels occurring between 10 p.m. and 7 a.m.
- Community Noise Equivalent Level (CNEL): CNEL is the energy average of the A-weighted sound levels occurring during a 24-hour period with 10 dB added to the A-weighted sound levels occurring between 10 p.m. and 7 a.m. and 5 dB added to the A-weighted sound levels occurring between 7 p.m. and 10 p.m.

Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the following factors.

Geometric Spreading: Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of 6 dBA for each doubling of distance. Highway noise is not a single, stationary point source of sound. The movement of the vehicles on a highway makes the source of the sound appear to emanate from a line (i.e., a line source) rather than a point. This line source results in cylindrical spreading rather than the spherical spreading that results from a point source. The change in sound level from a line source is 3 dBA per doubling of distance.

Ground Absorption: The noise path between the highway and the observer is usually very close to the ground. Noise attenuation from ground absorption and reflective-wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is done for simplification only because prediction results based on this scheme are sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., those sites with a reflective surface, such as a parking lot or a smooth body of water, between the source and the receiver), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees, between the source

and the receiver), an excess ground-attenuation value of 1.5 dBA per doubling of distance is normally assumed. When added to the geometric spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dBA per doubling of distance for a line source and 7.5 dBA per doubling of distance for a point source.

Atmospheric Effects: Atmospheric conditions can have a significant effect on noise propagation. Wind has been shown to be the most important meteorological factor within approximately 500 feet of the source, whereas vertical air-temperature gradients are more important for greater distances. Other factors such as air temperature, humidity, and turbulence also have significant effects. Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lower noise levels. Increased sound levels can also occur as a result of temperature inversion conditions (i.e., increasing temperature with elevation).

Shielding by Natural or Human-Made Features: A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by this shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction. A taller barrier may provide as much as 20 dB of noise reduction.

Noise-Sensitive Land Uses

Noise-sensitive land uses are generally defined as locations where people reside or where the presence of noise could adversely affect the use of the land. Typical sensitive uses include residences, schools, and hospitals. Sensitive land uses in the project area that could be affected include those listed below.

- Single-family residences located along Carmel Valley Road and connecting roadways.
- Multi-family residences and condominiums located along Carmel Valley Road and Rio Road west.
- The Community Church of the Monterey Peninsula, and the Carmel Middle School located to the north of the project site.
- Rural residential and the Riverwood multi-family housing development located to the west of the project site.
- Single-family residences located along Via Mallorca to the east of the project site.

Existing Noise Environment

The project area includes residential and public land uses located along Carmel Valley Road between Carmel-by-the-Sea and Carmel Valley Village. The existing noise environment in the project area is dominated by noise from traffic traveling on Carmel Valley Road. Other noise sources in the area are listed below.

- Community Church of the Monterey Peninsula.
- Carmel School District maintenance facility (mostly school buses entering and exiting).

- Youth baseball fields and batting cages.
- Rancho Cañada Golf Club.

The existing noise environment in the project area has been characterized both with noise monitoring—sound level measurements taken in the project area—and traffic noise modeling. Noise monitoring, traffic noise modeling, as well as existing groundborne vibration levels are described below.

Noise Monitoring

ICF conducted noise monitoring on August 20–21, 2015. Long-term noise monitoring was conducted in three locations (LT-1 through LT-3)~~, and short-term noise monitoring was conducted at one location (ST-1)~~ (Figure 3.9-1). The long-term measurements were conducted starting on Thursday, August 20 and ending on Friday, August 21, 2015, for an approximately 24-hour period. ~~The short-term measurement was conducted on August 20, 2015 for a 15-minute interval.~~ **Table 3.9-3** summarizes the long-term ~~and short-term~~ noise monitoring locations and results.

Table 3.9-3 Summary of Noise Monitoring Results

Location	Description	Dates	L_{eq}	dB CNEL
Long-Term Monitoring				
LT-1	Access road between the golf course and transportation yard at Carmel Middle School (northeast corner of the project site), approximately 160 feet from the transportation yard	August 20–21, 2015	N/A	47.6
LT-2	North side of the golf course, approximately 170 feet south of the easternmost baseball diamond on the Carmel Middle School campus.	August 20–21, 2015	N/A	52.9
LT-3	Eastern terminus of Rio Road west, in front of the Riverwood housing complex	August 20–21, 2015	N/A	54.5
~~**Short-Term Monitoring**~~				
~~ST-1~~	~~Lot 130, in front of the façade of the golf course maintenance facility and along fenceline, approximately 120 feet from the median of Carmel Valley Road.~~	~~August 20, 2015~~	~~64.3~~	~~N/A~~

dB L_{dn} = day-night noise level
dBA = A-weighted decibel

Traffic Noise Modeling

The project traffic study (**Appendix E**) provides traffic volumes through intersections in the project vicinity. The intersection volumes have been used to determine volumes on relevant roadway segments in the project vicinity, and these segment volumes have been modeled by ICF to assess the resulting traffic noise for existing conditions. The results are summarized in **Table 3.9-4**.

Table 3.9-4. Traffic Noise Modeling Results for Existing Conditions

Road	Segment	CNEL *
Carmel Valley Road	East of Rio Road	69.3
	Rio Road to Carmel Middle School	69.3
	Carmel Middle School to Carmel Rancho Boulevard	69.6
Carmel Rancho Boulevard	South of Carmel Valley Road	64.4
	North of Rio Road	63.3
Rio Road East	South of Carmel Valley Road	48.6
Rio Road West	Project site to Carmel Rancho Boulevard	51.5
	Carmel Rancho Boulevard to Highway 1	62.5

Source: **Appendices G and X**.

*50 feet from roadway centerline CNEL = community noise equivalent level

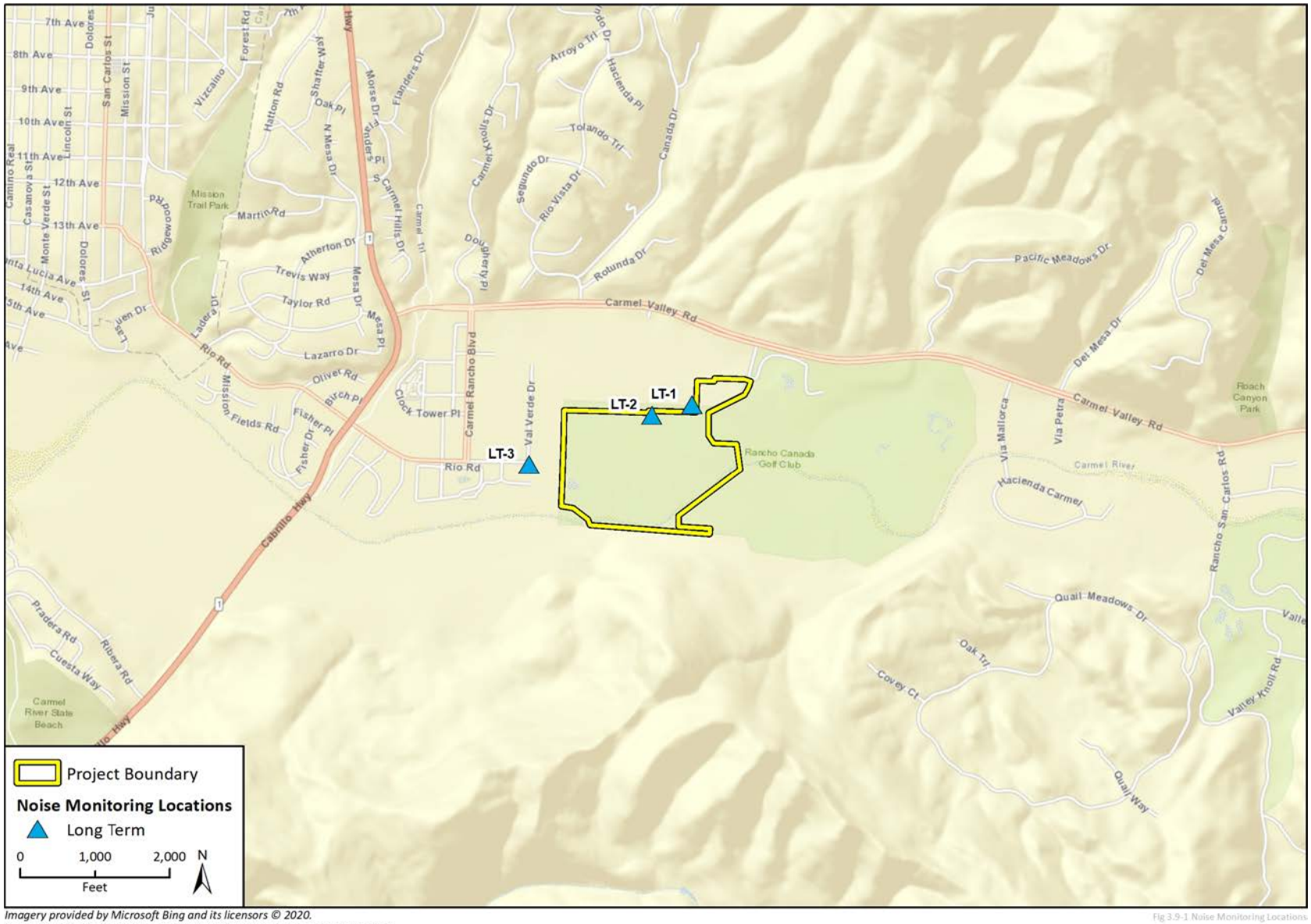
Groundborne Vibration Levels

Ground vibration is measured in terms of the vibration velocity level, or VdB, which is the root mean square velocity amplitude for measured ground motion expressed in dB. The most common sources of groundborne vibration are construction activities and roadway truck traffic. Large delivery trucks typically generate ground-borne vibration velocity levels around 63 VdB at 50 feet from the source (California Department of Transportation 2013). The vibration velocity level threshold of perception for humans is approximately 65 VdB. Therefore, existing traffic vibration is neither distinctly nor generally perceptible at the project site.

Regulatory Setting

This section discusses the local policies relevant to the analysis of noise in the project area. Noise standards in the County of Monterey are defined in the 2010 General Plan Safety Element, Health and Safety Noise Control Ordinance, and the 1986 Carmel Valley Master Plan. The following is a brief discussion of each as it applies to the Project.

Figure 3.9-1 Noise Monitoring Locations



Imagery provided by Microsoft Bing and its licensors © 2020.
Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Fig 3.9-1 Noise Monitoring Locations

Local Policies and Regulations

Current County Plans and Policies

2010 Monterey County General Plan

The project site is located in Carmel Valley within the unincorporated area of Monterey County. The County has established policies and regulations concerning the generation and control of noise that could adversely affect its citizens and noise-sensitive land uses. The 2010 Monterey County General Plan provides an overall framework for development in the jurisdiction and protection of its natural and cultural resources.

Safety Element

The General Plan's Safety Element contains the following planning guidelines relating to noise.

Goal S-7: Maintain a healthy and quiet environment free from annoying and harmful sounds.

Policy S-7.1: New noise-sensitive land uses may only be allowed in areas where existing and projected noise levels are "acceptable" according to "Land Use Compatibility for Community Noise Table" [included as **Table 3.9-5** below]. A Community Noise Ordinance shall be established consistent with said Table that addresses, but is not limited to the following:

a. Capacity-related roadway improvement projects.

b. Construction-related noise impacts on adjacent land uses.

c. New residential land uses exposed to aircraft operations at any airport or air base.

d. Site planning and project design techniques to achieve acceptable noise levels such as: building orientation, setbacks, earthen berms, and building construction practices. The use of masonry sound walls for noise control in rural areas shall be discouraged.

e. Design elements necessary to mitigate significant adverse noise impacts on surrounding land uses.

f. Impulse noise.

g. Existing railroad locations & noise levels.

Policy S-7.2: Proposed development shall incorporate design elements necessary to minimize noise impacts on surrounding land uses and to reduce noise in indoor spaces to an acceptable level.

Policy S-7.3: Development may occur in areas identified as "normally unacceptable" provided effective measures to reduce both the indoor and outdoor noise levels to acceptable levels are taken.

Policy S-7.6: Acoustical analysis shall be part of the environmental review process for projects when:

a. Noise sensitive receptors are proposed in areas exposed to existing or projected noise levels that are "normally unacceptable" or higher according [refer to **Table 3.9-5**].

b. Proposed noise generators are likely to produce noise levels exceeding the levels shown in the adopted Community Noise Ordinance when received at existing or planned noise-sensitive receptors.

Table 3.9-5. Monterey County Community Noise Exposure Levels (L_{dn} or CNEL, dBA)

Land Use Category	55	60	65	70	75	80	Interpretation:
Residential – Low Density Single Family, Duplex, Mobile Homes							**Normally Acceptable** Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Residential – Multi Family							**Conditionally Acceptable** New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.
Transient Lodging – Motels, Hotels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							**Normally Unacceptable** New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Auditoriums, Concert Halls, Amphitheaters							
Sports Arena, Outdoor Spectator Sports							**Cleary Unacceptable** New construction or development should generally not be undertaken.
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial and Professional							
Industrial, Manufacturing, Utilities, Agriculture							

Source: Monterey County 2010: Safety Element Table S-2.
CNEL = community noise equivalent level.
dBA = A-weighted decibel.
L_{dn} = day-night level.

Policy S-7.7: All discretionary residential projects that are within roadway or railroad noise contours of 60 CNEL or greater shall include a finding of consistency with the provisions of the Noise Hazards section of the Safety Element. If found that roadway noise exceeds the 60 CNEL within the project site, a project-specific noise impact analysis shall be required. If impacts are

identified, the applicant shall conduct mitigation analysis using published Caltrans/Federal Highway Administration guidelines and implement mitigation measures as required. Mitigation measures may include, but are not limited to sound walls, adjacent roadway design, dual pane glass, building location or design, etc. Any proposed mitigation measures shall be concurrently implemented with the implementation of the project.

Policy S-7.8: All discretionary projects that propose to use heavy construction equipment that has the potential to create vibrations that could cause structural damage to adjacent structures within 100 feet shall be required to submit a pre-construction vibration study prior to the approval of a building permit. Projects shall be required to incorporate specified measures and monitoring identified to reduce impacts. Pile driving or blasting are illustrative of the type of equipment that could be subject to this policy.

Policy S-7.9: No construction activities pursuant to a County permit that exceed "acceptable" levels listed in Policy S-7.1 shall be allowed within 500 feet of a noise sensitive land use during the evening hours of Monday through Saturday, or anytime on Sunday or holidays, prior to completion of a noise mitigation study. Noise protection measures, in the event of any identified impact, may include but not be limited to:

- Constructing temporary barriers, or
- Using quieter equipment than normal.

Policy S-7.10: Construction projects shall include the following standard noise protection measures:

- Construction shall occur only during times allowed by ordinance/code unless such limits are waived for public convenience;
- All equipment shall have properly operating mufflers; and
- Lay-down yards and semi-stationary equipment such as pumps or generators shall be located as far from noise-sensitive land uses as practical.

In addition to the County's land use compatibility guidelines summarized above, Monterey County has established 70 decibels (dB) as the maximum acceptable noise level for residential uses (Monterey County 2010).

County of Monterey Health and Safety Noise Control Ordinance

Chapter 10.60.030 of the County of Monterey Health and Safety Noise Control Ordinance prohibits the generation of mechanical noise in excess of 85 dBA, measured 50 feet from the noise source. This ordinance is only applicable to noise generated within 2,500 feet of any occupied dwelling unit and can be used to regulate construction-related noise.

Prior County Plans and Policies

As stated in Chapter 1, *Introduction*, discussion pertaining to the 1982 General Plan is provided for informational purposes only.

1982 Monterey County General Plan

According to the Noise Hazards element of the 1982 Monterey County General Plan, the maximum exterior sound level acceptable for residential land uses is 60 CNEL. The maximum allowable interior noise level for these land uses is 45 dBA. For new roadway improvement projects and general construction projects, the acceptable exterior community noise levels shown in **Table 3.9-6**

must be met. Further, construction-related noise is subject to the County's Noise Control Ordinance, described below.

Where existing noise-sensitive land uses may be exposed to increased noise levels, the following criteria is used to determine the significance.

- Where existing noise levels are less than 60 dB L_{dn} at outdoor activity areas of noise-sensitive land uses, a 5 dB L_{dn} increase in noise levels will be considered significant.
- Where existing noise levels are between 60 and 65 dB L_{dn} at outdoor activity areas of noise-sensitive land uses, a 3 dB L_{dn} increase in noise levels will be considered significant.
- Where existing noise levels are greater than 65 dB L_{dn} at outdoor activity areas of noise-sensitive land uses, a 1.5 dB L_{dn} increase in noise levels will be considered significant.

Table 3.9-6. Land Use Compatibility for Exterior Community Noise

	Noise Ranges (L_{dn} or CNEL) dB			
Land Use Category	I	II	III	IV
Passively used open spaces	50	50–55	55–70	70+
Auditoriums, concert halls, amphitheaters	45–50	50–65	65–70	70+
Residential—low density single-family, duplex, mobile homes	50–60	60–70	70–75	75+
Residential—multi-family	50–60	60–70	70–75	75+
Transient lodging—motels, hotels	50–60	60–70	70–80	80+
Schools, libraries, churches, hospitals, nursing homes	50–60	60–70	70–80	80+
Actively used open spaces—playgrounds, neighborhood parks	50–67	–	67–73	73+
Golf courses, riding stables, water recreation, cemeteries	50–70	–	70–80	80+
Office buildings, business commercial and professional	50–67	67–75	75+	–
Industrial, manufacturing, utilities, agriculture	50–70	70–75	75+	–

Source: Monterey County 1982.

Noise Range I—Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Noise Range II—Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Noise Range III—Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Noise Range IV—Clearly Unacceptable: New construction or development should generally not be undertaken.

Impact Analysis

Methods for Analysis

CEQA requires the significance of noise impacts to be determined for proposed projects. The process of assessing the significance of noise impacts associated with a proposed project starts by establishing thresholds at which significant impacts are considered to occur. Next, noise levels associated with project-related activities are predicted and compared to the criteria for determining significance, outlined in the following section. A significant impact is considered to occur when a predicted noise level exceeds a threshold.

Noise from traffic on roadways in the project area has been evaluated under existing conditions without the Project and existing conditions plus the Project ~~and 130-Unit Alternative~~ (including the extension of Rio Road west). The traffic noise modeling was conducted based on the Draft Transportation Impact Study (DTIS). The DTIS and details of the traffic noise modeling are presented as **Appendix G** of this Second Revised ~~Recirculated~~ Draft EIR and are available for review by appointment at the Monterey County Resource Management Agency, ~~Salinas Permit Center, 168 West Alisal Street, 2nd Floor~~ 1441 Schilling Place, Salinas, California, or online at https://www.co.monterey.ca.us/government/departments-i-z/resource-management-agency-rma-/planning/current-major-projects/rancho-canada-village-specific-plan (refer to Chapter 1, *Introduction*). ~~Traffic noise impacts for the 130-Unit Alternative were analyzed using the same methods as the methods used for the Project.~~

Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, 2010 General Plan's plans and policies, and agency and professional standards, a project impact would be considered significant if it would:

A. Long-Term Increases in Noise

- Expose persons to or generate noise levels in excess of standards established in the County's "Land Use Compatibility for Exterior Community Noise" chart.
- For new receptors, expose residential single- or multi-family housing to noise levels above 60 or 65 CNEL, respectively.
- Result in an increase in traffic that would increase existing traffic noise levels by 3.0 dBA or more (3 dBA is the threshold level for most people to notice a change in noise) in areas where Project noise levels would exceed land use noise standards for the affected land use.

B. Short-Term Increases in Noise

- Expose outdoor activity areas of noise sensitive land uses to construction noise of greater than 85 dB at 50 feet when construction is located within 2,500 feet of any occupied dwelling unit.

C. Vibration

- Expose persons to or generate excessive groundborne vibration or groundborne noise levels.

Impacts and Mitigation Measures

A. Long-Term Increases in Noise

Impact NOI-1: Exposure of Onsite Noise-Sensitive Land Use to Noise (less than significant with mitigation)

~~Proposed Project~~

New noise sensitive land uses on the project site (condominiums and single-family residences) would be exposed to noise from various sources. These land uses and noise sources are discussed below.

Condominiums

For the Proposed Project, the nearest residences would be the condominiums, which are more than 700 feet away from Carmel Valley Road. Current noise in the area of the project site where the condominiums would be located is approximately 47.6 CNEL, based on measurements conducted at LT-1 (**Table 3.9-3**). Existing sources of noise in the area include operational noise from the Community Church of the Monterey Peninsula and the Carmel School District Maintenance Facility and transportation yard. Existing plus Project noise along Carmel Valley Road, between Carmel Middle School and Rio Road, is anticipated to be 69.5 CNEL at 50 feet from the roadway based on the traffic modeling conducted for the Project (**Table 3.9-7**). At the distance at which the condominiums would be located, 700 feet, noise from Carmel Valley Road would attenuate to below 60 CNEL, assuming the standard attenuation rate of -3 dB per doubling of distance and, conservatively, no ground attenuation effect. Existing plus Project noise from Rio Road east, which will be adjacent to the condominiums, is anticipated to be 51.8 ~~52.8~~ CNEL at 50 feet from the roadway (**Table 3.9-7**). Thus, including existing noise sources and future traffic noise, noise levels at the condominiums will be below 60 CNEL.

Assuming the widely-used nominal exterior-to-interior noise reduction of 15 dB with windows closed, the interior noise level would be less than 45 CNEL. Because exterior and interior noise levels would be less than 60 CNEL and 45 CNEL, respectively, the noise impact at the condominiums would be *less than significant.*

Table 3.9-7 Traffic Noise Modeling Results for the Proposed Project

Road	Segment	Existing CNEL*	Existing Plus Project CNEL*	Project Increase in Noise (dBA)	Significant Noise Increase?
Carmel Valley Road	East of Rio Road	69.3	69.3	0.0	No
	Rio Road to Carmel Middle School	69.3	69.5	0.2	No
	Carmel Middle School to Carmel Rancho Boulevard	69.6	69.8	0.2	No
Carmel Rancho Boulevard	South of Carmel Valley Road	64.4	64.5 ~~64.4~~	0.1 ~~0.0~~	No
	North of Rio Road	63.3	63.4	0.1	No
Rio Road East	South of Carmel Valley Road	48.6	51.8 ~~52.8~~	3.2 ~~4.2~~	No
Rio Road West	Project site to Carmel Rancho Boulevard	51.5	51.5 ~~53.7~~	0.0 ~~2.2~~	No
	Carmel Rancho Boulevard to Highway 1	62.5	63.4 ~~62.6~~	0.9 ~~0.1~~	No

Source: **Appendices G and X**.
*50 feet from roadway centerline
CNEL = community noise equivalent level
dBA = A-weighted decibel

Single-Family Residences

The noise exposure at the lots closest to the baseball fields and batting cage is expected to be 52.9 CNEL, as indicated by the long-term measurement conducted at site LT-2 (**Table 3.9-3**). Corresponding interior noise levels would be approximately 37.9 CNEL (52.9 – 15 = 37.9). Noise exposure at lots closest to the golf course is predicted to be the same as the noise indicated for the lots closest to the baseball fields and batting cage area 52.9 CNEL, because site LT-2 was located near the baseball area as well as the golf course. Noise exposure at lots closest to the Carmel School District Maintenance Facility and transportation yard is predicted to be 47.6 CNEL exterior (see long-term measurement conducted at LT-1 in **Table 3.9-3**) and 32.6 CNEL interior (47.6 – 15 = 32.6). Noise exposure at lots closest to Rio Road east is predicted to be 52.8 CNEL exterior (see modeled traffic noise for Rio Road east segment in **Table 3.9-7**) and 37.8 CNEL interior (52.8 – 15 = 37.8) as a reasonable worst case scenario. Traffic noise from Rio Road east would likely be lower than the aforementioned levels, because the traffic modeling assumes a distance of 50 feet from the roadway centerline. The single-family residences would likely be located at a distance greater than 50 feet from the centerline, leading to lower noise levels. All predicted traffic noise levels are less than 60 CNEL exterior and 45 CNEL interior.

The project residences would be exposed to temporary noise from lawn mowers, which would be used for maintenance of the golf course. However, the noise from lawn mowers would be short in duration and would be consistent with noise generated by maintenance activities typically associated with a residential area. In addition, noise measured at the northern border of the golf course was determined to be 52.9 CNEL, which is below the day-night noise level at activity areas of 60 CNEL or greater. Thus, this source of noise would have a *less-than-significant* effect on residential land uses for the Proposed Project.

Noise from the batting practice area and baseball fields could temporarily result in elevated noise levels, but the 24-hour noise would be below 60 CNEL exterior and 45 CNEL interior, as indicated by the long-term measurement conducted at site LT-2. Nevertheless, the exposure of the single-family residences to noise from the batting area and baseball fields would be *potentially significant* during active use periods. This impact can be mitigated to a *less-than-significant* level through implementation of **Mitigation Measure NOI-1**.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative would also expose new single-family residences, condominiums, duplexes, and apartments to noise. The residential units under the 130-Unit Alternative, with the exception of Lot 130, would experience similar levels of exterior and interior noise as those discussed above for the Proposed Project. Noise exposure at lots near the Community Church of the Monterey Peninsula, the Rancho Cañada Golf Club, and Carmel School District Maintenance Facility and transportation yard would not be expected to exceed 48 CNEL exterior and 33 CNEL interior (48 – 15 = 33), as indicated by the CNEL measured at LT-1 (**Table 3.9-3**).~~

~~Noise exposure from the golf course, as discussed for the Proposed Project, would be temporary and not expected to result in a day-night noise levels at outdoor activity areas of more than 60 dBA CNEL. Thus, this source of noise would have a *less-than-significant* impact on residential land uses for this alternative.~~

~~The units that are closest to the batting practice area and baseball fields could experience temporarily elevated noise levels during active use periods. However, as discussed for the Proposed Project, noise measured south of the baseball field area where the closest units would be was determined to be 52.9 CNEL, which would result in an interior noise level of approximately 37.9 CNEL (52.9 – 15 = 37.9). Thus, similar to the Proposed Project, noise levels would be below 60 CNEL for the land uses under the 130-Unit Alternative, excluding Lot 130, although noise could be temporarily elevated at residences near the baseball area. Implementation of **Mitigation Measure NOI-1** would reduce temporarily elevated noise levels during the active use periods on the baseball fields.~~

~~Lot 130 would be developed with a single-family residence. Lot 130 is immediately adjacent to Carmel Valley Road and extends up to 300 to 400 feet south and, thus, traffic noise levels would range from 69.3 CNEL at 50 feet from Carmel Valley Road (**Table 3.9-8**) to 60[1] CNEL at 429 feet from Carmel Valley Road. Thus, traffic from Carmel Valley Road could cause noise levels that exceed 60 CNEL exterior and 45 CNEL interior. Implementation of **Mitigation Measure NOI-1** would reduce noise exposure at these areas. Noise reducing treatments would be implemented when the development is being completed, reducing *potentially significant* noise impacts to a *less-than-significant* level.~~

~~[2] This assumes the standard geometric attenuation of -3 dB per doubling of distance, and, conservatively, assumes that there is no ground attenuation effect.~~

[2] Long-term 24-hour noise measurements were conducted near the project site, as discussed above; in general, the peak-hour noise captured during the long-term measurement was up to approximately 2 dBA higher than the total CNEL for each 24-hour measurement. Therefore, the 1-hour L_{eq} modeling results were converted into CNEL values by subtracting 2 dBA from each L_{eq} result.

Mitigation Measure NOI-1: Implement Noise-Reducing Treatments at Residences Located Near the Batting Practice Area ~~and Lot 130~~

Prior to construction, the Project Applicant will retain a qualified acoustical consultant to identify specific outdoor and indoor residential areas near the baseball fields and batting practice area ~~and residential areas on Lot 130~~ that could be exposed to noise exceeding 60 CNEL exterior and 45 CNEL interior. The consultant will prepare a report which identifies specific treatments to be implemented that will reduce exterior and interior noise to less than 60 CNEL and 45 CNEL, respectively. Treatments that can be implemented to achieve these performance standards may include those listed below.

- Construction of a solid barrier between the batting practice area and the outdoor use areas ~~(~~for residential areas near the baseball fields and batting practice area.~~) or between Carmel Valley Road and Lot 130.~~
- Upgraded acoustical insulating of building structures.
- Addition of fresh air ventilation to allow windows to be closed when baseball games or batting practice is occurring ~~(~~for residential areas near the baseball fields and batting practice area~~) or the residence on Lot 130 along Carmel Valley Road~~.
- ~~For Lot 130, any solid barriers (soundwalls, earthen berms, or other structures) proposed to attenuate Carmel Valley Road traffic noise shall be designed to preserve the rural character and views along Carmel Valley Road, which may require setback from Carmel Valley Road and/or use of screening vegetation to hide any proposed solid structures. If such barriers must be set back from Carmel Valley Road to maintain scenic road views, this may require relocation or realignment of the Lot 130 residence to locations further from the roadway.~~

The report will be submitted to the County for review and approval prior to issuance of buildings permits.

Table 3.9-8 Traffic Noise Modeling Results for the 130-Unit Alternative

Road	Segment	Existing CNEL*	Existing + 130-Unit Alternative CNEL*	Project Increase in Noise (dBA)	Significant Noise Increase?
Carmel Valley Road	East of Rio Road	69.3	69.3	0.0	No
	Rio Road to Carmel Middle School	69.3	69.5	0.2	No
	Carmel Middle School to Carmel Rancho Boulevard	69.6	69.8	0.2	No
Carmel Rancho Boulevard	South of Carmel Valley Road	64.4	64.5	0.1	No
	North of Rio Road	63.3	63.4	0.1	No
Rio Road East	South of Carmel Valley Road	48.6	51.8	3.2	No
Rio Road West	Project site to Carmel Rancho Boulevard	51.5	51.5	0.0	No
	Carmel Rancho Boulevard to Highway 1	62.5	63.4	0.9	No

Source: **Appendices G and X.**
*50 feet from roadway centerline
CNEL = community noise equivalent level
dBA = A-weighted decibel

Impact NOI-2: Exposure of Offsite Noise-Sensitive Land Uses to Increased Noise (less than significant)

Proposed Project

Table 3.9-7 summarizes predicted traffic noise levels under existing and existing plus Project conditions. The modeling of the roadway intersections in the vicinity of the Project site was conducted using peak-hour traffic volumes. Therefore, the noise modeling resulted in 1-hour L_{EQ} values at a distance of 50 feet from the centerline of the roadway, which was generally the worst-case closest distance. Therefore, the results were converted into approximate CNEL values based on trends apparent in the long-term, onsite noise measurements.[2]

The traffic noise modeling results in **Table 3.9-7** indicate that with the exception of Rio Road west and Rio Road east, Project-related increases in traffic noise would be less than 1 dB at all roadways in the area. As shown in **Table 3.9-7**, all Project-related increases would be below 3.0 dBA, the threshold for most people to notice a change in noise, except for Rio Road east south of Carmel Valley Road. The increase in traffic noise at this roadway segment would be 3.2 4.2 dBA, which is above the threshold of perceptibility and could be noticeable to some people. However, because the existing traffic noise and existing plus Project traffic noise would be below 60 CNEL, which is

2 This assumes the standard geometric attenuation of -3 dB per doubling of distance, and, conservatively, assumes that there is no ground attenuation effect.

[2] Long-term 24-hour noise measurements were conducted near the project site, as discussed above; in general, the peak-hour noise captured during the long-term measurement was up to approximately 2 dBA higher than the total CNEL for each 24-hour measurement. Therefore, the 1-hour L_{eq} modeling results were converted into CNEL values by subtracting 2 dBA from each L_{eq} result.

considered normally acceptable according to the General Plan compatibility standards for single-family residential areas, the increase in traffic noise would not result in incompatible noise levels for the existing church, existing school or new residences. The noise impact of the Proposed Project on the affected roadways is therefore considered to be *less than significant*, and no mitigation is required.

~~**130-Unit Alternative**~~

~~Traffic volumes associated with the 130-Unit Alternative would generally be less than those associated with Proposed Project due to the fewer number of housing units under the 130-Unit Alternative. The 130-Unit Alternative would have less than half of the number of development units as the Proposed Project. Pedestrian and emergency vehicles would use the Rio Road west extension of the 130-Unit Alternative only. Through traffic would not be permitted from the project to travel directly to Rio Road west. **Table 3.9-8** summarizes predicted traffic noise levels under existing and existing plus 130-Unit Alternative conditions.~~

~~Similar to the Proposed Project traffic modeling results, the traffic noise modeling results in **Table 3.9-8** for the 130-Unit Alternative indicate that with the exception of Rio Road east (South of Carmel Valley Road), 130-Unit Alternative-related increases in traffic noise would be less than 1 dBA, which is well below the threshold of perceptibility. As shown in **Table 3.9-8**, the increase in traffic noise at the Rio Road east segment, south of Carmel Valley Road, would be 4.6 dBA, which is above the threshold of perceptibility and could be noticeable to some people. However, because the existing traffic noise and existing plus 130-Unit Alternative traffic noise would be below 60 CNEL, which is considered normally acceptable according to the General Plan compatibility standards for single-family residential areas, the increase in traffic noise would not result in incompatible noise levels for the existing church, existing school or new residences. The noise impact of the 130-Unit Alternative on the affected roadways is, therefore, considered to be *less than significant*, and no mitigation is required.~~

B. Short-Term Increases in Noise

Impact NOI-3: Exposure of Noise-Sensitive Land Uses to Construction Noise (less than significant with mitigation)

~~**Proposed Project**~~

Short-term construction noise impacts may occur during construction of the Proposed Project. Construction noise generates noise levels in the range of 75 to 95 dBA at a distance of 30 feet (**Appendix G**) from the source and has the potential to disturb nearby residential and public land uses. Noise from construction equipment (a point source) attenuates at a rate of 6 dB per doubling of distance. At receptor locations approximately 250 feet from the site, construction noise would be in the range of 56 to 76 dBA. Because construction noise could exceed 85 dBA at 50 feet, and there are residences within 2,500 feet of where construction would take place, noise from construction would be *potentially significant*. Implementation of **Mitigation Measure NOI-2** would reduce this impact to a *less-than-significant* level.

~~**130-Unit Alternative**~~

~~As discussed for the Proposed Project, construction noise associated with the 130-Unit Alternative has the potential to disturb nearby residential land uses. Thus, the same general type of equipment~~

~~would be used as for the Proposed Project. Although the 130-Unit Alternative has fewer development units than the Proposed Project, the noise that would be generated during residential construction would be comparable to the noise generated under the Proposed Project. It is expected that the same number and type of construction equipment pieces could operate simultaneously to construct the development and utilities of the 130-Unit Alternative as those used for the Proposed Project. Thus, the range of noise would also be between 75 to 95 dBA at a distance of 30 feet. Consequently, construction noise could exceed 85 dBA at 50 feet, and there are residences located within 2,500 feet of where construction would take place. Consequently, the residences adjacent to these lots could experience construction noise that is substantial so this impact would be *potentially significant*.~~ Implementation of ~~**Mitigation Measure NOI-2** would reduce noise impacts to a *less-than-significant* level.~~

Mitigation Measure NOI-2: Employ Noise-Reducing Construction Practices

During construction, the Project Applicant will implement noise reducing construction practices such that noise from construction is incompliance with the Monterey County Health and Safety Noise Control Ordinance. The ordinance limits construction noise to 85 dBA measured 50 feet from the noise source when construction is located within 2,500 feet of any occupied dwelling unit. Measures that would be implemented to comply with the requirement may include those listed below.

- Prohibit night-time and weekend construction and schedule all construction for daytime hours between 7:00 a.m. and 5:00 p.m. Monday through Friday.
- Require all internal combustion engines used at the project site to be equipped with a type of muffler recommended by the vehicle manufacturer.
- Require all equipment to be in good working condition to minimize noise created by faulty or poorly maintained engine, drive train, and other components.
- Restrict or prohibit construction traffic on Rio Road west of the project site. All construction equipment should access the site via Rio Road east from Carmel Valley Road to minimize noise at existing residences.
- Require all diesel equipment to be located more than 200 feet from any residence if equipment is to operate more than several hours per day.
- Place of berming or stockpiled material between equipment and noise sensitive location to reduce construction noise.
- Use scrapers as much as possible for earth removal rather than noisier loaders and haul trucks.
- Use a backhoe for backfilling which is quieter than dozers or loaders.
- Shield or enclose power saws where practical to decrease noise emissions. Use nail guns where possible instead of manual hammering.

C. Vibration Impacts

Impact NOI-4: Exposure of Sensitive Land Uses to Vibration from Construction Activity (less than significant)

~~**Proposed Project**~~

The operation of heavy construction equipment would produce ground vibration. The highest vibration levels are typically created by high impact equipment such as pile driving. Operation of other equipment such as scrapers and graders does not produce perceptible ground vibration beyond about 250 feet (Federal Transit Administration 2006). Noise sensitive land uses within 250 feet of the project area include a church to the north and residences to the west of the project site. However, because no high impact construction equipment would be used, and the distance between the project site and the sensitive land uses is between 200 and 250 feet, ground vibration would not be substantially perceptible. This impact would be *less than significant*. No mitigation is required.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative would not utilize high impact construction equipment that could generate substantial ground vibration. It is not likely that the residential property on Lot 130 would require pile driving activities. There would be noise-sensitive land uses within 250 feet of the site boundaries, identical to the Proposed Project, including a church to the north and residences to the west of the 130-Unit Alternative site that are located between 200 and 250 feet from the project site. In addition, there are existing residential structures directly east of Lot 130. Nevertheless, the construction equipment that would be used to construct the 130-Unit Alternative would not be high-impact equipment. Any ground vibration that does occur from the Proposed Project would be minor and temporary and would not be substantially perceptible. Therefore, this impact would be *less than significant*. No mitigation is required.~~

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Chapter 3.10
Public Services, Utilities, and Recreation

Introduction

This chapter provides a discussion of public service, utility, and recreation issues related to the Proposed Project ~~and the 130-Unit Alternative~~ in the Carmel Valley. This chapter includes a review of existing conditions based on available literature and field surveys; a summary of local, state, and federal policies and regulations related to other issues; and an analysis of direct and indirect environmental impacts of the project. Where feasible, mitigation measures are recommended to reduce the level of impacts.

Impact Summary

Table 3.10-1 lists the impacts and mitigation measures for the Proposed Project ~~and the 130-Unit Alternative~~. As shown in **Table 3.10-1**, the Proposed Project ~~and the 130-Unit Alternative~~ would have some significant adverse impacts related to public services and utilities within the project area. However, with the implementation of the mitigation measures described within this chapter, all of the impacts listed would be reduced to less-than-significant levels. The Project would be designed in accordance with applicable fire code design standards to reduce the risk of damage and injury during fire emergencies. Likewise, construction and engineering coordination would be used to minimize utility disruptions during construction periods.

Table 3.10-1. Public Services, Utilities, and Recreation Impact Summary

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
A. Fire and Police Services				
PSU-1: Increased Demand for Fire and First-Responder Emergency Medical Services	~~LTS~~	LTS	None Required	--
PSU-2: Increased Demand for Police Services	~~LTS~~	LTS	None Required	--
B. Emergency Access				
PSU-3: Interference with Emergency Access Routes or Adopted Emergency Access Plans	~~LTS~~	LTS	None Required	--
C. Wildland Fire Hazard				
PSU-4: Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Wildland Fires	~~LTS~~	LTS	None Required	--

Impact	~~Proposed Project Level of Significance~~	~~130 Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
D. Water Demand				
PSU-5: Increased Water Supply Demand	~~Potentially Significant~~	Potentially Significant	PSU-1: Dedicate Water Rights for the Project: Design for, Meter, and Monitor Water to meet Water Budgets; Implement Remedial Action of Water Budgets Exceeded	LTS ~~--~~
E. Infrastructure Capacities				
PSU-6: Increased Demand for Water and Sewer Infrastructure	~~Potentially Significant~~	Potentially Significant	PSU-2: Test Well Supply, Identify Water Treatment and Distribution Facilities, and Avoid Impacts on Biological Resources	LTS
F. Wastewater Treatment Capacity				
PSU-7: Increased Wastewater Treatment Capacity	~~LTS~~	LTS	None Required	--
G. Utility Disruption during Construction				
PSU-8: Construction-Related Service Disruptions	~~Potentially Significant~~	Potentially Significant	PSU-3: Coordinate with Appropriate Utility Service Providers and Related Agencies to Reduce Service Interruptions	LTS
H. School Enrollments				
PSU-9: Increased Student Enrollments	~~LTS~~	LTS	None Required	--
I. Recreational Demand				
PSU-10: Increased Use of Existing Neighborhood and Regional Parks	~~LTS~~	LTS	None Required	--
J. Open Space				
PSU-11: Quality and Quantity of Open Space Used for Recreation	~~LTS~~	LTS	None Required	--
K. Landfill Capacity				
PSU-12: Increased Demand for Solid Waste, Green Waste, and Recycling Disposal Needs	~~LTS~~	LTS	None Required	--

Impact	~~Proposed Project Level of Significance~~	~~130 Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
LTS = Less than Significant~~, NI= No Impact~~				

Environmental Setting

The Proposed Project site is ~~and the 130 Unit Alternative area~~ located in the mouth of the Carmel Valley just south of Carmel Valley Road. Carmel Valley is situated about 130 miles south of San Francisco, near the Cities of Carmel-by-the-Sea, Pacific Grove, and Monterey.

Existing Conditions

Table 3.10-2 summarizes the service, utility and recreation provided in the project area.

Table 3.10-2. Summary of Public Service, Utility, and Recreation Providers in the Project Area

Public Service or Utility	Service Provider
Water	On-site wells (golf course irrigation) Cal-Am (Rancho Canada Golf Course clubhouse)
Wastewater	Carmel Area Wastewater District
Electricity and Natural Gas	Pacific Gas & Electric Company
Communication Services	AT&T
Solid waste	Monterey Regional Waste Management District
Education	Carmel Unified School District
Police	Monterey County Sheriff's Office
Fire	Cypress Fire Protection District
Parks	Monterey County Parks Department/ Monterey Peninsula Regional Park District / California State Parks

Communication Services

AT&T provides telecommunication and Internet services in Monterey County, while cable television services are provided by Comcast Cable. At this time no facilities exist to support either service onsite, however these services are available immediately to the north and west of the Proposed Project ~~and the 130 Unit Alternative~~ site.

Electricity and Natural Gas

PG&E is the gas and electrical service provider that has been delivering energy to the Carmel Valley area for years. While service exists to the north and west of the project site, currently there are no existing gas mains or electrical distribution systems in place to serve the project area.

Schools

The Carmel Unified School District (CUSD) serves Carmel–by-the-Sea and the unincorporated areas of the Carmel Valley, including the project area. CUSD is comprised of three elementary schools (K

through 5th grade), one middle school (6th through 8th grade), and one high school (9th through 12th grade). In addition, CUSD provides one continuation high school, an adult school, and a child development center for district residents.

The following schools serve the project area.

- Carmel River Elementary School: Monte Verde Street and 15th Avenue, Carmel, CA.
- Carmel Middle School: 4380 Carmel Valley Road, Carmel Valley CA (adjacent to the project site).
- Carmel High School: 3600 Ocean Avenue Carmel, CA.

According to enrollment data from the Education Data Partnership, the Carmel School District has experienced an increase in enrollment at a rate of 2.95% per year between 2004 and 2014 (Education Data Partnership 2014).

Fire Protection

The project area falls within the jurisdiction of the Cypress Fire Protection District (CFPD), which covers approximately 7.4 square miles of the Carmel Valley (Acosta pers. comm.). The District operates under contract agreement with the California Department of Forestry. CFPD responds to the fire and medical emergency needs in the Carmel Valley from the Rio Road and Carmel Hill Fire Stations. Staffing of these stations is comprised of two 4-person engine companies, 1 battalion chief, and approximately 20 volunteer/standby firefighters (Acosta pers. comm.). The Rio Road Fire Station is located at 3775 Rio Road, and would be the closest to the project area.

The CFPD strives to maintain a service response time standard of 8 minutes and, as of 2014, the average response time for emergency calls was less than 5 minutes (Acosta pers. comm.). The CFPD currently has an Insurance Services Office Class 3 rating (Class 1 represents the most protected, Class 10 the least). However, the Fire Captain expects that the ISO class rating will be reduced in the future due to a recent increase in personnel and current level of response (Acosta pers. comm.).

Parks / Open Space

Over 290,000 acres of land in Monterey County is devoted to park and recreational facilities operated by various agencies (Monterey County 2010). The Monterey County Parks Department maintains approximately 12,155 acres of those lands within 9 county regional parks (ICF International 2010). These county parks and freshwater recreation areas provide overnight and day-use recreational opportunities for county residents.

The Monterey Peninsula Regional Parks District manages 24 regional parks, open spaces and preserves in the County totaling approximately 14,000 acres (ICF International 2010). Located adjacent to the project area, the 10,000-acre Palo Corona Ranch was acquired by the Regional Park District in 2004 and is managed together with the Big Sur Land Trust. Since 2004, the Regional Parks District has relied on funding from yearly assessments from single-family dwellings in the County (Monterey Peninsula Regional Park District 2014).

Within the County, the State of California Parks Department operates 20 parks that total 17,567 acres. Major state recreational areas include the Carmel River State Beach, Point Lobos State Reserve, Garrapata State Park, and Pfeiffer Big Sur State Park (ICF International 2010). In addition, approximately 22 golf courses are located within Monterey County, including the Rancho Cañada Golf Club.

Police Services

The Monterey County Sheriff's Office (MCSO) currently provides law enforcement services in the unincorporated areas of the County, including the project area. The Sheriff's patrol district is broken into three regional response stations: Central (Salinas), Coastal (Monterey) and South County (King City). The Coastal station serves the unincorporated areas of the Monterey Peninsula, Carmel Valley, and 100 miles of the coastline (MCSO website). The Coastal station is located at 1200 Aguajito Road in the City of Monterey. Twenty-two deputies operate out of this station, however, personnel from the Salinas and King City stations are available for additional assistance as needed. In addition, the Sheriff's Department includes a Community Field Office in Carmel Valley Village that is occasionally manned by deputies.

The three 'beat' areas that cover Carmel-by-the-Sea and the Carmel Valley are, Beat 7, Beat 8A, and Beat 8B. Together these beats cover the area of Carmel Valley Road from Ocean Avenue east to the 38-mile marker past Laureles Grade. The project area is located in the Beat 7 Area. The North and South boundaries of Beat 7 are both sides of Hwy 1 from Carmel High School to Rocky Point. The East and West boundaries are both sides of Carmel Valley Road from Hwy 1 to Rancho San Carlos Road. The project site is within the jurisdiction of the Coastal Station in Monterey. This is a Sheriff's Office Substation. The nearby Beat areas also encompassed within the Coastal Station jurisdiction are 6!, 6B, 8A, 8B and 9. During the Lincoln (Day) shift which is from 7am-5pm there is one deputy in a patrol vehicle patrolling Beat 7. During the X-Ray (Swing) shift which is from 3pm-1am, there is not a Coastal Station Deputy assigned to Beat 7. There are two deputies (each in a patrol vehicle) assigned from the X-Ray shift at the Central Station in Salinas. They travel to the Monterey Peninsula to cover all the Coastal Station Beat areas. In addition to Beat 7, these two patrol units also cover all the Calls for Service in the other beat areas of 6A, 6B, 8B and 9. During the Zebra (Midnight Shift) which is from 9pm to 7am, like the X-Ray shift, there is not a dedicated Coastal Station assigned to Beat 7. There are two deputies (each in a patrol vehicle) assigned from the Zebra shift at the Central Station in Salinas. They travel to the Monterey Peninsula to cover all the Coastal Station Beat areas. In addition to Beat 7, these two patrol units also cover all the Calls for Service in the other beat areas of 6A, 6B, 8A and 9. During the time frame of Jan-Dec 2013 the average response time was 9 minutes, 7 seconds. This statistic includes both emergency and non-emergency calls for service. However, now with much lower staffing levels and not one unit dedicated to Beat 7 for the Swing and Midnight shift, this response time would be much higher (Galletti pers. comm.). Beat 7 would cover the project area.

The California Highway Patrol provides traffic enforcement and accident investigation for Carmel Valley. The Sheriff's Department may also aid in traffic enforcement, however their primary function is to respond to criminal violations.

Solid Waste

Within the project area, solid waste pick up services are provided by Waste Management, Inc. and transferred to the Monterey Peninsula Landfill and Recycling Facility. The landfill is owned and operated by the Monterey Regional Waste Management District (MRWMD), which serves the greater Monterey Peninsula area; a 853-square mile service area that includes the project area. The landfill is located at14201 Del Monte Boulevard, in Marina and has a life expectancy of 150 years. As of 2014, the facility has a remaining capacity of 48 million tons (71 million cubic yards) of additional solid waste (Monterey Regional Waste Management District 2014). In 2004, the landfill received

369,389 tons of solid waste and recycled or diverted 142,425 tons. Currently the facility is exceeding the state mandated 50% diversion rate (Monterey Regional Waste Management District 2013).

Local recycling is provided by the MRWMD at 12 locations throughout the service area. Closest to the project area is the Carmel Valley Transfer Facility located at 9 Pilot Road, approximately 10 miles from the site.

Wastewater (Sewer)

The Carmel Area Wastewater District (CAWD) provides wastewater collection, treatment and disposal services to the project area. An existing 12-inch sewer trunk line runs westerly, parallel, and about 60 feet north of the northern boundary line of the Proposed Project ~~and the 130-Unit Alternative~~ site.

CAWD wastewater treatment facility, located 1.2 miles west on SR 1, has a permitted average dry weather treatment capacity of 3-million gallons per day (mgd) and is currently operating at 1.4 mgd (Carmel Area Wastewater District 2014). The CAWD facility is a tertiary plant that provides reclaimed water for landscape irrigation during the dry season, and when irrigation demand is low during the wet season, the treated effluent is discharged into the Pacific Ocean via an existing permitted outfall.

Water Supply

Cal-Am is the water purveyor for the majority of customers in the following areas: Monterey Peninsula, the Cities of Sand City and Del Rey Oaks, portions of the City of Seaside, portions of the Highway 68 corridor, Carmel Valley from about River Mile 15 to the Pacific Ocean, Carmel, and portions of the Carmel Highlands and Yankee Point areas. Many customers within this area are served from other systems; the largest is the City of Seaside municipal water system, and the smallest are individual domestic wells. In addition, many large properties, including the Rancho Cañada Golf Club, Carmel Valley Ranch, Tehama and Monterra Subdivisions, and the Santa Lucia Preserve (Rancho San Carlos), are served by private wells. Private wells are subject to regulation by the Monterey Peninsula Water Management District (MPWMD), the State Water Resources Control Board, and the Monterey County Health Department.

Existing Water Use

The Golf Club wells have produced between 309 and 522 acre-feet per year (AFY) over the past 24 years (**Table 3.10-3**) for irrigation of the golf course). Cal-Am also has a potable water supply well located on the golf course property.

Table 3.10-3. ~~Existing~~ Rancho Cañada Golf Course Use, 1991 - 2014

Year	Irrigation (AFY)[1]	Type[2]	Precipitation (inches)[3]	Type[2]
1991	358.4	RY1991	11.9	WY1991
1992	425.0	RY1992	15.3	WY1992
1993	440.5	RY1993	25.8	WY1993
1994	465.9	RY1994	12.0	WY1994
1995	337.6	RY1995	24.4	WY1995
1996	457.2	RY1996	18.0	WY1996
1997	499.8	RY1997	18.7	WY1997
1998	346.6	RY1998	40.6	WY1998
1999	309.4	RY1999	17.2	WY1999
2000	489.3	RY2000	18.0	WY2000
2001	430.8	RY2001	16.5	WY2001
2002	522.0	WY2002	13.4	WY2002
2003	451.9	WY2003	15.8	WY2003
2004	451.8	WY2004	14.1	WY2004
2005	379.4	WY2005	26.2	WY2005
2006	368.8	WY2006	21.3	WY2006
2007	404.3	WY2007	12.1	WY2007
2008	443.3	WY2008	12.3	WY2008
2009	411.8	WY2009	19.7	WY2009
2010	324.1	WY2010	18.8	WY2010
2011	309.1	WY2011	19.9	WY2011
2012	340.6	WY2012	8.9	WY2012
2013	419.3	WY2013	8.9	WY2013
2014	442.3	WY2014	5.9	WY2014
Avg. 1991–2013	409.6		20.9	

Notes:

[1] 1991 – 2005 from Lombardo, T. (Lombardo 2006: 08/23/06, Exhibit A), based on MPWMD records ("WMCALC" spreadsheets for each year. 2006 – 2014 from J. Zischke. (Zischke 2014a: 09/15/14 and Zischke 2014b: 12/22/14.

[2] RY = Reporting Year = July 1 to June 30; WY = Water Year = October 1 through September 30

[3] Site precip. for 2009-2016 from CIMS for on-site Weather Station #210 (http://www.cmis.water.ca.gov); Site precip. for 1991-2008 estimated through linear regression using Monterey Weather Station data for 2008 – 2016 compated to site precip. and applying to earlier years. Monterey precip. for 1991 – Sept. 1994 and Oct. 2014 – Sept. 2016 from Hopkins Marine Station, Weather Station #5795: accessed via Web at http://www.marine.stanford.edu/HMSweb/climate.html: Monterey precip. for Oct. 94 – Sep. 2014 from NWS Climatological Station, Monterey, California 93940 (elevation 385'), accessed via web at: http://met.nps.edu/~Idm/renardwx.

[4] "Low use", "high use" and "very high use" years based on 25th, 75th, and 90th percentile, respectively. "Low use", "high use" and "very high use" years would have 87%, 110% and 118% of average irrigation amounts. Use years not intended to be predictive; only to represent a range of irrigation pumping. The RDEIR utilized "wet", "dry" and "very dry" categories to reflect the range. Review of the irrigation vs. precipitation data indicated a weak correlation. Other factors (temperature, evapotranspiration, timing of precipitation, etc.) appear more related than total precipitation. For these revisions to the RDEIR, it was decided to use "low", "high", and "very high" use scenarios to reflect the range instead.

Regulatory Setting

This section discusses the local, state, and federal policies and regulations that are relevant to the analysis of the public service and utility issues of the Proposed Project ~~and the 130-Unit Alternative~~ being considered by Monterey County.

Federal Policies and Regulations

The only federal regulation that affects public services and utilities relative to this Project ~~and the 130-Unit Alternative~~ is the federal Endangered Species Act (ESA) related to use of water in the Carmel River aquifer and federally protected species.

Federal Endangered Species Act

The federal ESA protects species, and their habitats, that have been identified by USFWS or the National Oceanic and Atmospheric Administration (NOAA) Fisheries (formerly known as the National Marine Fisheries Service) as threatened or endangered. *Endangered* refers to species, subspecies, or distinct population segments that are in danger of extinction through all or a significant portion of their range; *threatened* refers to species, subspecies, or distinct population segments that are likely to become endangered in the near future.

The ESA is administered by USFWS and NOAA Fisheries. In general, USFWS has authority over listed terrestrial plants on lands under federal jurisdiction and over listed wildlife species, regardless of whether publicly or privately owned. Relevant to this Project, USFWS has authority over the California red-legged frog (CRLF) in and adjacent to the Carmel River. In general, NOAA Fisheries is responsible for protection of ESA-listed marine species and anadromous fish, whereas other listed species are under USFWS jurisdiction. Relative to the Proposed Project, NOAA Fisheries has authority over federally listed South-Central Coast steelhead in the Carmel River.

Relative to water use, water right permits obtained from the State Water Resources Control Board (State Water Board) include a standard caveat that such rights do not supersede the authority of the federal ESA. Some parties have argued that the federal ESA can also supersede individual water rights, but this is controversial and the subject of extensive litigation. NOAA Fisheries has focused intensive attention on the Carmel River as it is viewed as a lynchpin to preserve the South-Central Coast steelhead gene pool.

Biological resource impacts are further addressed separately in Section 3.3, *Biological Resources*.

State Policies and Regulations

SB 610 and SB 221 Applicability

SB 610 and SB 221 (Water Code Section 10912 and Government Code Section 65867.5, respectively) are companion measures that support planning between water suppliers and local jurisdictions. SB 610 expands the existing requirement that lead agencies confer with affected public water agencies when preparing a negative declaration, mitigated negative declaration, or EIR for certain large projects. The water agency is required to provide the lead agency a detailed water supply assessment (WSA) of whether the water agency has sufficient current and future water supplies to service the proposed project and other expected future projects (Water Code Section 10910). The

WSA must be considered during the CEQA process. If there is insufficient water, the County must include that determination in its findings for the project (Water Code Section 10911).

A WSA (per Water Code Section 10912) is required for:

1. A proposed residential development of more than 500 units.
2. A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
3. A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
4. A proposed hotel or motel, or both, having more than 500 rooms.
5. A proposed industrial, manufacturing, or processing plant, or industrial park planned to have more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
6. A mixed-use project that includes one or more of the projects specified in this subdivision.
7. A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

~~The Proposed Project is only 281 units and thus does not exceed the trigger for a WSA. For the 130-Unit Alternative, the residential element~~ The Proposed Project does not trigger a WSA and the combined water demand of the 130 units and proposed water transfer (as shown below) is less than the equivalent of 500 units and thus a WSA is not triggered.

Senate Bill 50

Senate Bill 50 (SB 50), the Leroy F. Greene School Facilities Act of 1998, was signed into law on August 27, 1998. SB 50 allows governing boards of school districts to establish fees to offset costs associated with school facilities made necessary by new construction within their respective district boundaries. Payment of these fees is required prior to the issuance of building permits. Pursuant to Government Code Section 65995, the payment of these fees by a developer serves to fully mitigate all potential project impacts on school facilities from implementation of a project.

California Water Rights Overview

California administers its water rights under a bifurcated system that generally separates water rights associated with surface water (such as the water in streams, rivers, and lakes) from the water rights associated with groundwater (water found in its natural state below the surface of the ground). These two systems of water rights operate almost completely separately and demands on one system are generally not considered in determining whether adequate water supplies are available under the other system. One exception to the separation described above exists when the groundwater is deemed to be underflow of a surface water system. Under this exception, because the groundwater is in close hydrologic connectivity with the surface water, and withdrawals of the underflowing groundwater have a direct impact on the availability of the surface water for diversion, the underflowing groundwater is deemed to be surface water subject to surface water rights.

In 1995 the State Water Board, in evaluating the water rights of the California-American Water Company (Cal-Am) in the Carmel Valley, concluded that the groundwater in the Carmel Valley Aquifer (CVA) below and surrounding the Carmel River was not properly classified as groundwater, but rather was classified as underflow of the Carmel River and, thus, subject to the surface water rights system (State Water Board Order No. WR 95-10, [July 6, 1995]).

Therefore, any diversions of water from the CVA would need to be made pursuant to a surface water right.

While exceptions exist, the two primary types of surface water rights in California are the riparian right and the appropriative right. The riparian right is a right that exists by nature of a parcel sitting adjacent to a water course. Because of the proximity of the parcel to the water course, the law imputes to the parcel a right to divert water to the parcel. All owners of riparian parcels may divert the water necessary for use on their parcel, so long as the use is reasonable and beneficial. The right, however, is said to be "correlative" with all other riparian rights. This means that in a time of shortage, all riparian parcels must reduce their use of water on a pro rata basis. A parcel will generally lose its riparian status if the parcel becomes separated from the water course. Under this limitation, if a parcel is riparian and is subdivided into two parcels (one still being adjacent to the water course and the other now being separated from the water course by the other parcel), then unless explicitly stated otherwise in the documents affecting the subdivision, the parcel no longer adjacent to the water course will generally lose its riparian status.

The second primary type of surface water right in California is the appropriative right. The appropriative right is a right that does not rely on the proximity of the land to the water course. Prior to 1914, an appropriative right was established by the diversion of water for beneficial use on a parcel of land. Such diversion and use needed to be publicly manifested (either through open and notorious use or through the filing or posting of the right). Beginning in 1914, one could only establish an appropriative right by filing an application with the State and being granted a permit (and eventually a license) for the appropriative right. In contrast to the correlative nature of the riparian right, the appropriative right is based on a priority system. That is, in times of shortage, water must be allocated to the most senior holder of an appropriative right before being made available to holders of junior appropriative rights. For appropriative rights, the seniority or priority is determined by the date on which water was first put to beneficial use. Thus, for example, in a year of shortage, water would be available for a right established in 1920 before it would be available for a right established in 1921.

Carmel River: State Water Board Order WR95-10 and State Water Board Order WR2009-0060 (CDO)

In 1995, the State Water Board issued Order WR 95-10, which found that Cal-Am did not have sufficient water rights for its existing water diversions from the Carmel River. State Water Board found that Cal-Am had rights to only 3,376 AFY, and ordered Cal-Am to do the following: (1) immediately cease and desist from diverting any water from the Carmel River in excess of 14,106 AFY; (2) obtain appropriative permits for its diversions; (3) obtain water from other sources to make 1:1 reductions in unlawful diversions; and/or (4) contract with another agency having rights to divert and use water from the Carmel River. Cal-Am was also ordered to implement a water conservation plan to further reduce diversions to 11,990 AFY in 1996 and to 11,285 AFY in 1997 and subsequent years. State Water Board subsequently required Cal-Am to maintain a water conservation program with the goal of limiting annual diversions to 11,285 AFY until full

compliance with the order was achieved (State Water Resources Control Board 1995). A discretionary exemption to certain limitations of WR 95-10 related to the Project Applicant's entitlement is discussed in the section on the history of the entitlement below.

The State Water Board (in Decision D-1632, as amended in Order WR 98-04) has also determined that the Carmel River is a "fully appropriated stream" from the mouth of the river upstream to the Sleepy Hollow Gage (RM 17.2) between May 1 through December 31 and that State Water Board has permit authority in this reach. Certain existing diversions present prior to Decision D-1632 are allowed to apply for a permit to allow diversion between May and December; all other applicants must limit their diversions to between January and April.

In October 2009, the State Water Board issued Order WR2009-0060, a cease and desist order (CDO), which prescribes a series of significant cutbacks to Cal-Am's pumping from the Carmel River from 2010 through December 2016. Specifically, it includes a schedule for Cal-Am to reduce diversions from the Carmel River, bans new water service connections (with certain exceptions), bans increased use of water at existing service connections resulting from a change in zoning or use, establishes a requirement to build smaller near-term water supply projects, and requires reporting procedures. The CDO stated that if a new water supply cannot be built by the end of 2016, the CPUC, which regulates Cal-Am as a water utility, may require water rationing and/or a moratorium on new water permits for construction/remodels.

The CDO was amended on July 19, 2016 (Order WR 2016-0016) to grant Cal-Am a five-year extension. The extension includes a diversion limit of 8,310 AFY and also includes seven milestones over the next five years that must be met or Cal-Am will face a reduction to the diversion limit by 1,000 AFY per milestone.

New supplies of water for Cal-Am will need to be found in order to meet the current and future demand for potable water in the County. Current planning for a new water source for the County is focused on desalination. It is believed that a new desalination plant would provide the necessary supply to meet current demand but the extent to which it would supply water for future demand is undetermined. While preparatory work for several desalination projects, including drilling and operation of a test well for one project and environmental review for several competing proposals, is underway, none of the desalination projects have yet begun construction and their timing for completion is uncertain.

Water Rights Context for Rancho Cañada Golf Club and the Project

The Project Applicant has asserted they have both riparian and appropriative water rights and provided information to the County to support this assertion (Zischke 2014c, Zischke 2014d, Zischke 2014e, Rancho Canada de la Segunda, Inc. 1992, Zischke 2016)

The Applicant has presented substantial evidence of a riparian right through a chain of title (Zischke 2014 c) showing continuity of the project property as connected to the water source (Carmel River/Carmel Valley Alluvial Aquifer) and the County, as part of a separate project independently reviewed that chain of title (see discussion below). The County finds that the riparian rights are valid for use on the project site itself. However, the riparian rights could not be used to support a water transfer to other off-site properties.

An appropriative right requires approval by SWRCB. An Application for an appropriative right has been submitted to SWRCB in relation to the entire golf course property, of which the project site is

part. The Applicant's proposal to transfer water as part of the Project ~~130-unit Alternative~~ would require approval of the appropriative right by the SWRCB. The appropriative rights have not been "perfected" in that they have not been formally recognized by the State Water Resources Control Board or by a court of law. That does not mean they are not valid. In the end, water rights is a legal matter, not a CEQA matter, since CEQA is focused on physical impacts on the environment. The legal matters will be a matter for the Project Applicant and the SWRCB to resolve, but if the SWRCB does not approve the appropriative right, the Project ~~130-unit Alternative~~ would ultimately result in less water use due to elimination of the proposed water transfer.

Groundwater use on the property that is now used for the golf course reportedly started in approximately 1875 initially for dairy, irrigated pasture, and irrigated vegetable crops. Since 1969, the primary use has been irrigation of the two golf courses, with some use for supporting riverbank vegetation (Rancho Canada de la Segunda, Inc.1992). The golf club has a series of five on-site wells that it has used historically to draw water for irrigation from the lower Carmel Valley Alluvial Aquifer.

The Project Applicant provided the County with a chain of title (Zischke 2014c) showing that the property on which the site is located has apparently never been "severed" from the Carmel River, which is a key determination as to whether the project has riparian water rights. The County has previously conducted an independent review of chain of title as part of a prior project. In the fall of 2002, the Monterey County Resource Management Agency – Planning Department retained Downey Brand LLP (Sacramento, CA) to perform an independent review of the water rights of September Ranch Development Application (PLN050001) to determine whether valid riparian rights exist (Monterey County 2006; Downey Brand Seymour and Rohwer 2003). The analysis concluded that the riparian rights were not severed from the property formerly owned by the Hatton Family. The Rancho Cañada Village project site originates from the same chain of title of property formerly owned by the Hatton Family. The riparian rights have not been adjudicated, but as a result of the deed mentioned above between Hatton and Pacific Improvement Co., the riparian rights appurtenant to the Rancho Cañada property likely have a priority superior to Cal-Am's appropriative rights to the Carmel River and Carmel River underflow excluding Cal-Am's right to extract from the Carmel Valley Basin under its pre-1914 appropriative water rights.

The applicant has also asserted that project site has both pre-1914 and post-1914 appropriative water rights in addition to riparian rights. In 1992, Rancho Canada de la Segunda, Inc. the lessee and operator of the Rancho Canada Golf Course, applied for an appropriative right (per Application A03111) to the SWRCB in relation to irrigation use for the golf course in the amount of 700 AFY and ongoing diversion of up to 2.36 cubic feet per second (cfs) (Rancho Canada de la Segunda, Inc. 1992). The 700 AFY amount was later reduced in 2003 to 545 AFY by Rancho Canada de la Segunda, Inc. in order to qualify for a CEQA exemption (for the water right application – not for this project) (SWRCB 2011).

In 1995, SWRCB made determinations in Decision 1632 regarding potential appropriative rights being sought by MPWMD in relation to the prior Los Padres Dam project. The decision required SWRCB to examine how the potential appropriative rights being sought for that might project would affect existing water right and potential water rights claims of others concerning the Carmel River and the Carmel River Alluvial Aquifer. Table 13 of Decision 1632 recognizes that if the SWRCB were to approve an appropriative right permit for up to 700 AFY for the Rancho Cañada golf course property~~y~~ies, those appropriative rights would be senior to any appropriative rights that might have been issued to MPWMD in relation to the Los Padres Dam project. SWRCB did not recognize a right

per se to 700 AFY for the Rancho Cañada property in Decisions 1632. Instead, under Decision 1632, the SWRCB reserved 700 AFY for a potential future appropriation subject to SWRCB approval of an appropriative right.

In order for an appropriative water right to be valid, the State Water Board must follow the public notification, protest, and environmental review process specified in the California Water Code before issuing a permit for diversion and use of water. The State Water Board has determined the application is complete, and issued notice of the Application A30111. To date, a permit has not yet been issued for Application A30111; Application A30111 is still being processed and considered for the irrigation purposes applied for by Rancho Cañada de la Segunda.

Given that appropriative rights are subject to a seniority system, the exercise of such rights (if validated) could be limited in the event of water shortages and in favor of potential senior water rights. There are numerous challenges concerning the Carmel River and the Carmel River Alluvial Aquifer given the long-standing effects of groundwater pumping on instream flows supporting Central Coast steelhead, California red-legged frog, and other resources as well as the situation concerning Cal-Am. The SWRCB informed Rancho Canada de La Segunda, Inc. in 2011 that the appropriative rights that they applied for may be conditioned to require the maintenance of minimum daily instream flows for the Carmel River (SWRCB 2011).[1] The SWRCB noted that they believe that the proposed condition would resolve a number of public trust protests to Application A03111 and the application could be permitted with inclusion of the condition. Rancho Canada de la Segunda, Inc. has reportedly not responded to the 2011 SWRCB letter. If the proposed condition were ultimately required and instream flows cannot be maintained to meet this condition (due to cumulative ongoing pumping regardless of whether the project would worsen baseline conditions or not), this may mean that any appropriative use, including any water transferred to parcels not benefitted by a riparian right, may be subject to interruption. An interruptible water supply may be insufficient to allow MPWMD to issue water use permits.

Prior to any Cal-Am service to the Rancho Cañada Village project, the Project Applicant will seek a State Water Board determination to either confirm that water diverted under the project site properties rights are not subject to Ordering paragraphs 2 and 3.(a)(5) of WR 2009-0060, or to modify its order to allow same. Nonetheless, the Project would not necessarily rely solely on Cal-Am water service, but rather as set forth in Chapter 2, *Project Description*, the water will be supplied to the Project either through the Cal-Am distribution system, or through the creation of a separate community services district or mutual water company.

If the Rancho Cañada Village project is approved, then the Project Applicant intends to file a change petition with the State Water Board to change the proposed water us in Application A03111 from irrigation to residential. If the Project ~~130-Unit Alternative~~ is approved by the County, then State Water Board and MPWMD approvals would be obtained in order to implement both the proposed uses, including the proposed water transfer. This would entail a change petition to change the purpose and place of use for approval by the State Water Board (as noted above for the Proposed Project), and the Project Applicant would seek confirmation from the State Water Board that water diverted under Rancho Cañada's rights for new subscriber use does not conflict with WR 2009-0060. Also, a new ordinance by the MPWMD similar to the ordinance allowing transfer of water

[1] The instream flow requirements are based on National Marine Fisheries Service (NMFS, 2002) study of requirements for steelhead are as follows: December 1 to April 15 – minimum bypass of 40 cfs at the SR 1 bridge prior to lagoon opening and minimum bypass of 120 cfs at the SR1 bridge after lagoon opening; April 16 to May 31 – minimum bypass of 80 cfs at SR1 bridge; June 1 to November 30 – minimum bypass of 5 cfs at the SR1 bridge.

entitlements from the Pebble Beach Company to other users would need to be approved, which would entail a new rule for issuance of water use permits under this entitlement. (See for example MPWMD Rules 23.5 (Pebble Beach Water Entitlement) and 23.6 (Sand City Water Entitlement). The new MPWMD ordinance would dictate the restrictions for issuance of a water use permit to approved developments and existing lots of record.

Another water rights issue concerns the disposition of rights between the different owners of the golf course land. The entire golf course is approximately 270 acres. In 2016, the Trust for Public Land (TPL) purchased 140 acres (the Hatton parcel) of the golf course and has been pursuing acquisition of the 50 acre parcel of the golf course owned by the Lombardo Land Group II (although this second acquisition has not yet occurred). The remaining 80 acres are within the Rancho Canada Village project site, which is owned by the Lombardo Land Group I, which is working with the Project proponent. TPL intends that the land be used for park and open space purposes. TPL, in a letter to the County (TPL 2016) identified that there is a pre-existing contractual allocation of water rights between the different property owners and that 180 AFY is allocated to the developer of the Rancho Canada Village project for use at their discretion. TPL, the Rancho Canada project developer, and the Lombardo Land Group II entered into a forbearance agreement to temporarily constrain the exercise of the riparian water rights appurtenant to the remaining golf course property. This agreement will reportedly result in approximately 1,000 AFY (in total) over several years to be dedicated for Carmel River beneficial use. This agreement is temporary and would not constrain project use after the end of the forbearance agreement. The Lombardo Land Group II also sent a letter to the County (Lombardo Land Group II 2016) confirming the same details noted in the TPL letter that are described above. As such, in regards to the TPL acquisition and its potential second future acquisition of the Lombardo Land Group II property, there does not appear to be any legal restriction to the Project Applicant's use of up to 180 AFY for project purposes. The agreement between the different landowners does not in itself validate the legality or amount of a water right; it only resolves any dispute between the parties as to the division of the potential 545 AFY appropriative water right (pursuant to the SWRCB application) among the parties.

While this water rights discussion provides useful context, CEQA is solely concerned with determining the nature and extent of physical impacts on the environment that may result from a proposed project. With respect to water supply, CEQA is concerned with whether the proposed supply is physically available, and whether the use of the supply will result in any significant physical changes to environmental resources such as, a groundwater basin, water supply for other users, or biological resources.

There is one other circumstance in which a water right analysis may be relevant to a CEQA analysis, and that is if the exercise of a riparian or overlying right would displace existing water uses by virtue of the "seniority'' of the riparian or overlying right, so that the existing uses were required to obtain a water supply elsewhere. For this reason, and in order to respond to specific questions from the Court of Appeal in *Save Our Peninsula Committee v. Monterey County Bd. of Supervisors* (2001) 87 Cal. App. 4th 99, Monterey County has included this ~~a~~ water rights analysis (as described above) in this Second Revised ~~Recirculated~~ Draft EIR. This analysis concludes that: (i) substantial evidence indicates that the owners of Rancho Cañada Golf Course have apparent pre-1914 and riparian rights; (ii) any post-1914 appropriative rights will need SWRCB approval and (iii) under either riparian or appropriative water right system, the Project's use of water from the CVA will not injure any senior water right holders and will not displace junior water users because the Project ~~(or the 130-unit Alternative)~~ will result in a net reduction of water use (see impact analysis below). In this regard, it should be noted that Monterey County is not the final arbiter of whether any particular property has

riparian or overlying rights. Such a binding determination may only be a ruling of a court of competent jurisdiction and/or, with respect to appropriative rights, SWRCB.

California Integrated Waste Management Act

In 1989, Assembly Bill 939 (AB 939), known as the Integrated Waste Management Act, was passed into law. Enactment of AB 939 established the California Integrated Waste Management Board (CIWMB), and set forth aggressive solid waste diversion requirements. Under AB 939, every city and county in California is required to reduce the volume of waste sent to landfills by 50%, through recycling, reuse, composting, and other means. AB 939 requires counties to prepare a Countywide Integrated Waste Management Plan (CIWMP). An adequate CIWMP contains a summary plan that includes goals and objectives, a summary of waste management issues and problems identified in the incorporated and unincorporated areas of the county, a summary of waste management programs and infrastructure, existing and proposed solid waste facilities, and an overview of specific steps that will be taken to achieve the goals outlined in the components of the CIWMP.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. CPUC is responsible for assuring California utility customers have safe, reliable utility service at reasonable rates, protecting utility customers from fraud, and promoting the health of California's economy. CPUC establishes service standards and safety rules, and authorizes utility rate changes as well as enforcing the CEQA for utility construction. CPUC also regulates the relocation of power lines by public utilities under its jurisdiction, such as PG&E. CPUC works with other state and federal agencies in promoting water quality, environmental protection, and safety.

California Department Fish and Wildlife

As described in Section 3.3, *Biological Resources*, the California Department of Fish and Wildlife (CDFW) has authority under the California Endangered Species Act and the California Fish and Game code over certain protected resources. CDFW is also a trustee agency for California's natural heritage. The California Water Code requires that when considering the appropriation of water, the State Water Board consult with CDFW on the amounts of water needed for fish and wildlife. CDFW reviews applications to appropriate new sources of water, to change existing uses of water, and to transfer water. Therefore, CDFW may file protests or complaints to avoid adverse impacts on public trust resources (California Department of Fish and Wildlife 2014). CDFW has been intensively involved in matters concerning fish and other riparian resources associated with the Carmel River.

Local Policies and Regulations

Current County Plans and Policies

2010 Monterey County General Plan

The 2010 General Plan contains the following goals and policies related to public services and utilities that are relevant to the Proposed Project ~~and the 130-Unit Alternative~~.

Public Services Element

GOAL PS-1. Ensure that adequate public facilities services (APFS) and the infrastructure to support new development are provided over the life of this plan.

Policy PS-1.1. Adequate Public Facilities and Services (APFS) requirements shall:

a) Ensure that APFS needed to support new development are available to meet or exceed the level of service of "Infrastructure and Service Standards" (Table PS-1) concurrent with the impacts of such development.

b) Encourage development in infill areas where APFS are available, while acknowledging the rights of property owners to economically viable use of existing legal lots of record throughout the county.

Policy PS-1.3. No discretionary application for new development shall be approved unless the County finds that APFS for that use exist or will be provided concurrent with the development.

Policy PS-1.4. New development shall pay its fair share of the cost of providing APFS to serve the development.

Policy PS-1.6. Only those developments that have or can provide adequate public services and facilities shall be approved.

Goal PS-3. Ensure that New Development is assured a Long-Term Sustainable Water Supply

Policy PS-3.1 Except as specifically set forth below, new development for which a discretionary permit is required, and that will use or require the use of water, shall be prohibited without proof, based on specific findings and supported by evidence, that there is a long-term, sustainable water supply, both in quality and quantity to serve the development. [Exceptions listed in policy not included herein].

Policy PS-3.2. Specific criteria for proof of a Long Term Sustainable Water Supply and an Adequate Water Supply System for new development requiring a discretionary permit, including but not limited to residential or commercial subdivisions, shall be developed by ordinance with the advice of the General Manager of the Water Resources Agency and the Director of the Environmental Health Bureau. A determination of a Long Term Sustainable Water Supply shall be made upon the advice of the General Manager of the Water Resources Agency. The following factors shall be used in developing the criteria for proof of a long term sustainable water supply and an adequate water supply system:

a. Water quality;

b. Authorized production capacity of a facility operating pursuant to a permit from a regulatory agency, production capability, and any adverse effect on the economic extraction of water or other effect on wells in the immediate vicinity, including recovery rates;

c. Technical, managerial, and financial capability of the water purveyor or water system operator;

d. The source of the water supply and the nature of the right(s) to water from the source;

e. Cumulative impacts of existing and projected future demand for water from the source, and the ability to reverse trends contributing to an overdraft condition or otherwise affecting supply; and

f. Effects of additional extraction or diversion of water on the environment including on in-stream flows necessary to support riparian vegetation, wetlands, fish or other aquatic life, and the migration potential for steelhead, for the purpose of minimizing impacts on the environment and to those resources and species.

g. Completion and operation of new projects, or implementation of best practices, to renew or sustain aquifer or basin functions.

The hauling of water shall not be a factor nor a criterion for the proof of a long term sustainable water supply.

PS-3.9. A tentative subdivision map and/or vesting tentative subdivision map application for either a standard or minor subdivision shall not be approved until the applicant provides evidence of a long-term sustainable water supply in terms of yield and quality for all lots that are to be created through subdivision.

Goal PS-4. Ensure adequate treatment and disposal of wastewater.

Policy PS-4.5. New development proposed in the service area of existing wastewater collection, treatment, and disposal facilities shall seek service from those facilities unless it is clearly demonstrated that the connection to the existing facility is not feasible.

Goal PS-5. Maximize the amount of solid waste that is diverted from local landfills through recycling, composting and source reduction.

Policy PS-5.3. Programs to facilitate recycling/diversion of waste materials at new construction sites, demolition projects, and remodeling projects shall be implemented.

Policy PS-5.4. The maximum use of solid waste source reduction, reuse, recycling, composting, and environmentally-safe transformation of wastes, consistent with the protection of the public's health and safety, shall be promoted.

Policy PS-5.5. The County shall promote waste diversion and recycling and waste energy recovery as follows:

a) The County shall adopt a 75% waste diversion goal.

b) The County shall support the extension of the types of recycling services offered (e.g., to include food and green waste recycling).

c) The County shall support waste conversion and methane recovery in local landfills to generate electricity.

d) The County shall support and require the installation of anaerobic digesters or equivalent technology for wastewater treatment facilities.

Policy PS-5.6. The County will review its Solid Waste Management Plan on a five (5) year basis and institute policies and programs as necessary to exceed the wastestream reduction requirements of the California Integrated Waste Management Act. The County will adopt requirements for wineries to undertake individual or joint composting programs to reduce the volume of their wastestream. Specific mitigation measures to reduce the impacts of future solid waste facilities are infeasible because the characteristics of those future facilities are unknown.

Goal PS-6. Ensure the disposal of solid waste in a safe and efficient manner.

Policy PS-6.5. New development projects shall provide for handling of waste in a manner that conforms to State-mandated diversion and recycling goals. Site development plans shall include adequate solid waste recycling collection areas.

Policy PS-7.8. New development shall assist in land acquisition and financial support for school facilities, as required by state law. Where school districts have adopted appropriate resolutions, written confirmation from the school district that applicable fees and contributions have been paid or are ensured to the satisfaction of the district shall be required prior to the issuance of building permits. The County shall, as a condition of approval of development projects, require the project applicant to pay the fees required by statute (Government Code section 65996, as it may be periodically amended) to mitigate the impact of the proposed development on school facilities.

Safety Element

Policy S-4.11. The County shall require all new development to be provided with automatic fire protection systems (such as fire breaks, fire-retardant building materials, automatic fire sprinkler systems, and/or water storage tanks) approved by the fire jurisdiction.

Policy S-4.13. The County shall require all new development to have adequate water available for fire suppression. The water system shall comply with Monterey County Code Chapter 18.56, NFPA Standard 1142, or other nationally recognized standard. The fire authority having jurisdiction, the County Departments of Planning and Building Services, and all other regulatory agencies shall determine the adequacy and location of water supply and/or storage to be provided.

Policy S-4.14. Water systems constructed, extended, or modified to serve a new land use or a change in land use or an intensification of land use, shall be designed to meet peak daily demand and recommended fire flow.

Policy S-4.15. All new development shall be required to annex into the appropriate fire district. Where no fire district exists, project applicants shall provide verification from the most appropriate local fire authority of the fire protection services that exist. Project approvals shall require a condition for a deed restriction notifying the property owner of the level of service available and acceptance of associated risks to life and property. Where annexations are mandated, the County shall negotiate a tax share agreement with the affected fire protection district.

Policy S-4.18. All access roads and driveways shall be maintained by the responsible parties to ensure the fire department safe and expedient passage at all times.

Policy S-4.19. Gates on emergency access roadways shall be constructed in accordance with Monterey County Code Chapter 18.56 and the California Fire Code as amended.

Policy S-4.20. Reduce fire hazard risks to an acceptable level by regulating the type, density, location, and/or design and construction of development.

Policy S-4.21. All permits for residential, commercial, and industrial structural development (not including accessory uses) shall incorporate requirements of the fire authority having jurisdiction.

Policy S-4.22. Every building, structure, and/or development shall be constructed to meet the minimum requirements specified in the current adopted state building code, state fire code, Monterey County Code Chapter 18.56, and other nationally recognized standards.

Policy S-4.31. A zone that can inhibit the spread of wildland fire shall be required of new development in fire hazard areas. Such zones shall consider irrigated greenbelts, streets, and/or Fuel Modification Zones in addition to other suitable methods that may be used to protect

development. The County shall not preclude or discourage a landowner from modifying fuel within the Fuel Modification Zone, or accept any open space easement or other easement over land within a Fuel Modification Zone that would have that effect.

Policy S-4.32. Property owners in high, very high, and extreme fire hazard areas shall prepare an overall Fuel Modification Zone plan in conjunction with permits for new structures, subject to approval and to be performed in conjunction with the CDFFP and/or other fire protection agencies in compliance with State Law.

Policy S-4.33. Where new developments are required to provide for fuel modification zones, the cost of such construction shall be borne by the developer. Future maintenance of such fuel modification zones shall be in accordance with the fire defense standards adopted by the State of California. Homeowners shall be responsible for said maintenance.

Policy S-5.9. Emergency roadway connections may be developed where distance to through streets is excessive, or where a second means of emergency ingress or egress is critical. New residential development of three units or more shall provide more than one access route for emergency response and evacuation unless exempted by the Fire jurisdiction. Such protection requirements shall be consistent with adopted fire safety standards.

Policy S-5.17. Emergency Response Routes and Street Connectivity Plans shall be required for Community Areas and Rural Centers, and for any development producing traffic at an equivalent or greater level to five or more lots/units. Said Plan shall include:

a) Roadway connectivity that provides multiple routes for emergency response vehicles.

b) Primary and secondary response routes in Community Areas and Rural Centers.

c) Secondary response routes, which may include existing roads or new roads required as part of development proposals.

The County shall review said plans in coordination with the appropriate Fire District.

Policy S-6.7. Public safety measures, including sequential house numbering, non-repetitive street naming, standardized lettering of house numbers in subdivision design, lighting, and park designs, that allow for adequate view from streets shall be included in the design and construction of new development.

2013 Carmel Valley Master Plan

The 2013 CVMP was enacted as part of the County 2010 General Plan and is intended to guide future land use within the 2013 CVMP plan area boundary. Specifically the plan area boundary is defined as "the primary watershed of the Carmel River from SR 1 to just east of Carmel Valley Village, except for the upper reaches of Garzas Creek and Robinson Canyon." (Monterey County 2010) Key 2013 CVMP public services and utilities policies and regulations relevant to the Proposed Project ~~and the 130-Unit Alternative~~ are noted below.

Conservation/Open Space

CV-3.14: Wherever possible a network of shortcut trails and bike paths should interconnect neighborhoods, developments, and roads. These should be closed to motor vehicles and their intent is to facilitate movement within the Valley without the use of automobiles.

CV-3.19: As development of bike paths and a coordinated, area-wide trails system are essential for circulation, safety, and recreation in the Carmel Valley Planning Area, dedication of trail easements may be required as a condition of development approval, notwithstanding Policy OS-1.10(b).

Safety

CV-4.3: In addition to required on-site improvements for development projects, a fee shall be imposed to help finance the improvement and maintenance of the drainage facilities identified in the Drainage Design Manual for Carmel Valley.

CV-4.4: The County shall require emergency road connections as necessary to provide controlled emergency access as determined by appropriate emergency service agencies (Fire Department, OES). The County shall coordinate with the emergency service agencies to periodically update the list of such connections.

Public Services

CV-5.3: Development shall incorporate designs with water reclamation, conservation, and new source production in order to:

a. maintain the ecological and economic environment;
b. maintain the rural character; and
c. create additional water for the area where possible including, but not limited to, on-site stormwater retention and infiltration basins.

CV-5.4: The County shall establish regulations for Carmel Valley that limit development to vacant lots of record and already approved projects, unless additional supplies are identified. Reclaimed water may be used as an additional water source to replace domestic water supply in landscape irrigation and other approved uses provided the project shows conclusively that it would not create any adverse environmental impacts such as groundwater degradation.

Prior County Plans and Policies

As stated in Chapter 1, *Introduction*, discussion pertaining to the 1982 General Plan is provided for informational purposes only.

1982 Monterey County General Plan

The 1982 *Monterey County General Plan* (1982 General Plan) was adopted by the Board of Supervisors in 1982 and, when in effect, was periodically amended until it was superseded by the adoption of the County's 2010 General Plan. The 1982 General Plan provides general direction for future growth throughout the unincorporated areas of the County. The 1982 General Plan's objective is to promote balanced growth throughout the County in a manner that protects the County's natural resources.

General Land Use

Policy 26.1.4: The County shall designate growth areas only where there is provision for an adequate level of services and facilities such as water, sewage, fire and police protection, transportation, and schools. Phasing of development shall be required as necessary in growth areas in order to provide a basis for long-range services and facilities planning.

Policy 26.1.4.3: A standard tentative subdivision map and/or vesting tentative and/or Preliminary Project Review Subdivision map application for either a standard or minor subdivision shall not be approved until

- the applicant provides evidence of assured long-term water supply in terms of yield and quality for all lots which are to be created through subdivision. A recommendation on the

water supply shall be made to the decision making body by the County's Health Officer and the General Manager of the Water Resources Agency, or their respective designees

- the applicant provides proof that the water supply to serve the lots meets both the water quality and quantity standards as set forth in Title 22 of the California Code of Regulations and Chapters 15.04 and 15.08 of the Monterey County Code subject to review and recommendation by the County's Health Officer to the decision making body.

Residential

Goal 27: to encourage various types of residential development that are accessible to major employment centers and at locations and densities which allow for the provision of adequate public services and facilities.

Open Space

Policy 34.1.3: Wherever possible, open space lands provided as part of a development project should be integrated into an areawide open space network.

1986 Carmel Valley Master Plan

The 1986 *Carmel Valley Master Plan* (1986 CVMP) is a component of the 1982 General Plan. The major function of the 1986 CVMP is to guide the future development of the valley using goals and policies that reflect an understanding of the physical, cultural and environmental setting of the area.

Environmental Constraints

17.4.1.1 (CV): The potential for wildland fires in the valley must be recognized in development proposals and adequate mitigation measures incorporated in the designs.

17.4.1.2 (CV): All proposed developments, including existing lots of record shall be evaluated by the appropriate fire district prior to the issuance of building permits. The recommendations of the fire district shall be given great weight and should, except for good cause shown, ordinarily be followed.

17.4.15 (CV): In high and very high fire hazard areas, as defined by the California Department of Forestry and shown on California Department of Forestry Fire Hazard Maps, roof construction (except partial repairs) of fire retardant materials, such as tile, asphalt or asbestos combination, or equivalent, shall be required as per Section 3203 (e) (excluding 11) of the Uniform Building Code, or as approved by the fire district. Exterior walls constructed of fire resistant materials are recommended but not required. Vegetation removal will not be allowed as a means of removing high or very high fire hazard designation from an entire parcel.

General Land Use

26.1.22 (CV): Developed areas should be evaluated in light of resource constraints especially the water supply constraint addressed by policy 54.1.7 (CV) and the character of each area. No further development in such areas shall be considered until a need is demonstrated through public hearings.

Public Services and Facilities

51.2.11 (CV): Active neighborhood recreation areas should be located at or within close access to the three development areas.

- All valley residents should have nearby access to hiking and riding trails and small neighborhood open areas or parks.

- Even though the Master Plan area contains two large regional parks, there should be constant consideration of the acquisition of additional areas. Land on the south side of the valley near the village is highly suitable for a mixture of active and passive uses, and should be seriously considered in conjunction with growth around the village area.

54.1.5 (CV): Development shall be limited to that which can be safely accommodated by on-site sewage disposal, or in the case of the Lower Valley, by the Carmel Sanitary District. Consideration may be given to package plants operated under supervision of a county service district.

54.1.6 (CV): When projects for low/moderate income owners or renters are proposed at densities exceeding those recommended by the wastewater application rates of the Wastewater Study, but not exceeding 40 grams/acre/day of total nitrogen, a detailed wastewater study acceptable to the Director of Environmental Health shall be required to determine whether the recommendations of the Wastewater Study should be relaxed or upheld, and the policies of the Basin Plan, Monterey County Code (Septic System Ordinance), and other applicable health requirements will be met.

Monterey Peninsula Water Management District

The MPWMD manages the production of water from two sources: surface water from the Carmel River stored in San Clemente and Los Padres Reservoirs; and ground water pumped from municipal and private wells in Carmel Valley and the Seaside Coastal Area.

The MPWMD's legislated function is as follows:

- Augment the water supply through integrated management of ground and surface water resources
- Promote water conservation
- Promote water reuse and reclamation of storm and wastewater
- Foster the scenic values, environmental quality, native vegetation, fish and wildlife, and recreation on the Monterey Peninsula and in the Carmel River basin.

All Water Distribution Systems (WDS) within the District, ranging from large systems such as Cal-Am in the EIR) to small systems such as one well serving a single-family parcel, are regulated by MPWMD. The MPWMD requires a WDS permit to create or amend a WDS, and also requires a Water Permit to serve connections within a system, such as new homes to be constructed in a subdivision. A valid permit from MPWMD is needed before a Monterey County building permit is issued. All wells within the District boundary are regulated by MPWMD.

Issuance of a permit to create or amend a WDS requires Findings of Approval supported by written evidence, compliance with minimum standards of approval, and mandatory Conditions of Approval, pursuant to MPWMD Rules 22-B, C and D. An applicant must show that the source of supply can reliably meet the water needs of the project, would not adversely impact existing systems, and would not adversely impact the environment.

Wells within the Cannel Valley Alluvial Aquifer (CVAA) are subject to more stringent review due to federal and state Endangered Species Act issues. Wells within the CVAA must also demonstrate adequate water rights as the CVAA is within the jurisdiction of the State Water Board.

Monterey County Department of Environmental Health

The mission of the Monterey County Department of Environmental Health (MCDEH) is to prevent environmental hazards from occurring and to protect the public and resources from environmental hazards when they occur. The agency is responsible for water well permits for construction, destruction and modification as well as to inspect placement of sanitary seal. They also conduct inspections, issue permits and monitor chemical and bacteriological water quality for small public water systems with less than 200 connections.

Impact Analysis

Methods of Analysis

The impact analysis included review of the following documents and determination of impacts on public services and utilities related to the project site: 2010 General Plan; information provided by Project Applicant; service providers' web sites; information supplied by service providers; and other research sources.

Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, 2010 Monterey County General Plan plans and policies, 2013 CVMP plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

A. Fire and Police Services

- Result in substantial increased demands to maintain acceptable service ratios, response times, or other performance objectives related to fire or police services, which would require new or expanded facilities to maintain acceptable provision of service or result in inadequate emergency access.

B. Emergency Access

- Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

C. Wildland Fire Hazard

- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

D. Water Demand

- Result in a water demand that exceeds water supplies available to serve the project from existing entitlements and resources, and/or require new or expanded supplies.

E. Infrastructure Capacities

- Result in water demand that exceeds capacity of the water supply infrastructure system; or would require substantial expansion of water supply, treatment, or distribution facilities, the construction of which could cause significant environmental effects.

F. Wastewater Treatment Capacity

- Result in wastewater flows that exceed sewer line or treatment plant capacity, or that contribute substantial increases to flows in existing sewer lines that exceed capacity.

G. Utility Disruption during Construction

- Result in prolonged or recurring disruption in the provision of services and utilities, including power, water, and sewer service to residences, businesses, or public service providers during construction of a project.

H. School Enrollments

- Result in increased student enrollments that would cause school capacities to be exceeded, or that would substantially increase existing overcrowding in schools, resulting in a need for new facilities.

I. Recreational Demand

- Increase the use of existing neighborhood and regional parks or other recreation facilities such that substantial physical deterioration of the facility would occur or be accelerated or that new recreational facilities would need to be constructed and would result in secondary physical impacts to the environment.

J. Open Space

- Increase the use of existing open space such that substantial physical deterioration of the facility would occur or such that quality of the facility would diminish.

K. Landfill Capacity

- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.

Impacts and Mitigation Measures

A. Fire and Police Services

Impact PSU-1: Increased Demand for Fire and First-Responder Emergency Medical Services (less than significant)

~~**Proposed Project**~~

The Proposed Project would increase demand for fire and first-responder emergency medical services. As discussed in the Fire Protection section above, the CFPD's Insurance Service Office Class 3 rating is expected to be reduced due to recent increase in personnel and current level of response.

Therefore, the Proposed Project is not anticipated to change the service rations and response time in the project area. The extension of Rio Road would provide a direct access route to the project area and would minimize fire and first-responder emergency services response times to the area. The automatic aid agreement with Carmel–by-the-Sea, Pebble Beach Fire Station, and the Carmel Valley Fire Protection District also improve the ability to provide fire protection and first-responder medical emergency services to the project area.

The project design must comply with all applicable building code standards as well as any additional County, CVMP, and local fire district policies related to fire and emergency response. Implementation of these building code standards would ensure that impacts would be *less than significant.* No mitigation is required.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative, including Lot 130, would increase demand for fire and first-responder emergency medical services. However, the increased demand would be less than that of the Proposed Project due the reduction in proposed housing units from 281 to 130 in the 130-Unit Alternative.~~

~~As discussed in the *Fire Protection* section above, the CFPD's Insurance Service Office Class 3 rating is expected to be reduced due to recent increase in personnel and current level of response. The extension of Rio Road would provide a direct access route to the project area and would minimize fire and first-responder emergency services response times to the area. The automatic aid agreement with the City of Carmel, Pebble Beach Fire Station, and the Carmel Valley Fire Protection District also improve the ability to provide fire protection and first-responder medical emergency services to the project area.~~

~~As with the Proposed Project, the 130-Unit Alternative, including Lot 130, project design must comply with all applicable building code standards as well as any additional County, CVMP, and local fire district policies related to fire and emergency response. Therefore, the 130-Unit Alternative potential impact on fire protection and first responder services would be *less than significant*. No mitigation is required.~~

Impact PSU-2: Increased Demand for Police Services (less than significant)

~~**Proposed Project**~~

The Proposed Project would increase demand for police services by increasing the number of permanent residents in Carmel Valley, an unincorporated area of Monterey County, by adding 130 new residential units and approximately 393 new residents.[2] ~~The analysis assumes a total population of 849 persons at buildout of the Proposed Project.~~

The Monterey County Sheriff's Office requires each project applicant to satisfactorily comply with the Monterey County Public Safety and Security Guidelines, as well as with specific guidelines tailored to the project for both private and commercial development. Compliance with these guidelines would improve public safety and security of the Proposed Project.

The Monterey County Sheriff's Office strives to maintain a service standard of one deputy per 1,000 persons. The 2013/2014 ratio of deputies per residents was 1:1,320 (Galletti pers. comm.). This

[2] Calculation of new residents based on an average household size of 3.02 residents per household.

coupled with the increasing population of the area may lead to delayed response times for service calls (Galletti pers. comm.).

However, under CEQA, impacts related to police service only occur if the demand for police services would result in construction of new public facilities that would result in secondary physical impacts on the environment. This impact would be *less than significant*. No mitigation is required.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative would increase the population in Carmel Valley. At buildout, the 130-Unit Alternative would increase the population less than the Proposed Project due the reduction in proposed housing units from 281 to 130. Under CEQA, impacts related to police service only occurs if the demand for police services would result in construction of new public facilities that would result in secondary physical impacts on the environment. This impact would be *less than significant*.~~ ~~No mitigation is required.~~

B. Emergency Access

Impact PSU-3: Interference with Emergency Access Routes or Adopted Emergency Access Plans (less than significant)

~~**Proposed Project**~~

The area is currently a golf course and does not provide emergency access routes or trails for CFPD or the Sheriff's Department. Furthermore, the future residents of the proposed development would have 2 separate access/exit routes available in the event of an emergency.

The most common event requiring evacuation in the extended project area is the periodical flooding of the Carmel River. The residential site would be located above the 100-year flood zone, and thus would be unaffected during evacuations of this nature. In addition, risk of fire is low (see Impact PSU-4 below) in the area surrounding the project site. However, if a 500-year flood event should occur, the Carmel Valley Road, Rio Road west, and Rio Road east exits would suffice to serve area residents during evacuation. Thus, the Proposed Project would have a *less-than-significant* impact on adopted emergency response or evacuation plans. No mitigation is required.

~~**130-Unit Alternative**~~

~~The 130-Unit Alternative site is currently a golf course and does not provide emergency access routes or trails for CFPD or the Sheriff's Department. Furthermore, the future residents of the proposed development on the western golf course would have two separate access/exit routes available in the event of an emergency. The portion of Rio Road west of the project site would be used for emergency, bicycle, and pedestrian access only. Rio Road would be extended from the east southwest across the site to meet up with the emergency access section of Rio Road extending to the west. Access to Lot 130 would be from Carmel Valley Road. The existing access to this site would not change.~~

~~Similar to the Proposed Project, the most common event requiring evacuation in the extended project area is the periodical flooding of the Carmel River. The main residential site and Lot 130, would be located above the 100-year flood zone, and thus would be unaffected during evacuations of this nature. In addition, risk of fire is low in the area surrounding the 130-Unit Alternative (see Impact PSU-4, below). However, if a 500-year flood event should occur, the Carmel Valley Road, Rio~~

~~Road west, and Rio Road east exits would suffice to serve area residents during evacuation. Thus, the 130-Unit Alternative would have a *less-than-significant* impact on adopted emergency response or evacuation plans. No mitigation is required.~~

C. Wildland Fire Hazard

Impact PSU-4: Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Wildland Fires (less than significant)

~~Proposed Project~~

The Proposed Project would be situated in an area that is currently developed as a golf course. The general area encompassing the project site is not located in a Very High Fire Hazard Severity Zone according to the California Department of Forestry and Fire Protection (California Department of Forestry and Fire Protection 2007). Development exists to the west and east of the parcel and a major road bounds the northern portion. To the south runs the Carmel River and beyond that exists the Palo Corona Ranch open space. The MPRPD and Big Sur Land Trust acquired the open space area in 2004 and portions of it are developed for public recreation. In addition, the habitat preserve and nature trails incorporated into the project design would provide a buffer zone along the north bank of the Carmel River separating the housing development from the open space.

While the Proposed Project would be located across the river from an open space area, it would not significantly increase the risk of loss, injury, or death involving people or structures resulting from wildfires. This impact would be *less than significant.* No mitigation is required.

~~130-Unit Alternative~~

~~Similarly to the Proposed Project, the 130-Unit Alternative, would be situated in an area that is currently developed as a golf course. Lot 130 is developed with existing maintenance facility structures. The general area encompassing the 130-Unit Alternative site, including Lot 130, is not located in a Very High Fire Hazard Severity Zone according to the California Department of Forestry and Fire Protection (California Department of Forestry and Fire Protection 2007). Development exists to the west and east of the 130-Unit Alternative site and a major road bounds the northern portion. To the south runs the Carmel River and beyond that exists the Palo Corona Ranch open space. The MPRPD and Big Sur Land Trust acquired the open space area in 2004 and portions of it are developed for public recreation. In addition, the habitat preserve and nature trails incorporated into the project design would provide a buffer zone along the north bank of the Carmel River separating the housing development from the open space.~~

~~While the 130-Unit Alternative would be located across the river from an open space area, it would not significantly increase the risk of loss, injury, or death involving people or structures resulting from wildfires. This impact would be *less than significant.* No mitigation is required.~~

D. Water Demand

Impact PSU-5: Increased Water Supply Demand (less than significant with mitigation)

Baseline for Impact Analysis

In order to assess water supply impacts, an existing use baseline must be established. The existing golf courses use between 309 and 522 AFY for irrigation (based on 1991 to 2014 data shown in **Table 3.10-3**), with an average annual use of 410 AFY. The Project will result in the elimination of one of the two Rancho Cañada golf courses and the baseline irrigation use is considered to be 50% of the current golf course irrigation use. Most irrigation occurs during the drier parts of the year (April through October) and thus a large portion of the irrigation on the golf course is consumed by the golf turf through evaporation and transpiration (referred to as evapotranspiration). Based on the recommendation of MPWMD, the baseline for this Second Revised Draft EIR ~~RDEIR~~ is the consumptive use of water, as opposed to the total amount of pumping. Consumptive use of water is defined as the water that is used under baseline or project conditions and is not returned to the Carmel Valley Alluvial Aquifer. For irrigated areas, consumptive use is defined as evapotranspiration.

Using data from the on-site CIMIS weather station on precipitation and reference evapotranspiration, irrigation data from the golf course, data on crop plant factors for turfgrass, and data on site soils, a soil-water balance analysis was completed for the 1991 – 2014 period in order to estimate evapotranspiration (see calculations in Appendix H). The identified average turf evapotranspiration factors for different types of years was applied to the irrigation pumping data to derive the baseline consumptive use as shown in **Table 3.10-4**.

Table 3.10-4. Baseline Consumptive Water Use for the Rancho Cañada Village Project (acre-feet)

	Average Year	Low-Use (2) (84% avg.)	High-Use (2) (110% avg.)	Very High-Use (2) (118% avg.)
Irrigation Pumping (1)	204.8	177.7	225.9	241.1
Consumptive Use (3)	145.1	113.4	170.8	195.0

Notes:

Data presented in Appendix H

1. Baseline irrigation pumping use is assumed to be the water use of one of the two golf courses on-site because with the Project, only one golf course will remain in operation.

2. Assumptions for "low-use", "high use" and "very high use" year irrigation pumping in Table 3.10-3.

3. Consumptive use determined through a soil-water balance analysis to estimate evapotranspiration. Evapotranspiration for different type of years used same percentiles as used for irrigation pumping in Table 3.10-3 See Appendix B.

Proposed Project

ICF developed water demand estimates for different types of housing units using MPWMD fixture unit methodology (**Table 3.10-5**). MPWMD mandatory water efficiency requirements required by MPWMD regulation for high efficiency toilets and washing machines were assumed. ICF then prepared a demand estimate using these fixture estimates and estimates of the Maximum Applied Water Allowable (MAWA) for common landscape areas (**Table 3.10-6**). ICF also estimated evapotranspiration for the landscaping water demand (both within residential lots and common landscaped areas) using the same factors used to determine baseline consumption use. These

estimates were then combined to derive an estimate of project consumptive use. Consumptive use includes residential indoor use (which is discharged to the CAWD treatment plant and not returned to the Carmel Valley Alluvial Aquifer) and evapotranspiration in landscaped areas.

The average project consumptive use is estimated as 112 ~~88~~ AFY including treatment and system transmission losses and 60 AFY proposed for transfer to other Cal-Am uses. The ICF estimate was used for the EIR analysis. Accounting for climatic[3] variation, project use is estimated to range from 106 to 120 ~~82 to 99~~ AFY (**Table 3.10-5**).

Based on these estimates (excluding the instream dedication), there would be a net reduction in water use ranging from 7 to 75 AFY, with an average of 33 AFY (**Table 3.10-7**). This estimate is based on the assumptions for demand, treatment, and system losses discussed in this Chapter and in Appendix H. Further, the same percentage adjustments were made to the baseline use case for golf course irrigation for low use, high use, and very high use years as for the Project residential demand.

Given the existing impact of Cal-Am withdrawals on the Carmel River, this net reduction is a beneficial impact for both water supply and for biological resources in the river, such as steelhead.

~~Based on these estimates, there would be a net reduction in water use ranging from 31 to 96 AFY, with an average of 57 AFY (**Table 3.10-7**).~~

The water source for the Project would be the on-site wells using water rights held by the property, as described above, or a connection to Cal-Am facilitated by dedication of an appropriate amount of the Project Applicant's water right to Cal-Am (see discussion of water rights in an earlier section of this Chapter).

[3] The variation by climatic conditions for "low use", "high use" and "very high use" conditions was estimated by using the same factors as noted above in **Table 3.10-3**, but the variation factor was only applied to landscape uses, as indoor uses were assumed to not vary due to climatic conditions.

Table 3.10-5. Water Demand by Housing Type

		Condo		Townhouse		SFR- Small		SFR-Medium		SFR-Large	
Type of Fixture	FU Value	No.	FU Count	No.	FU Count	No.	FU Count	No.	FU Count	No.	FU Count
Wash Basins (lavatory sink) each	1.0	2	2.0	2	2.0	3	3.0	3	3.0	4	4.0
Two washbasins in Master Bathroom	1.0									1	1.0
Toilet (ULF, 1.6 gpf)	1.8										
Toilet (HET, 1.3 gpf)	1.3	2	2.6	2	2.6	3	3.9	3	3.9	4	5.2
Toilet (UHET, 0.8 gpf)	0.8										
Masterbath (Tub, sep. shower)	3.0		0.0		0.0		0.0	1	3.0	1	3.0
Large bathtub (w/ showerhead)	3.0									1	
Standard bathtub (w/ showerhead)	2.0	1	2.0	2	4.0	2	4.0	2	4.0	2	4.0
Shower, separate stall	2.0		0.0		0.0		0.0		0.0		0.0
Kitchen sink and dishwasher	2.0	1	2.0	1	2.0	1	2.0	1	2.0	2	4.0
Kitchen sink and HE dishwasher	1.5										
Laundry/utility sink	2.0		0.0		0.0	1	2.0	1	2.0	2	4.0
Washing Machine	2.0										
Washing Machine (HEW, WF 5 or less)	1.0	1	1.0	1	1.0	1	1.0	1	1.0	1	1.0
Bidet	2.0		0.0		0.0		0.0		0.0		0.0
Bar sink	1.0		0.0		0.0		0.0		0.0		0.0
Entertainment sink	1.0									1	1.0
Vegetable sink	1.0		0.0		0.0		0.0		0.0		0.0
Subtotal Interior Fixture Units			9.6		11.6		15.9		18.9		27.2
Landscaping (Interior FUs X 0.5)			4.8		5.8		8.0		9.5		13.6
Swimming Pools (per 100 SF)	1.0		0.0		0.0		0.0	3	3.0	4.5	4.5
Fixture Unit Count			*14.4*		*17.4*		*23.9*		*31.4*		*45.3*
Acre-Feet/Unit (0.01 AF/FU)			**0.14**		**0.17**		**0.24**		**0.31**		**0.45**
Prepared by ICF using MPWMD Fixture Unit Methodology. All Assumptions about number of fixtures by ICF											

Table 3.10-6. Rancho Cañada Village Estimated Water Demand/Use (by ICF)

-	Units	AF/Unit (1)	Total	Total
		Average Year Direct Water Demand		
Housing	-	-	-	-
Condominiums	35	0.14	5.0	
Townhouses	64	0.17	11.1	
Small Lot Single Family	67	0.24	16.0	
Medium Lot Single Family	114	0.31	35.7	
Large Lot Single Family	1	.45	0.45	
Housing Subtotal	*281*	-	*68.3*	
Active Park (2)	2.6	1.0	2.6	
Landscape Parkways (2)	3.3	2.3	7.7	
Landscape Total	-	-	*10.3*	
Residential Element Subtotal			78.6	
Treatment (15%) and System (7%) Loss			22.2	
Average Year Direct Water Demand			***100.8***	
Low Use Wet Year (87% 80% of avg.) (3)			*95.2*	
High Use Dry Year (110% 110% of avg.) (3)			*105.2*	
Very High Use Dry Year (118% 125% of avg.) (3)			*108.3*	
		Average Year Consumptive Use		
Residential Element Subtotal (from Above)			78.6	
Evapotranspiration Adjustment for Landscaping in Housing Area (4)			*-6.6*	
Evapotranspiration Adjustment for Shared Park/Parkways (4)			*-3.0*	
Revised Residential Element Subtotal			69.0	
Treatment (15%) and System (7%) Loss			19.5	
Average Year Consumptive Use			***88.5***	
Low Use Year (87% of avg.) (3)			*81.9*	
High Use Year (110% of avg.) (3)			*93.8*	
Very High Use Year (118% of avg.) (3)			*98.8*	

Notes:

1. From Table 3.10-5
2. Used MWELO MAWA limit for park and parkways.
3. With consumptive use approach, the total landscape demand is not included, only the evapotranspiration amount (as was done in the baseline).
4. Only landscaping demand was adjusted for different years. Indoor use was not.

Table 3.10-6. Estimated Water Demand/Use

	Units	AF/Unit (1)	Total	~~Total~~
Housing				
Condominiums	12	0.14	1.7	
Small Lot Single Family	110	0.24	26.2	
Medium Lot Single Family	7	0.31	2.2	
Large Lot Single Family	1	0.45	0.5	
Housing Subtotal	*130*		*30.6*	
Open Space Irrigation (2)	7.7	2.3	17.9	
Residential Element Subtotal			48.5	
Treatment (15%) and System (7%) Loss			13.7	
Average Year Direct Water Demand			**62.2**	
Low Use Year (87% of avg.) (3)			*57.4*	
High Use Year (110% of avg.) (3)			*65.9*	
Very High Use Year (118% of avg.) (3)			*68.6*	
Water Transfer to Other Cal-Am Users			*60.0*	
Net Water Demand (Average Year)			***122.2***	
Low Use Year (87% of avg.) (3)			*117.4*	
High Use Year (110% of avg.) (3)			*125.9*	
Very High Use Year (118% of avg.) (3)			*128.6*	
Dedication for Instream Purposes (based on high use year)			51.4	
Water Demand + Instream Dedication (based on high use year)			**180.0**	**~~180.0~~**
Average Year Consumptive Use				
Residential Element Subtotal (from Above)			48.5	
Evapotranspiration Adjustment for Landscaping in Housing Area (4)			*-3.0*	
Evapotranspiration Adjustment for Shared Park/Parkways (4)			*-5.2*	
Revised Residential Element Subtotal			40.3	
Treatment (15%) and System (7%) Loss			11.4	
Average Year Consumptive Use			***51.7***	
Low Use Year (87% of avg.) (3)			*46.1*	
High Use Year (110% of avg.) (3)			*56.2*	
Very High Use Year (118% of avg.) (3)			*60.5*	
Water Transfer to Other Cal-Am Users			*60.0*	
Net Water Demand (Average Year)			***111.7***	
Low Use Year (87% of avg.) (3)			*106.1*	
High Use Year (110% of avg.) (3)			*116.2*	
Very High Use Year (118% of avg.) (3)			*120.5*	
Dedication for Instream Purposes (based on high use year)			59.5	
Water Demand + Instream Dedication (based on high use year)			**180.0**	

Notes:

1. From **Table 3.10-5**
2. Used MWELO MAWA limit for landscaping area.
3. With consumptive use approach, the total landscape demand is not included, only the evapotranspiration amount (as was done in the baseline).
4. Only landscaping demand was adjusted for different years. Indoor use was not.

~~**Table 3.10-7. Rancho Cañada Village Water Impact (Acre-Feet)**~~

~~-~~	~~Baseline Consumptive Use~~	~~Project Consumptive Use~~	~~Net Change~~
~~Average Year~~	~~145.1~~	~~88.5~~	~~-56.7~~
~~Low Use Year~~	~~113.4~~	~~81.9~~	~~-31.5~~
~~High Use Year~~	~~170.8~~	~~93.8~~	~~-77.0~~
~~Very High Use Year~~	~~195.0~~	~~98.8~~	~~-96.3~~

~~Note: This estimate is based on assumptions described in text and Appendix H.~~

Table 3.10-7. Water Impact (acre-feet)

-	Baseline Consumptive Use	Project Consumptive Use	Net Change
Average Year	145.1	111.7	-33.4
Low Use Year	113.4	106.1	-7.3
High Use Year	170.8	116.2	-54.6
Very High Use Year	195.0	120.5	-74.5

Note: This estimate is based on assumptions described in text and in **Appendix H**. The Project use does not include proposed dedication of 50 AFY for instream purposes.

Water for the new homes would be supplied either through the Cal-Am distribution system by assigning a portion of water rights associated with the project property to Cal-Am for delivery back to the development, or though the creation of independent community services (private or public), contract or dedication to use the existing wells on the project property to pump, treat, and purvey the amount of water necessary for the Project. Reduction in water use would be documented through the meters on the wells which are already in place as required by ordinance with MPWMD.

Because the Proposed Project would result in an overall reduction in water use, this impact would be *less than significant* provided the project would result in no more than the amount of consumptive water described above.

Mitigation Measure PSU-1, described below, will require the project to meet the water budgets in this Second Revised Draft EIR ~~RDEIR~~, by requiring dedication of adequate water rights for the residential development, designing new development to be water efficient, installation of water meters for the development in accordance with MPWMD regulations, monitoring and reporting of water use to the County and MPWMD, remedial action if the project exceeds established water budgets.

Infrastructure impacts related to a potential new water system are discussed below separately.

~~**130-Unit Alternative**~~

~~ICF then prepared a demand estimate for the 130-Unit Alternative using the housing type water demand estimates from **Table 3.10-5** and assumptions similar to those used for the Proposed Project. As shown in **Table 3.10-8** below, this Alternative would result in a consumptive water use of 112 AFY including 60 AFY proposed for transfer to other Cal-Am uses. The ICF estimate is used~~

for the EIR analysis. Accounting for use variation, 130-unit Alternative consumptive use use is estimated to range from 106 to 120 AFY (**Table 3.10-8**).

Table 3.10-8. 130-Unit Alternative Estimated Water Demand/Use (by ICF)

	Units	AF/Unit (1)	Total	Total
Housing				
Condominiums	12	0.14	1.7	
Small Lot Single Family	110	0.24	26.2	
Medium Lot Single Family	7	0.31	2.2	
Large Lot Single Family	1	0.45	0.5	
Housing Subtotal	*130*	-	*30.6*	
Open Space Irrigation (2)	7.7	2.3	17.9	
Residential Element Subtotal	-	-	48.5	
Treatment (15%) and System (7%) Loss			13.7	
Average Year Direct Water Demand	-	-	**62.2**	
Low Use Year (87% of avg.) (3)			*57.4*	
High Use Year (110% of avg.) (3)	-	-	*65.9*	
Very High Use Year (118% of avg.) (3)			*68.6*	
Water Transfer to Other Cal-Am Users			*60.0*	
Net Water Demand (Average Year)			***122.2***	
Low Use Year (87% of avg.) (3)			*117.4*	
High Use Year (110% of avg.) (3)	-	-	*125.9*	
Very High Use Year (118% of avg.) (3)			*128.6*	
Dedication for Instream Purposes (based on high use year)			51.4	
Water Demand + Instream Dedication (based on high use year)			**180.0**	**180.0**
	Average Year Consumptive Use			
Residential Element Subtotal (from Above)			48.5	
Evapotranspiration Adjustment for Landscaping in Housing Area (4)			*-3.0*	
Evapotranspiration Adjustment for Shared Park/Parkways (4)			*-5.2*	
Revised Residential Element Subtotal			40.3	
Treatment (15%) and System (7%) Loss			11.4	
Average Year Consumptive Use			***51.7***	
Low Use Year (87% of avg.) (3)			*46.1*	
High Use Year (110% of avg.) (3)			*56.2*	
Very High Use Year (118% of avg.) (3)			*60.5*	

Water Transfer to Other Cal-Am Users	*60.0*
Net Water Demand (Average Year)	***111.7***
Low Use Year (87% of avg.) (3)	*106.1*
High Use Year (110% of avg.) (3)	*116.2*
Very High Use Year (118% of avg.) (3)	*120.5*
Dedication for Instream Purposes (based on high use year)	59.5
Water Demand + Instream Dedication (based on high use year)	**180.0**

Notes:

5. From Table 3.10-5
6. Used MWELO MAWA limit for landscaping area.
7. With consumptive use approach, the total landscape demand is not included, only the evapotranspiration amount (as was done in the baseline).
8. Only landscaping demand was adjusted for different years. Indoor use was not.

Based on these estimates (excluding the instream dedication), there would be a net reduction in water use ranging from 7 to 75 AFY, with an average of 33 AFY (**Table 3.10-9**). This estimate is based on the assumptions for demand, treatment, and system losses discussed in this Chapter and in Appendix H. Further, the same percentage adjustments were made to the baseline use case for golf course irrigation for low use, high use, and very high useyears as for the Project residential demand.

Similar to the Proposed Project, given the existing impact of Cal-Am withdrawals on the Carmel River, this net reduction is a beneficial impact for both water supply and for biological resources in the river, such as steelhead.

Table 3.10-9. 130-Unit Alternative Water Impact (acre-feet)

	Baseline Consumptive Use	130-unit Alternative Consumptive Use	Net Change
Average Year	145.1	111.7	-33.4
Low Use Year	113.4	106.1	-7.3
High Use Year	170.8	116.2	-54.6
Very High Use Year	195.0	120.5	-74.5

Note: This estimate is based on assumptions described in text and in Appendix H. The 130-unit Alternative use does not include proposed dedication of 50 AFY for instream purposes.

Because the 130-Unit Alternative would result in an overall reduction in water use, this impact would be *less than significant* provided the project would result in the amount of consumptive water described above. However, without enforcement and monitoring, there is no guarantee that the project will limit its water use to the amounts estimated above.

Mitigation Measure PSU-1, described below, will require the project to meet the water budgets in this RDEIR by requiring dedication of adequate water rights for the residential development, designing new development to be water efficient, installation of water meters for the development in accordance with MPWMD regulations, monitoring and reporting of water use to the County and MPWMD, remedial action if the project exceeds established water budgets.

Infrastructure impacts related to a potential new water system are discussed below separately.

Mitigation Measure PSU-1: Dedicate Water Rights for the Project; Design for, Meter, and Monitor Water to meet Water Budgets; Implement Remedial Action if Water Budgets Exceeded

The Applicant, the Homeowner's Association (HOA), individual property owners, and any other parties responsible for water use for the project shall implement the following measures to ensure that the overall project consumptive use of water does not exceed the amounts estimated in this Second Revised Draft EIR ~~RDEIR~~:

- (1) The Applicant shall obtain a permanent dedication of ~~108 AFY (Proposed Project) or~~ 60 AFY ~~(130-unit Alternative)~~ of the water rights associated with the project site that reserves its use solely for the on-site residential development (including the park and preserve) and precludes any future use of this amount for any other use or transfer. These amounts are based on the estimated net demand during a very high use year as indicated in **Table 3.10-6**. ~~7 (Proposed Project) and in **Table 3.10-8** (130-unit Alternative).~~
- (2) The Applicant shall provide MPWMD and the County RMA-Planning evidence of SWRCB approval of any appropriative rights in sufficient amounts for any proposed on-site residential uses that would rely on appropriative rights and/or any proposed water transfer prior to issuance of any building or water use permit. If the site residential development would only rely on riparian rights and no water transfer is advanced, then this portion of this measure would not apply.
- (3) The Applicant (if they build parts or all of the development), individual homeowners (for lot development not built by the Applicant), or other parties proposing water uses on-site shall demonstrate to MPWMD and the County at the final design phase (prior to issuance of a building permit or any water use permits) that the project employs all MPWMD mandated efficiency measures, will meter the new development as required by MPWMD and will require reporting on actual water use on-site monthly and annually to MPWMD and the County RMA-Planning. All water use on-site shall be conditioned that MPWMD shall retain the ability to mandate feasible and reasonable reductions in water use in the future as necessary to constrain water use to the established water budgets.
- (4) MPWMD and the County shall track building permit and water use permit approvals to assure that the development overall will remain within the water budgets in this Second Revised Draft EIR ~~RDEIR~~. If tracking indicates that the project overall trend would result in an exceedance of the established water budgets upon full buildout, then MPWMD and the County shall require conditioning of all future building and water use permits with reductions in water use in order to restore the trend to compliance with the established water budgets. This limitation may ultimately include limitations on residential improvements (such as numbers of fixtures, swimming pools, or other limits), changes in landscaping amounts, types, or irrigation practices, a limit on overall amount of landscaping or other measures.
- (5) If monitoring/reporting indicates that the project is exceeding the estimated water budget in this Second Revised Draft EIR ~~RDEIR~~ on average over two or more years or the "high use" estimate in any one year, MPWMD and the County shall require responsible parties (HOA, individual property owners, and/or any other entity responsible for water use on the project) to modify landscaping and irrigation practices and/or add additional water efficiency measures to the project as necessary to reduce the water use to the average yearly consumptive use shown in this Second Revised Draft EIR ~~RDEIR~~. If triggered, the responsible parties for water use shall implement remedial measures within one year of the exceedance.

- (6) Failure to comply with these requirements will result in a request from the County to MPWMD to impose mandatory limitations on project consumptive water use until compliance is achieved.
- (7) If a separate water system is proposed, the Applicant shall be required to obtain all necessary permits for the separate water delivery system and to demonstrate to the County's satisfaction that the water delivery system can deliver water consistently and perpetually to the project prior to issuance of the first building permit.

Consistency Relative to Long-Term Sustainable Water Supply Goals and Policy in the 2010 General Plan

The focus of a CEQA evaluation of consistency with local land use policies is not to make a final determination of consistency with the policies (which is up to the Planning Commission and the Board of Supervisors), but rather to identify rather any inconsistencies might give rise to a physical impact on the environment and whether that physical impact is significant or not. An inconsistency with a local land use policy does not inherently result in a significant physical impact on the environment. It depends on the character of the resource affected and the nature and extent of the project impact. Thus, what ultimately matters for CEQA is the physical impact of the environment, which in this case is the impact on water supply.

Water supply impacts are analyzed in this Chapter including the cumulative context of the impact of prior and ongoing withdrawals from the Carmel Valley Alluvial Aquifer and the effects on Carmel River Biota as well as regional water supply conditions in which water is not available for new connections while the regional water supply project is being completed. The significance threshold used for this evaluation is no net increase in withdrawals from the aquifer, which was identified in recognition of the critical state of the Carmel River and the biological resources dependent upon it as well as the current regional water supply condition.

The fundamental intent of the County General Plan Goal PS-3 and associated policies PS-3.1 and PS-3.9 (and other related policies) is that new development must have a long-term water supply in terms of quantity and quality. The analysis shows that the Proposed Project ~~(or the 130-unit Alternative)~~ would not increase consumptive water use, would result in increased recharge to the Carmel Valley Alluvial Aquifer, and would not result in any substantial adverse effect on Carmel River instream flows. In regards to quality, the Proposed Project ~~(or the 130-unit Alternative)~~ would draw water from the same location that Cal-Am already draws water to serve its customers. Regardless of the modality of water delivery for the proposed residential use (Cal-Am distribution system or a separate community services district or mutual water company), the water can be treated to all regulatory standards just like the water being drawn at present from Cal-Am wells on the Rancho Canada golf course property and in nearby adjacent areas. Thus, the water source is of an acceptable water quality.

The proposed water supply for this project was reviewed using the criteria in County General Plan Policy PS-3.2:

- *Water Quality*: Water is the same quality as current local Cal-Am wells and is thus of acceptable water quality. See discussion above.
- *Authorized production capacity of a facility operating pursuant to a permit from a regulatory agency, production capability, and any adverse effect on the economic extraction of water or other effect on wells in the immediate vicinity, including recovery rates:* The analysis in this Chapter

shows that the on-site pumping levels would be less than baseline pumping levels which will help with groundwater recharge and thus would have no adverse effects to other wells or groundwater level recovery.

- *Technical, managerial and financial capability of the water purveyor or water system operator: If the project is served by Cal-Am, it has proven capabilities to deliver water.* If a separate water system is proposed, the Project Applicant will be required to obtain all necessary permits for the separate water delivery system and to demonstrate to the County's satisfaction that the water delivery system can deliver water consistently and perpetually to the project. With mitigation, the project's water supply can meet this criteria.
- *The source of the water supply and the nature of the right(s) to water from the source:* Please see discussion of water rights above and in Chapter 3.10, *Public Services, Utilities, and Recreation*. As discussed therein, there are riparian rights associated with the project site and the Project Applicant is seeking to obtain an appropriative right from the SWRCB in order to facilitate the proposed water transfer.
- *Cumulative impacts of existing and projected future demand for water from the source, and the ability to reverse trends contributing to an overdraft condition or otherwise affecting supply:* Cumulative conditions were taken into account when establishing significance criteria for the water supply analysis in this EIR as no net increase in consumptive water use, no net reduction in groundwater recharge, and no substantial adverse change in instream flows in the Carmel River. The project's water supply impact will not exceed any of the significance criteria. The project would reduce water use relative to baseline and help to reverse cumulative trends of water supply impacts on the Carmel River.
- *Effects of additional extraction or diversion of water on the environment including on in-stream flows necessary to support riparian vegetation, wetlands, fish or other aquatic life, and the migration potential for steelhead, for the purpose of minimizing impacts on the environment and to those resources and species*: The project's water supply will not result in a net increase in consumptive water use, no net reduction in groundwater recharge, and no substantial adverse change in instream flows in the Carmel River. Thus, it will not result in any additional extraction or diversion of water impacts on the environment and will not result in impacts to riparian vegetation, wetlands, fish or other aquatic life, or migration potential for steelhead. The project instead should benefit riparian vegetation, wetlands, fish and other aquatic life and help improve spring and summer instream flows.
- *Completion and operation of new projects, or implementation of best practices, to renew or sustain aquifer or basin functions:* As noted above, the project will not adversely affect aquifer or basin functions and will not hinder other efforts to renew aquifer or basin functions, such as the development of an alternative water supply to Cal-Am's withdrawals in excess of its current water rights or the dedication of water to instream uses by others. The project will instead contribute to sustaining aquifer and basin functions.
- *The hauling of water shall not be a fact or nor a criterion for the proof of a long term sustainable water supply:* Hauling of water is not proposed.

As indicated above, with proposed **Mitigation Measure PS<u>U</u>-1** to ensure delivery of the project's water supply (as noted above) and constrain it to a maximum of the amounts estimated in this <u>Second Revised Draft EIR</u> ~~RDEIR~~, the Proposed Project ~~(or the 130-unit Alternative)~~ is considered to have a long-term sustainable water supply because it has already met the relevant criteria and/or

will be required to meet the relevant criteria prior to issuance of any building permits.

E. Infrastructure Capacities

Impact PSU-6: Increased Demand for Water and Sewer Infrastructure (less than significant with mitigation)

~~**Proposed Project**~~

The Proposed Project would increase demand for sewer capacity. This increase in demand can be met by existing sewer lines and treatment facilities (see discussion under Impact PSU-7 below). The Proposed Project would add additional lines to existing infrastructure. Impacts on an increased demand for sewer capacity are *less than significant* and no mitigation is required.

As described above in Impact PSU-5, water for the new homes would be supplied either through the Cal-Am distribution system or though the creation of independent community services (public or private), contract, or dedication to use the existing wells to pump, treat, and purvey the amount of water necessary for the Project. The Project Applicant has identified the location of the treatment facilities as within the 1.6 ~~2~~-acre park, and the wells are on-site so the pipeline routing would likely be across the golf course and through the residential development. While treatment facilities are likely to be necessary, the extent of the treatment facilities is likely limited in character and size and would not substantially change the character of the park facility, increase the footprint of disturbance, or be particularly noticeable.

It is probable that the existing wells would provide suitable potable water because Cal-Am utilizes a potable water supply well on the golf course and the water from the Project Applicant's wells is likely to be of similar quality to the Cal-Am well. However, groundwater withdrawals for water supply in the lower portion of the Carmel River basin must be treated for iron and manganese prior to distribution (EIP Associates 1993). Thus, it is expected that some treatment facilities may be necessary as well as pipelines and pumping to transport treated water to the residential area. This is considered a *potentially significant* impact. Implementation of **Mitigation Measures PSU-21** ~~1~~ would reduce this impact to a *less-than-significant* level.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative would increase demand for sewer capacity. The 130-Unit Alternative would have a smaller increase in demand than the Proposed Project. This increase in demand can be met by existing sewer lines and treatment facilities (see discussion under Impact PSU-7 below). The 130-Unit Alternative, including Lot 130, lots would add additional lines to existing infrastructure. Impacts on an increased demand for sewer capacity are *less than significant* and no mitigation is required.~~

~~As described above, for the Proposed Project and in Impact PSU-5, water for the new homes would be supplied either through the Cal-Am distribution system or though the creation of independent community services (public or private), contract, or dedication to use the existing wells to pump, treat, and purvey the amount of water necessary for the Project or 130-Unit Alternative.~~

~~As discussed above for the Proposed Project, it is probable that the existing wells would provide suitable potable water because Cal-Am utilizes a potable water supply well on the golf course and the water from the Project Applicant's wells is likely to be of similar quality to the Cal-Am's well.~~

~~However, groundwater withdrawals for water supply in the lower portion of the Carmel River basin must be treated for iron and manganese prior to distribution (EIP Associates 1993). Thus, it is expected that some treatment facilities may be necessary as well as pipelines and pumping to transport treated water to the residential area. This is considered a *potentially significant* impact. Implementation of **Mitigation Measures PSU-2** would reduce this impact to a *less-than-significant* level.~~

Mitigation Measure PSU-2: Test Well Supply, Identify Water Treatment and Distribution Facilities, and Avoid Impacts on Biological Resources

Prior to construction, the Project Applicant will condition its contractor to test the proposed water supply for the Project ~~(or 130-Unit Alternative)~~ for California Title 22 constituents for potable water supply and will design and fund any necessary treatment and distribution facilities needed to transport treated water to the project site. Testing results will be provided to the County. The design for the new facilities will be submitted to Monterey County for review and approval. The new facilities can be placed within the existing golf course and/or other non-habitat disturbed areas (such as existing roads or golf paths). Under no circumstances will the new facilities result in permanent loss of native vegetation, ponds, or wetlands. All biological mitigation described for the Project construction-related impacts of the project ~~(or 130-Unit Alternative)~~ will apply to any potential impacts of new facilities (this shall include the following, as applicable to impacts of construction of the new facilities: **Mitigation Measures BIO-1** through ~~BIO-6; BIO-8 through~~ **BIO-1921**.

No grading for the Proposed Project ~~(or 130-Unit Alternative)~~ will be allowed until the new facilities have been approved by Monterey County and all biological resource mitigation has been approved by the County, USFWS, and CDFW. The Project Applicant will be required to fund all necessary improvements. This mitigation also applies to any new facilities required if the Project ~~(or 130-Unit Alternative)~~ utilizes a connection to the Cal-Am distribution system.

F. Wastewater Treatment

Impact PSU-7: Increased Wastewater Treatment Capacities (less than significant)

~~Proposed Project~~

The Proposed Project would increase wastewater flows to the CAWD treatment facility. A 12-inch sanitary sewer trunk exists adjacent to the project area from which additional connections would be made to serve the project area. Increased wastewater flow from the residential development is estimated to range from an average dry weather flow of 39,000 ~~84,900~~ gallons per day (gpd), up to a peak wet weather flow of 130,000 ~~280,170~~ gpd. Currently, the CAWD treatment plant is operating at 50% below permitted capacity and has remaining capacity of approximately 1.6 million gpd (Carmel Area Wastewater District 2014).

Increased flows resulting from the Proposed Project would not exceed the CAWD treatment facility's permitted facility or substantially decrease the ability of the plant to treat existing flows (Buikema pers. comm.). Thus, the treatment of this increased capacity would have a *less-than-significant* impact. No mitigation is required.

~~**130-Unit Alternative**~~

~~The 130-Unit Alternative would increase wastewater flows to the CAWD treatment facility. A 12-inch sanitary sewer trunk exists adjacent to the project area from which additional connections would be made to serve the project area. It is assumed all water used for residential development would be discharged to the wastewater system. Scaling down from the Proposed Project estimates, increased wastewater flow from the 130-Unit residential development and Lot 130, is estimated to range from 39,000 gpd (average dry weather flow) to 130,000 gpd (wet weather flow). Currently, the CAWD treatment plant is operating at 50% below permitted capacity with approximately 1.6 million gpd remaining capacity. Increased flows resulting from the 130-Unit Alternative (including residential uses) would not exceed the CAWD treatment facility's permitted facility or substantially decrease the ability of the plant to treat existing flows (Buikema pers. comm.). Thus, the treatment of this increased capacity would have a *less-than-significant* impact. No mitigation is required.~~

G. Utility Disruption during Construction

Impact PSU-8: Construction-Related Service Disruptions (less than significant with mitigation)

~~**Proposed Project**~~

Much of the water and sewage infrastructure is in place nearby. Sewer line connections would occur along the main trunk to efficiently serve the development. New water facilities may be required to supply the required fire protection and water pressure for homeowner use. However, this would not affect water service to other areas because the water supply originates from an onsite well. Furthermore, new utility connections for power and communications would be necessary to serve the development.

Project development, installation of the infrastructure noted above, and road improvements could disrupt existing utility lines. This impact would be *potentially significant.* Implementation of **Mitigation Measures PSU-3** would reduce this impact to a *less-than-significant* level.

~~**130-Unit Alternative**~~

~~As discussed for the Proposed Project, much of the water and sewage infrastructure is in place nearby. Sewer line connections would be located along the main trunk to efficiently serve the development. New water facilities may be required to supply the required fire protection and water pressure for homeowner use. However, this would not affect water service to other areas because the water supply originates would be diverted from an existing well or rehabilitated well(s) located onsite. A pipeline from the existing or new well to the nearby Cal-Am water distribution system would be constructed. Furthermore, new utility connections for power and communications would be necessary to serve the development.~~

~~Development of the 130-Unit Alternative and road improvements, could disrupt existing utility lines. This impact would be *potentially significant.* Implementation of Mitigation Measure PSU-2 would reduce the impact to a *less-than-significant* level.~~

Mitigation Measure PSU-3: Coordinate with Appropriate Utility Service Providers and Related Agencies to Reduce Service Interruptions

Prior to construction, the Project Applicant or its contractor will coordinate with the appropriate utility service providers and related agencies to avoid or reduce service interruptions. This coordination would include the following.

- The Project Applicant or its contractor will contact the Underground Service Alert (800/642-2444) at least 48 hours before excavation work begins to verify the nature and location of existing underground utilities. The Project Applicant will also notify all public and private utility owners at least 48 hours prior to the commencement of work adjacent to any existing utility, unless the excavation permit specifies otherwise.
- The Project Applicant or its contractor will coordinate with the remaining sections of the Rancho Cañada Golf Club and the CFPD to minimize or eliminate potential water interruption. Such coordination efforts may include requiring the construction contractor to "hot-tap" existing water lines for new waterline connections when possible to maintain service of existing water lines, and isolate construction areas and back feed water through alternate lines to provide continuous use.
- The Project Applicant or its contractor will coordinate with CAWD to minimize or eliminate potential interruptions of service when connections are made between existing and new sewer lines. Efforts may include coordination with the construction contractor to bypass sewage flows in the affected areas through use of portable pipeline that connects to unaffected sewage lines.

H. School Enrollments

Impact PSU-9: Increased Student Enrollments (less than significant)

~~**Proposed Project**~~

The Proposed Project could potentially increase student enrollments within the CUSD. A conservative multiplying factor of 0.34 students per household was used to determine the potential increase of school-age children attending public schools. Using the estimated build-out population projected, approximately 44 ~~51~~ school-aged children would be generated from the Proposed Project. The introduction of new students would result in placing further demands upon school services. The CUSD levies school developer fees as authorized by SB 50, and the Project Applicant would be legally required to pay these fees. Pursuant to Government Code Section 65995, the payment of these fees by a developer serves to fully mitigate all potential project impacts on school facilities from implementation of a project. Therefore, this impact is *less than significant*. No mitigation is necessary.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative could potentially increase student enrollments within the Carmel Unified School District. A conservative multiplying factor of 0.34 students per household was used to determine the potential increase of school-age children attending public schools. Using the multiplying factor of 0.34 students per household, the 130-Unit Alternative would generate approximately 44 school-aged children. The introduction of new students would result in placing less demand upon school services than the Proposed Project due to~~

~~the decrease in residential units from 281 to 130. The CUSD levies school developer fees as authorized by SB 50, and the Project Applicant would be legally required to pay these fees. Pursuant to Government Code Section 65995, the payment of these fees by a developer serves to fully mitigate all potential project impacts on school facilities from implementation of a project. Therefore, this impact would be *less than significant*. No further mitigation is necessary.~~

I. Recreational Demand

Impact PSU-10: Increased Use of Existing Neighborhood and Regional Parks (less than significant)

~~Proposed Project~~

The Proposed Project would result in an increase of 130 households ~~approximately 849 residents~~ in the Carmel Valley area. Monterey County Subdivision Ordinance (Section 19.12.010) requires standard for provision of regional parkland is 3 acres per 1,000 residents, or 0.003 acres per person. Monterey County has over 290,000 acres of land devoted to park and recreational facilities (Monterey County 2010). Based on the U.S. Census' 2010 Monterey County population estimate (415,057), the current ratio of parkland per resident is nearly 0.70 acres/person, which indicates that the County is not only meeting, but greatly exceeding its parkland standard. At buildout, the Proposed Project would increase demand for parkland by a total of 1.2 ~~2.5~~ acres. Implementation of the Proposed Project would bring the ratio of parkland per resident to 0.697:1 ~~0.698:1~~, which would result in a negligible impact on the existing demand on County and regional parks.

The increased population would also create a small increase in demand for active recreation facilities. Although, implementation of the Proposed Project would require the removal of one golf course, numerous other golfing facilities would still be available, including the east course of the Rancho Cañada Golf Club.

In accordance with County Subdivision Ordinances and the Quimby Act, the Proposed Project is required to provide 2.44 acres of park area. The Development Plan for the Project provides 1.6 ~~2.50~~ acres of community park, approximately 11 acres of common area within the development area, and approximately 38 ~~of land for two neighborhood parks, 0.4 acres of open space, and 31~~ acres of habitat preserve land in the Rancho Cañada Village. Each park will provide passive recreational opportunities for residents and visitors to the Rancho Cañada Village. In addition, a network of paths and trails would be constructed into the natural habitat preserve, which would connect into the Carmel Valley Trail System's planned regional trail system. The project design is such that each resident of the development is within 5 minutes (0.25 mile) of a park or the habitat preserve area.

This parkland design feature, in conjunction with the ample County and regional parkland currently available to residents, is sufficient to offset increased demand associated with the Proposed Project. In fact, the Proposed Project would result in an increase of the ratio of parkland per resident with the creation of approximately 40 ~~39~~ acres of additional recreational area. Thus, the Proposed Project is not anticipated to create or accelerate substantial physical deterioration of existing facilities or create a demand for new facilities beyond that included in the project design. Impacts would be *less than significant*. No mitigation is required.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative would result in an increase of residents in the Carmel Valley area. However, the number of residential units would be reduced from 281 to 130; therefore, fewer residents would be added to the local population under the 130-Unit Alternative. The 130-Unit Alternative is proposing a similar amount of open space and recreation acreage with 39.4 acres for habitat conservation, 1.7 acres for neighborhood parkland, approximately 12.1 acres of common areas within the development area, and a trail network. The 130-Unit Alternative would result in a negligible impact on the existing demand on County and regional parks. Therefore, this impact is considered to be *less than significant*. No mitigation is required. Additionally, the 130-Unit Alternative is not anticipated to create or accelerate substantial physical deterioration of existing facilities or create a demand for new facilities beyond that included in the project design. Impacts would be *less than significant*. No mitigation is required.~~

J. Open Space

Impact PSU-11: Quality and Quantity of Open Space Used for Recreation (less than significant)

~~**Proposed Project**~~

The Proposed Project would increase the current quantity of open space in the Carmel Valley area by dedicating approximately 38 ~~31.3~~ acres for habitat conservation, approximately 1.6 ~~2.50~~ acres for neighborhood parkland, and approximately 11 ~~0.47~~ acres of common area ~~open space~~. The proposed trail network would accommodate increased recreational accessibility within or adjacent to open space areas as well as provide connections to a larger regional trail system. The Proposed Project includes resource management components that would preserve and enhance the quality of the land planned for open space. The maintenance and preservation of the proposed open space would also help to enhance and protect open space that exists adjacent to the project area, near the ecologically sensitive Carmel River. This action would offset the loss of golf course open space and thus the impact on the quantity and quality of open space would *be less than significant*. No mitigation is required.

~~**130-Unit Alternative**~~

~~The 130-Unit Alternative would increase the current quantity of open space in the Carmel Valley area by dedicating 39.4 acres for habitat conservation, 1.7 acres for neighborhood parkland, and approximately 12.1 acres of common areas within the development area. Similar to the Proposed Project, the 130-Unit Alternative proposes a trail network that would accommodate increased recreational accessibility within or adjacent to open space areas as well as provide connections to a larger regional trail system. However, the 130-Unit Alternative would develop more area of the golf course than the Proposed Project. Like the Proposed Project, the end result of the 130-Unit Alternative is that there will be only one golf course instead of two on the property. The proposed open space and park elements of the 130-Unit Alternative would offset the loss of golf course open space; and thus, the impact on the quantity and quality of open space would *be less than significant*. No mitigation is required.~~

K. Landfill Capacity

Impact PSU-12: Increased Demand for Solid Waste, Green Waste, and Recycling Disposal Needs (less than significant)

~~**Proposed Project**~~

The Proposed Project would increase the number of residents in the unincorporated Monterey County area. These residents would generate an increased demand for solid waste, green waste, and recycling disposal needs. Based on an average of waste generation rates provided by the California Department of Resources Recycling and Recovery (CalRecycle) (California Department of Resources Recycling and Recovery 2013), the new residential uses would generate approximately 451 ~~992~~ tons of solid waste per year[4]. Additionally, construction activities related to the Proposed Project would temporarily generate a substantial amount of solid waste.

MRWMD is currently disposing of approximately 823-tons of waste per day at the facility, which is below the maximum permitted disposal of 3,500-tons per day (Monterey Regional Waste Management District 2014). The use of green waste and recycling containers for residential and commercial collection has greatly contributed to reducing the total amount of waste disposed at the landfill. Solid waste generated by operation of the Proposed Project would represent less than 1% of the permitted capacity of the Monterey Peninsula Landfill. As such, the Monterey Peninsula Landfill would have sufficient capacity to serve the Proposed Project.

The Proposed Project would comply with the Chapter 10.41 Monterey County Code of Ordinances, which requires residences to separate recyclables from solid waste and store trash in approved containers for weekly removal.

Increased solid waste, green waste, and recycling needs resulting from the Proposed Project can be accommodated by the existing disposal services and facilities and, therefore, impacts would be *less than significant*. No mitigation is necessary.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative would increase the number of residents in the unincorporated Monterey County area. These residents would generate an increased demand for solid waste, green waste, and recycling disposal needs. However, the 130-Unit Alternative would reduce the number of residential units from 281 to 130.~~

~~The 130-Unit Alternative would comply with the Chapter 10.41 Monterey County Code of Ordinances, which requires residences to separate recyclables from solid waste and store trash in approved containers for weekly removal.~~

~~Increased solid waste, green waste, and recycling needs resulting from the 130-Unit Alternative can be accommodated by the existing disposal services and facilities and, therefore, impacts would be *less than significant*.~~ No mitigation is necessary.~~

[4] Disposal Rate: 6.4 pounds/person/day; calculation based on an estimated 386 new residents each disposing 6.4 pounds/day.

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Chapter 3.11
Cultural Resources

Introduction

This chapter provides a discussion of the cultural resources related to construction of the Proposed Project ~~and the 130-Unit Alternative~~ in the Carmel Valley. This chapter includes a review of existing conditions based on previously conducted archaeological investigations; a records search conducted at the Northwest Information Center (NWIC); a summary of local, state, and federal regulations related to cultural resources; and an analysis of direct and indirect environmental impacts of the project. Where feasible, mitigation measures are recommended to reduce the level of impacts.

Impact Summary

Based on the NWIC records search results, prior studies, and the review of existing conditions, no cultural resources have been identified within the project area that would be impacted by the Project ~~or the 130-Unit Alternative~~. However, there remains the potential for the presence of buried resources that could not be identified during archival research and field survey, as the nature and location of the project suggest that it is sensitive for prehistoric archaeological deposits. **Table 3.11-1**, provides a summary of the potential cultural resource impacts of the Project ~~and the 130-Unit Alternative~~.

Table 3.11-1. Cultural Resources Impact Summary

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
A. Historical Resources				
CR-1: Demolition, Destruction, Relocation, or Alteration of Historical Resources	~~NI~~	NI	None Required	—
B, C, and D. Archaeological Resources, Human Remains, and Paleontological Resources				
CR-2: Ground Disturbing Activities, Such As Grading, Trenching, or Excavation	~~Potentially Significant~~	Potentially Significant	CR-1: Archaeological Resources— Stop Work if Buried Cultural Deposits are Encountered during Construction Activities CR-2: Archaeological Monitoring during Ground-Disturbing Activities within the Project Area during Construction	LTS

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
			CR-3: Archaeological Resources—Stop Work if Human Remains are Encountered during Construction Activities CR-4: Paleontological Resources—Stop Work if Vertebrate Remains are Encountered during Construction	
CR-3: Erosion or Usage of the Project Area That Could Expose Buried Archaeological Resources Due to Long-Term Use of the Area	~~Potentially Significant~~	Potentially Significant	CR-5: Consult With a Qualified Archaeologist to Identify Resources and Assess Impacts	LTS
LTS = Less-than-Significant, NI = No Impact				

Environmental Setting

Existing Conditions

The Proposed Project ~~and the 130-Unit Alternative (henceforth referred to collectively as the "project area" unless otherwise specified)~~ consists of portions of the Rancho Cañada Golf Club in Carmel, Monterey County. Based on a site inspection and review of historic topographic maps and aerial photographs, this facility appears to date from circa 1976 (ENGEO 2004). Only two ~~five~~ structures were found to exist within the project area ~~or the 130-Unit Alternative area~~. They are a Mission Revival restroom building~~;~~ and a sign with Old English style lettering in plastic~~,; and on Lot 130, two small maintenance office and restroom buildings and a large maintenance facility garage building.~~ Portions of the project area have been planted with grass turf for use as a golf course, while the remaining areas of the project area feature both introduced ornamental trees and plants (e.g., cypresses, pines, and palms), as well as clusters of native plants, such as willows, oaks, and scrub.

Methodology

Literature Reviewed

The following literature was reviewed for analysis of cultural resources found in the project area:

- Archaeological Consulting. *Preliminary Archaeological Reconnaissance for Rancho Cañada Community Partners Housing Site on a Portion of the Rancho Cañada Golf Club in Carmel, Monterey, CA*. December 13, 2003.
- Archaeological Consulting. *Preliminary Archaeological Reconnaissance for Rancho Cañada Village Extension, Including portions of APN 015-162-016 and APN 015-162-037 in Carmel, Monterey, CA*. July 28, 2005.

- Jones & Stokes 2008. *Draft Environmental Impact Report, Monterey County 2007 General Plan, Monterey County, California*. September 2008.
- Levy 1978, *Coastanoan*, in Volume 8 (California) of the Handbook of North American Indians, the definitive source for data on California Indian groups.
- 2014 Records Search conducted at the Northwest Information Center, Sonoma State University, Rohnert Park, which provides a list of previously recorded sites, studies, and other pertinent background data with regards to previously recorded cultural resources in and around the project area.
- Jones et al. 2007, Chapter 9: The Central Coast: a Midaltitude Milieu, in *California Prehistory*, the most recent compilation of California prehistory by region.

Prehistoric Context

The project area is located in the Monterey Bay Area, a component of the Central Coast of California. Jones et al. (2007) present a chronological system of six periods in the Central Coast.

Paleo-Indian (pre-8000 cal B.C.)

Human presence in this area at this time is suggested only by isolated, fluted projectile points, such as the specimens from Nipomo (see Mills et al. 2005), which likely reflected habitation sometime between 13,000 and 10,000 years ago. No substantive components of this age have yet been identified in the Central Coast (Jones et al. 2007:134).

Millingstone Culture (8000 to 3500/3000 cal B.C.)

At least 42 sites throughout the Central Coast area have been identified as Millingstone occupations, including the open rocky coasts of Santa Cruz and San Luis Obispo Counties, the Morro Bay and Elkhorn Slough estuaries, and the near shore interior valleys of San Luis Obispo County (Jones et al. 2007:135, 137). All of these sites are located no farther than 25 kilometers inland from the shore, and most interior Millingstone sites have produced marine shells, indicating that the site inhabitants also exploited coastal environments. The Millingstone Culture is marked by large numbers of well-made handstones and/or milling slabs, crude core and cobble-core tools, with less abundant flake tools and large side-notched projectile points. The Millingstone peoples practiced broad-spectrum hunting and gathering and exploited shellfish, fish, birds, and mammals, according to faunal remains from several sites (Jones et al. 2007:137).

Hunting Culture (3500/3000 cal B.C. to cal A.D. 1000/1250)

The term "Hunting Culture" was coined in 1929 to define a distinctive complex in the Santa Barbara area that was marked by large quantities of stemmed and notched projectile points. This was a direct contrast with the Millingstone Culture (Jones et al. 2007:138). This culture encompasses three Central Coast chronological periods- Early, Middle, and Middle-Late Transition, which are summarized below.

Early (3500 to 600 cal B.C.)

The Early Period is marked by co-occurrence of contracting-stemmed and Rossi square-stemmed points and large, side-notched variants (as a holdover from Millingstone). Portable mortars and pestles appear for the first time, but also contain Millingstone holdovers such as handstone/slab

dyads, along with pitted stones. Early Period phases of this culture include Sand Hill Bluff in the Santa Cruz area, Saunders on the Monterey Peninsula, and Redwood in Big Sur (Jones et al. 2007:138).

Middle (600 cal B.C. to cal A.D. 1000)

Middle Period expressions of the Hunting Culture are well represented at SCR-9 and SMA-218 (which define the Ano Nuevo Phase) and at MNT-101 and MNT-282 (which define the Willow Creek Phase), along with several other sites in Monterey and San Luis Obispo Counties that define additional Middle Period phases. Ano Nuevo sites are characterized by distinctive long-stemmed points. Other Middle Period characteristic include G2 saucer beads, both handstones/ slabs and portable mortars/pestles, grooved stone net stinkers, and flexed burials (Jones et al. 2007:139).

Middle/Late Transition (cal A.D. 1000 to 1250)

Around 1000 cal A.D., the Central Coast experienced changes in assemblages and settlement (the appearance of large numbers of arrow points, the disappearance of most stemmed points, changes in bead types). However, this transition seems to date differently in different areas; thus, the indeterminate dating of this period (Jones et al. 2007:139). In the Santa Cruz area, Hylkema (2002) argues that an abrupt, highly visible transformation took place at cal A.D. 1100; while in Big Sur, finding from MNT-1233 suggest that the Hunting Culture persisted until cal A.D. In general, it appears as though late-period Hunting Culture inhabitants preferred coastal habitation, but some larger middens also appear in pericoastal valleys. These late-period sites are often characterized by large quantities of biface-derived debitage and a range of site types, including middens, flaked and ground stone scatters, and lithic procurement stations/quarries. Faunal remains show abundant rabbit and deer consumption (Jones et al. 2007: 139-140).

Late Period (cal A.D. 1250 to 1769)

No less than 157 Late-Period sites have been recognized in the Central Coast. Most of these sites are away from the shoreline in a variety of settings, including the interior ranges, and are marked by small middens with associated or nearby bedrock mortars (Jones et al. 2007:140). While expansive sites have been documented at some locations, such as MNT-1277/H in Big Sur (Jones 2003); Late-Period middens are often small (30-40 meters in diameter) with several discrete deposits clustered in one area (Jones et al. 2007:140). The assemblages are characterized by large quantities of Desert side-notched and Cottonwood arrow points, small bifacial drill beads, bedrock and hopper mortars, Class E (lipped) and Class K (cupped) *Olivella* beads, and steatite disk beads, all of which represent a change in artifact assemblage from the Hunting Culture. Sites from the Santa Cruz area and the Monterey Peninsula also contain thin rectangular (Class M) beads and small serrated arrow points (Jones et al. 2007:140).

The Central Coast, with its abundant resources, was a constant magnet for human occupation. The pattern of occupation related to this resource base, however, suggests intermittent use on both seasonal and longer timescales. Radiocarbon dates demonstrate that some seemingly homogeneous midden deposits actually reflect multiple occupations separated by prolonged periods of abandonment, often of a millennium or more. This pattern is increasingly evident in the Santa Cruz area (e.g., SCR-20), the Monterey Peninsula (see discussion in Bean 1994), and other areas in Monterey and San Luis Obispo Counties. It is possible that the diversity and flux of Central Coast environments fostered a certain degree of instability in cultural adaptations over time. Future

research will need to focus more on the pattern of intermittent occupation and multiscaled site abandonment that seems to characterize this mid-latitude milieu (Jones et al. 2007:145-146).

Ethnographic Background

The Carmel Valley is situated within territory once occupied by Costanoan (also commonly referred to as Ohlone) language groups. Eight Ohlone languages were spoken in the area from the southern edge of the Carquinez Strait to portions of the Big Sur and Salinas rivers south of Monterey Bay and approximately 50 miles inland from the coast. Speakers of Rumsen, numbering about 800, occupied the lower Carmel, Sur, and lower Salinas Rivers (Levy 1978:485).

Linguistic evidence suggests that the ancestors of the Ohlone moved south and west from the delta of the San Joaquin-Sacramento River system into the San Francisco and Monterey Bay areas about A.D. 500. The linguistic evidence also indicates that they were then in contact with speakers of a Hokan language that shared some vocabulary with ancestral Pomoan and Esselen (Levy 1978:485).

The Ohlone were hunter-gatherers who relied heavily on acorns and seafood. They also exploited a wide range of other foods, including various seeds (the growth of which was promoted by controlled burning), buckeye, berries, roots, land and sea mammals, waterfowl, reptiles, and insects (Bean 1994).

Ohlone territories were composed of one or more land-holding groups that anthropologists refer to as *tribelets*. The tribelet consisted of a principal village occupied year-round, with a series of smaller hamlets and resource gathering and processing locations occupied intermittently or seasonally (Kroeber 1955: 303–314).

Seven Spanish missions were founded in Ohlone territory between 1776 and 1797. While living within the mission system, the Ohlone commingled with other groups, including the Yokuts, Miwok, and Patwin. Mission life was devastating to the Ohlone population. When the first mission was established in Ohlone territory in 1776, the Ohlone population was estimated be 10,000. By 1832, the Ohlones numbered less than 2,000 as a result of introduced disease, harsh living conditions, and reduced birth rates (Cook 1943a, 1943b in Levy 1978:486).

Ohlone recognition and assertion began to move to the forefront during the early 20th century, enforced by legal suits brought against the United States government by Indians of California (1928–1964) for reparation due them for the loss of traditional lands. The Ohlone participated in the formation of political advocacy groups, which brought focus upon the community and reevaluation of rights due its members (Bean 1994:xxiv). In recent years, the Ohlone have become increasingly organized as a political unit and have developed an active interest in preserving their ancestral heritage. Many Ohlones are active in maintaining their traditions and advocating for Native American issues.

Historic Context

The following historic context has been adapted from the *Draft Environmental Impact Report, Monterey County 2007 General Plan* (Jones & Stokes 2008).

Monterey Bay was the focus of several Spanish exploratory expeditions after it was first noticed by Juan Cabrillo in 1542. The bay was named for Conde de Monterrey, Viceroy of Spain, by Sebastian Vizcaino who sailed into it in 1602. The Franciscans founded three missions (San Carlos Borromeo,

San Antonio de Padua, and Nuestra Sonora de Soledad) in what is now Monterey County, and these, along with the Presidio established in the late 1700s and eight large ranchos that formed from land concessions to Spanish army veterans, became focal points of activity.

When the Mexican Republic formed in 1822, the missions were secularized and new ranchos developed on 68 Mexican land grants. An agrarian economy emerged, based on cattle ranching on large ranchos. This economy received a boost when the Mexican regime opened Monterey harbor to foreign trade, enabling rancheros to trade their hides and tallow for products from the outside world. The Custom House in Monterey became the site for collection of duties, providing the main source of income for Alta California's government. This commercial vitality supported by Monterey Bay's ideal harbor, led to Monterey's role as the Mexican capital of California.

Monterey continued to play a key role after the Americans took control of California in the late 1840s. For example, the convention to draft and sign California's new constitution convened at Colton Hall. This period coincided with the California Gold Rush, and during the 1850s, the market for tallow and hides shifted to a demand for beef and grain to feed the population of gold prospectors. At the same time, dairy farming was introduced in the area around Gonzales and Soledad. This enterprise required irrigation to support alfalfa production, a practice based on rudimentary canal systems used earlier by friars at the Missions.

Transportation soon became a major factor in supporting the County's growing economy. In 1872, Southern Pacific Railroad extended its train line to Salinas from Pajaro and Hollister. As the railroad pushed farther south it opened new markets and stimulated settlement of new towns. From Salinas it extended southward to Chualar, followed by Gonzales and Soledad, as landowners donated right-of-way across their ranches. With this new transport capability, crops could be shipped to market more efficiently. As improved irrigation systems were introduced to the area in the late nineteenth century, combined with additional railroad connections, production of fruits and vegetables replaced dry farming of grains as the leading agricultural products.

In addition to agriculture, by the late nineteenth Century, Monterey County became a destination for tourism and resort activities. Three hot spring resorts with hotels developed at Paraiso, Tassajara, and Slates Hot Springs. Pacific Grove was founded as a religious and cultural retreat, growing from a tent city to a town of small Victorian cottages. In the early 1900s, Pebble Beach was subdivided and became a fashionable summer resort. In Carmel, the Arts and Crafts movement took hold in local architecture as the town became a colony for artists and writers.

Paleontological Resources

The following paleontological discussion has been adapted from the *Draft Environmental Impact Report, Monterey County 2007 General Plan* (Jones & Stokes 2008).

Most of the fossils found in Monterey County are of marine life forms. They form a record of the region's geologic history of advancing and retreating sea levels. These deposits lack the large terrestrial fossils found in other regions due to their marine origin, and are comprised mainly of microorganisms such as foraminifers or diatoms or assemblages of mollusks and barnacles most commonly found in sedimentary rocks ranging from Cretaceous age (138 to 96 million years old) to Pleistocene age (1.6 million to 11 thousand years old).

Twelve sites in Monterey County have been identified as having significant paleontological resources. The fossils at these 12 sites generally reflect the type of assemblages found throughout

the county (microorganisms or invertebrates); however, they also possess special characteristics that make them unique or rare, or in some way provide important stratigraphic or historic information. None of these 12 sites are in proximity to the project area.

Records Search Results

Sources consulted in the August 21, 2014, NWIC records search conducted for the project area include the list of prior studies, previously recorded sites, historical maps and literature, the National Register of Historical Places (NRHP), the California Register of Historical Resources (CRHR), and the Santa Clara County Historical Resources Index.

The records search identified no previously recorded cultural resources within the project area. One previously recorded resource was identified approximately 0.5 mile west of the project area.

- P-27-393/CA-MNT-290: a midden site with shell, animal bone, charcoal, and lithics. This resource, originally recorded in 1951, was noted as having "since been destroyed…A small remnant…is all that remains" (Waldron et al. 1984).

Nine reports have covered portions of the project area.

- S-3477, Wardell, D. 1978. *Preliminary Cultural Resource Assessment: File No. C-22 a, b, c, Monterey County Flood Control S.C.S. #216*. No resources in the vicinity of the project area were identified during this study.
- S-9647, Smith, C. and G. Breschini. 1987. *Preliminary Cultural Resources Reconnaissance of Parcel A.P.N. A09-021-06, Carmel, Monterey County, California*. No resources were identified during this study.
- S-28073, Doane, M. and G. Breschini. 2003. *Preliminary Archaeological Reconnaissance for the Rancho* Cañada *Community Partners Housing Site on a Portion of Rancho* Cañada *Golf Club in Carmel, Monterey County, California*. No resources were identified during this study.
- S-30063, Wulzen, W. 2005. *Barn Road Removal Project: The Big Sur Land Trust Palo Corona Front Ranch, Monterey County, California*. No resources in the vicinity of the project area were identified during this study.
- S-30341, Doane, M. and G. Breschini. 2005*. Preliminary Archaeological Reconnaissance for the Rancho* Cañada *Village Extension, Including Portions of APN 015-162-016 and 015-162-037, in Carmel, Monterey County, California*. No resources were identified during this study.
- S-30348, Doane, M. 2005. *Negative Archaeological Survey Report for the Carmel Valley Class I Bicycle Path Project in Lower Carmel Valley, Monterey County, California*. No resources were identified during this study.
- S-33690, Doane, M. and G. Breschini. 2007. *Preliminary Archaeological Reconnaissance for the River Unit Riparian Revegetation Project, Palo Corona Regional Park Near Carmel, Monterey County, California*. No resources were identified during this study.
- S-34371, Doane, M. and G. Breschini. 2007. *Preliminary Archaeological Reconnaissance for Assessor's Parcel 015-281-015, in Carmel, Monterey County, California*. No resources were identified during this study.
- S-37683, Breschini, G. 2010. *Carmel Valley Bicycle Path, realigned segments* (letter report). No resources were identified during this study.

An additional 42 reports have been conducted within 0.5 mile of the project area. These reports included a variety of regional overviews, site-specific studies, and archaeological surveys for a variety of projects throughout the Carmel Valley, and greater Monterey County. None of these reports identified any resources in proximity to the project area.

Native American Correspondence

As required under Senate Bill (SB) 18, the Native American Heritage Commission (NAHC) and Native American groups and representatives were contacted about the Rancho Cañada Village Recirculated Draft EIR when that document was prepared in 2016 to analyze the previously considered 281-unit project at the same site (refer to Chapter 2, *Project Description*, for a description of Project history). Their input was requested as part of the planning process. Initiation of this contact included a letter sent to the NAHC on July 16, 2008. A discussion of SB 18 is provided in the Regulatory Setting below.

ICF contacted the NAHC on August 13, 2014 to identify any areas of concern within the project area that may be listed in the NAHC's Sacred Lands File. The NAHC responded on August 21, 2014 stating that a search of their files failed to indicate the presence of Native American cultural resources in the immediate Project area.

Regulatory Setting

This section discusses the local, state, and federal policies and regulations that are relevant to the analysis of cultural resources issues of the Proposed Project ~~and the 130-Unit Alternative~~ being considered by Monterey County.

Federal Policies and Regulations

There are no relevant federal regulations for cultural resources because there are no known historic or prehistoric resources or outstanding examples of paleontological features in the project area that could be affected.

State Policies and Regulations

California Environmental Quality Act and Guidelines (Section 15126.2[a])

CEQA requires that public or private projects financed or approved by state or local public agencies be assessed to determine their potential to affect historical resources. CEQA uses the term *historical resources* to include buildings, sites, structures, objects, or districts, each of which may have historical, pre-historical, architectural, archaeological, cultural, or scientific importance.

CEQA states that if implementation of a project would result in significant effects on historical resources, then alternative plans or mitigation measures must be considered; however, only significant historical resources need to be addressed (14 California Code of Regulations [CCR] 15064.5, 15126.4). Therefore, before impacts and mitigation measures can be identified, the significance of historical resources must be determined.

The State CEQA Guidelines define three ways that a property may qualify as a historical resource for the purposes of CEQA review.

- The resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR).
- The resource is included in a local register of historical resources, as defined in Section 5020.1[k] of the California Public Resources Code (PRC) or identified as significant in a historical resource survey meeting the requirements of Section 5024.1[g] of the PRC, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- The Lead Agency determines the resource to be significant, as supported by substantial evidence in light of the whole record (CCR, Title 14, Division 6, Chapter 3, section 15064.5[a]).

Each of these ways of qualifying as a historical resource for the purpose of CEQA is related to the eligibility criteria for inclusion in the CRHR (PRC Sections 5020.1[k], 5024.1, 5024.1[g]). A historical resource may be eligible for inclusion in the CRHR if it meets any of the following conditions:

- The resource is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- The resource is associated with the lives of persons important in our past.
- The resource embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values.
- The resource has yielded, or may be likely to yield, information important in prehistory or history.

Properties that are listed in or eligible for listing in the NRHP are considered eligible for listing in the CRHR and thus are significant historical resources for the purpose of CEQA (PRC Section 5024.1[d][1].

According to CEQA, a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant impact on the environment (14 CCR 15064.5[b]). Under CEQA, a substantial adverse change in the significance of a resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired. Actions that would materially impair the significance of a historic resource are any actions that would demolish or adversely alter the physical characteristics that convey the property's historical significance and qualify it for inclusion in the CRHR or in a local register or survey that meet the requirements of PRC Sections 5020.1[k] and 5024.1[g].

CEQA includes in its definition of *historical resources* "any object [or] site … that has yielded or may be likely to yield information important in prehistory" (State CEQA Guidelines Section 15064.5[3]), which is typically interpreted as including fossil materials and other paleontological resources. In addition, destruction of a "unique paleontological resource or site or unique geologic feature" constitutes a significant impact under CEQA (State CEQA Guidelines Appendix G). Treatment of paleontological resources under CEQA is generally similar to treatment of cultural resources, requiring evaluation of resources in a project's area of potential affect; assessment of potential impacts on significant or unique resources; and development of mitigation measures for potentially significant impacts, which may include monitoring combined with data recovery and/or avoidance.

Senate Bill 18 (Chapter 905, Statutes of 2004) – Local and Tribal Intergovernmental Consultation

SB 18 is a process separate from CEQA that requires cities and counties to consult with federally and non-federally recognized Native American tribes prior to approving certain land use plans that include traditional tribal cultural places on both public and private lands. A cultural place is a landscape feature, site, or cultural resource that has some relationship to particular tribal religious heritage or is a historic or archaeological site of significance or potential significance.

SB 18 places the responsibility of initiating consultation on local governments. The purpose of SB 18 is to provide time for tribal input early in the planning process. From the date on which a California Native American tribe is contacted by a city or a county, the tribe has 90 days to accept the offer of consultation. Consultation is a "government to government" interaction between tribal representatives and representatives of the County; however, the process may also include applicants and consultants. The NAHC maintains a list of Native American individual/groups, organized by county, for SB 18 Tribal Consultation.

California Public Resources Code

Historical resources are considered under PRC Section 5024.1, which established the CRHR. PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet NRHP listing criteria.

Several PRC sections extend protection to paleontological resources. Section 5097.5 prohibits "knowing and willful" excavation, removal, destruction, injury, and defacement of any paleontologic feature on public lands (lands under state, county, city, district, or public authority jurisdiction, or the jurisdiction of a public corporation), except where the agency with jurisdiction has granted express permission. Section 30244 requires reasonable mitigation for impacts on paleontological resources that occur as a result of development on public lands.

California Health and Safety Code—Treatment of Human Remains

Under Section 8100 of the California Health and Safety Code (HSC), six or more human burials at one location constitute a cemetery. Disturbance of Native American cemeteries is a felony (HSC Section 7052).

HSC Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must then contact the NAHC, which has jurisdiction pursuant to PRC Section 5097.

In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
    a. The county coroner has been informed and has determined that no investigation of the cause of death is required, and:
    b. If the remains are of Native American origin:

- The coroner shall contact the NAHC within 24 hours.
- The NAHC shall identify the person or persons it believes to be the most likely descendent (MLD) from the deceased Native American.
- The descendants of the deceased Native American(s) make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.

2. The landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface ground disturbance, in the event that the NAHC is unable to identify a MLD, or the MLD failed to make a recommendation within 24 hours after being notified by the commission, or if the landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

Paleontological Resources

Under CEQA, destruction of a "unique paleontological resource or site or unique geologic feature" constitutes a significant impact. Appendix G of the State CEQA Guidelines provides a checklist of questions a lead agency should address. The question on the checklist with respect to paleontology is: "Would the project directly or indirectly destroy a unique paleontological resource?" The treatment of paleontological resources under CEQA generally requires an evaluation of resources in a project's area of potential effect; an assessment of potential impacts on significant or unique resources; and the development of mitigation measures for potentially significant impacts, which may include monitoring combined with data recovery or avoidance (or both).

The Society of Vertebrate Paleontology (SVP) *Conformable Impact Mitigation Guidelines* (SVP guidelines) (Society of Vertebrate Paleontology Conformable Impact Mitigation Guidelines Committee 1995; 1996) serve as a method to comply with CEQA and local ordinances and laws which protect paleontological resources. According to the SVP guidelines, significant paleontological resources are defined as fossils that provide important information on evolution, age of a sedimentary strata, past environments, and biotic history, and which are rare or in short supply.

Local Regulations

Current County Plans and Policies

2010 Monterey County General Plan

The following 2010 *Monterey County General Plan* (2010 General Plan) policies pertain to cultural and paleontological resources (Monterey County 2010) and are relevant to the Proposed Project ~~and 130-Unit Alternative~~.

Policy OS-6.1: Important representative and unique archaeological sites and features shall be identified and protected for all parcels with undisturbed natural conditions (i.e., ungraded properties), consistent with State Office of Historic Preservation guidelines and definitions employed on a statewide basis, including Phase I, II, and III studies.

Policy OS-6.3: New development proposed within moderate or high sensitivity zones, or within 150 feet of a known recorded archaeological and/or cultural site, shall complete a Phase I survey including use of the regional State Office of Historic Preservation or the California Native American Heritage Commission's list of sacred and traditional sites. Routine and Ongoing Agricultural Activities shall be exempted from this policy in so far as allowed by state or federal law.

Policy OS-6.4: Development proposed in low sensitivity zones are not required to have an archaeological survey unless there is specific additional information that suggests archaeological resources are present.

Policy OS-6.6: Efforts by historical, educational, or other organizations to improve the public's recognition of the County's cultural heritage and the citizen's responsibilities for archaeological or cultural resource preservation shall be encouraged. The County shall adopt a uniform set of guidelines to define Phase I, II, and III significance assessment and data recovery programs. Similar guidelines shall be created to set standards for requirements for consultation with Native Californian descendants to establish procedures for determining the presence or absence of sacred or traditional sites. These guidelines shall address monitoring requirements and participation in cultural resource data recovery programs.

Policy OS-7.3: Development proposed within high and moderate sensitivity zones and known fossil bearing formations shall require a paleontological field inspection prior to approval. Routine and Ongoing Agricultural Activities are exempted from this policy in so far as allowed by state or federal law.

Policy OS-7.4: Development proposed in low sensitivity zones are not required to have a paleontological survey unless there is specific additional information that suggests paleontological resources are present.

Policy OS-7.5: Policies and procedures shall be established that encourage development to avoid impacts to sensitive paleontological sites including: a. designing or clustering development to avoid paleontological deposits; b. requiring dedication of permanent conservation easements where subdivisions and other developments can be planned to provide for such protective easements. The 2010 *Monterey County General Plan Environmental Impact Report* (Jones & Stokes 2008) provides the following exhibits for implementing general plan policies.

- **Archaeological Sensitivity** (Exhibit 4.10.2). This map displays three archaeological sensitivity zones (low, moderate, and high), based on available information and knowledge of those topographic characteristics most often associated with archaeological sites. Zones of high sensitivity are found along the coast and inland along the Carmel River and along the major creeks. The project area is considered to be in a high sensitivity zone because of its proximity to the Carmel River.
- **Historic Resources** (Exhibit 4.10.3). This map displays primary historical resources that are located in the County and that are listed on the Monterey County Inventory of Historic Resources (MCIHR). The MCIHR listing meets the requirements of PRC Section 5020.1(k), which states that properties officially designated or recognized as historically significant by a local government are considered significant resources for the purposes of CEQA. None of the buildings or structures in the project area is included on the map of the MCIHR.
- **Paleontological Resources** (Exhibit 4.10.1). This map identifies the 12 significant paleontological localities within the County. None of the 12 sites within the County that have been identified as having significant paleontological resources are near the project area.

2013 Carmel Valley Master Plan

The 2013 *Carmel Valley Master Plan* (2013 CVMP) is part of the 2010 General Plan. As such, the policy outlined in the 2013 CVMP and presented below must be considered in conjunction with the 2010 General Plan and is relevant to the Proposed Project ~~and 130-Unit Alternative~~.

3.13 (CV). Historic and Archaeological Resources, including buildings and sites of historical significance, located in Carmel Valley shall:

a. be reviewed on a site by site basis.

b. be rezoned to the "HR" District as a condition of permit approval for any development impacting such sites.

c. require preservation of the integrity of historic sites and/or structures.

A committee to evaluate the current condition of each and recommend deletions, additions or other measures shall be drawn from members of local historical, architectural, and/or educational societies as determined by the Planning Commission.

Prior County Plans and Policies

As stated in Chapter 1, *Introduction*, discussion pertaining to the 1982 General Plan is provided for informational purposes only.

1982 Monterey County General Plan

As discussed in the 1982 *Monterey County General Plan* (1982 General Plan), the County has recognized that the data obtained from archaeological surveys are useful in determining other areas likely to contain archaeological resources, and that this "extrapolation of data can then be used by planners to identify areas where an archaeological survey may be required before development can occur" (Monterey County 1982).

The goals and policies pertaining to Archaeological Resources are as follows.

Goal 12: Encourage the Conservation and Identification of the County's Archaeological Resources.

Objective

Identify and conserve important representative and unique archaeological sites and features.

Policies

12.1.1. The County shall take such action as necessary to compile information on the location and significance of its archaeological resources so this information may be incorporated into the environmental or development review process.

12.1.2. The Archaeological Sensitivity Zones map shall be used, along with whatever other data is appropriate, to evaluate whether archaeological resources are threatened by proposed development projects. The map shall be updated continuously as new data becomes available and shall have an appropriate review in five years (January 1, 1987).

12.1.3. All proposed development, including land divisions, within high sensitivity zones shall require an archaeological field inspection prior to project approval.

12.1.4. All major projects (i.e., 2.5 acres or more) that are proposed for moderate sensitivity zones, including land divisions, shall require an archaeological field inspection prior to project approval.

12.1.5. Projects proposed for low sensitivity zones shall not be required to have an archaeological survey taken unless specific additional information has been obtained to suggest that archaeological resources are present.

12.1.6. Where development could adversely affect archaeological resources, reasonable mitigation procedures shall be required prior to project approval.

12.1.7. All available measures, including purchase of archaeological easements, dedication to the County, tax relief, purchase of development rights, consideration of reasonable project alternatives, etc., shall be explored to avoid development on sensitive archaeological sites.

Objective

12.2. Encourage various historical and educational societies or other appropriate organizations in their efforts to improve the public's recognition of its cultural heritage and the citizen's responsibilities for archaeological or cultural resource preservation.

The goals and policies pertaining to Historic Preservation are as follows.

Goal 52: To Designate, Protect, Preserve, Enhance, and Perpetuate Those Structures and Areas of Historical, Architectural, and Engineering Significance which Contribute to the Historical Heritage of Monterey County and to Enhance Monterey County's Historical Heritage and Diverse Cultural Background by Encouraging the Systematic Collection and Preservation of Historic Records and Artifacts and the Promotion of Related Cultural Events.

Objective

52.2. Protect the County's cultural resources by developing a historic preservation plan and a historic preservation ordinance by 1985 which establish the necessary tools to protect the County's cultural resources.

Policies

52.1.1. The County shall compile and maintain a current inventory of cultural resources in unincorporated areas of the County and encourage the same of incorporated cities.

52.1.2. The County shall encourage and assist property owners to submit applications to qualify appropriate properties and buildings on the National Register of Historic Places and/or the State Landmark program. Those achieving such status shall be given "HR" zoning.

52.1.3. The County shall work with property owners to mitigate the destruction or alteration of historic resources by zoning identified historic sites as "HR" or Historic Resources zones. The "HR" reclassification would be implemented as follows:

- Either at the time of requests for demolition or alteration of the resource, or
- At the time of mutual agreement between the County and the property owner to preserve that historic resource.

52.1.4. The County shall appoint an Architectural Review Board to review restoration, rehabilitation, alteration, and demolition proposals of those cultural resources identified by the cultural resources inventory.

52.1.5. The County shall support any such tax incentive, mutual covenants, protective covenants, purchase options, preservation easements, building, fire, health and County code modifications

and any other methods deemed mutually agreeable between County and landowner which will help to preserve historic resources.

52.1.6. The County shall, through monies acquired from grants, donations and other revenue sources, provide funds for the restoration and enhancement of historic resources.

52.1.7. The County shall encourage lending institutions to reinvest in culturally significant neighborhoods where conventional loans are available and shall encourage the flow of low interest mortgage and home improvement loans.

52.1.8. The Monterey County Historical Advisory Commission shall:

- Work for the continuing education of county residents concerning historic resources;
- Seek financial support from local, state, and federal governments as well as the private sector to protect, preserve, and enhance the County's historic resources; and
- Coordinate its activities with all groups concerned with the preservation of historic resources.

Objective

52.2. Preserve the County's public records of historic value by initiating a preliminary study of present records management policies which outlines problems, identifies appropriate storage areas, makes recommendations for a records management program, and identifies public and private funding sources for the implementation of such a program by 1985.

Policies

52.2.1. The County shall inventory existing County records to determine those which have historic value, unify archives and records management policies within the county government and private archives, and accept donations of artifacts, manuscripts or monetary gifts which are to be used for acquisition of historical records.

52.2.2. The County shall support the revision of appropriate sections of the California Government Code to provide a strong statutory base for the management and preservation of state and local records.

Objective

52.3. Support existing cultural events and generate new programs by providing activity sites within the Monterey County Parks system and by developing and enhancing interpretive centers at San Lorenzo, San Antonio, Laguna Seca, Toro, Royal Oaks, and Jacks Peak Parks by 1985.

Policy

52.3.1. The County shall promote Monterey County's historical heritage through the recognition of existing cultural events and shall implement new activities such as tours, workshops, speaking engagements, interpretive programs, and festivals within the County Parks System.

1986 Carmel Valley Master Plan

The following plans and policies are presented in the 1986 Carmel Valley Master Plan (1986 CVMP) (Monterey County 1986).

Archaeological Resources

12.1.6.1 (CV). Archaeological resources, historic resources, and ethnographic and ethnohistoric resources shall be identified, and if adverse impacts would result from a project their

significance shall be evaluated, prior to project approval. Based on this evaluation, important representative or unique resources shall be protected and preserved.

12.1.7.1 (CV). On discovery of archaeological sites or historic sites, or upon identification of ethnographic or ethnohistoric sites, procedures will be followed which employ project modification, relocation or on-site mitigation measures appropriate to the location, significance of the find and potential impacts of development.

12.1.8.1 (CV). Archaeological surveys are required within the three sensitivity zones as follows:

- High and Potentially High Sensitivity Zones: All permit applications which include earth disturbing or earth altering activities (including but not limited to grading permits, utility and other excavations, foundation trenching and land leveling, etc.) shall be preceded by a cultural resources reconnaissance.
- Low Sensitivity Zones: All major projects or projects otherwise requiring preparation of an EIR shall be preceded by a cultural resources reconnaissance. Construction of or addition to single-family dwellings and other minor projects shall not be required to conduct a cultural resources reconnaissance.

12.1.9.1 (CV). The archaeologic sensitivity map shall be updated by a professional archaeologist every two years.

12.1.10.1 (CV). Known historic, historical archaeological sites and ethnographic or ethnohistoric sites shall be coded into the County Planning Department database through the use of Assessor's Parcel Numbers. Categorical and ministerial exemptions, grading, mechanical clearing, and all other activities under County permitting authority which might be destructive to these known sites shall be reviewed for appropriate conditions by the County Planning Department.

Development rights for known sites of archaeologic, historic or ethnographic nature shall be acquired by the County of Monterey as follows:

3. Known archaeologic and ethnographic sites shall be protected by an easement which deeds the development and disturbance rights to the County of Monterey. Such sites may also be rezoned to the status of "HR" District. Stewardship shall include preservation. Scientific research disturbance shall only be allowed upon approval of a Use Permit not to exceed a 10% sampling disturbance upon showing of an appropriate research design acceptable to a college with a recognized program for California archaeology, which will be conducted by archaeologists on the County list of qualified archaeologists.

4. Historic sites shall be required to be rezoned to the HR District as a condition of permit approval for any development impacting such sites. Any Use Permit required by the HR zone shall require preservation of the integrity of historic sites and/or structures. Appropriate mitigation measures shall be implemented as conditions of the permit.

12.1.11.1 (CV). The Monterey County Historical Inventory files for the planning area shall be completed and/or updated annually, and will be made available for the use of historical researchers. These files shall be amended to include ethnographic and/or ethnohistoric resources. Complete copies of all files pertaining to the CVMP area shall be made available to (1) the Bancroft Library at the University of California, Berkeley, and (2) the archives vault of the Monterey County Historical Society in Salinas.

12.1.12.1 (CV). Innovative preservation techniques, such as purchase or dedication of façade easements in exchange for property tax reductions, shall be considered to protect and preserve historic resources.

12.1.13.1 (CV). The County shall consider adoption of the California State Historic Buildings Code and the Model Historic Preservation Ordinance.

Impact Analysis

Methods for Analysis

To assess potential impacts of the Proposed Project ~~and the 130-Unit Alternative on cultural resources~~, the results of the previous cultural resources investigations, including those conducted by Archaeological Consulting (2003, 2005) were reviewed in detail. ICF also conducted archival research at the NWIC in Sonoma County in 2014, reviewed the information regarding existing conditions in the project area, and reviewed project maps and the surrounding topography to independently assess the sensitivity for the presence of cultural resources within the project area.

Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, 2010 General Plan plans and policies, and 2013 CVMP plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

A. Historical Resources

- Cause a substantial adverse change in the significance of a historical resource (State CEQA Guidelines Section 15064.5), including physical demolition, destruction, relocation, or alteration of historical resources or their immediate surroundings, such that their significance would be materially impaired. The significance of a historical resource is considered materially impaired when a project demolishes or adversely materially alters those physical characteristics that convey its historical significance and that justify its eligibility for or inclusion in the CRHR or in registers meeting the definitions in PRC 5020.1(k) or 5024.1(g).

B. Archaeological Resources

- Cause a substantial adverse change in the significance of an archaeological resource, or potential disturbance to undiscovered archaeological resources (State CEQA Guidelines Section 15064.5).

C. Human Remains

- Disturb or potentially disturb any undiscovered human remains, including those interred outside of formal cemeteries.

D. Paleontological Resources

- Directly or indirectly destroy a unique paleontological resource or site, or a unique geological feature.

Impacts and Mitigation Measures

A. Historical Resources

Impact CR-1: Demolition, Destruction, Relocation, or Alteration of Historical Resources (no impact)

~~**Proposed Project**~~

Implementation of the Proposed Project would require that the two structures that currently exist within the project area be removed: a restroom and the concrete monument sign at the entrance to the facility. However, neither the built features nor the designed landscape features appear to be historic resources for the purposes of CEQA. The features found within the project area are less than 45 years old and are not associated with significant persons or patterns and events of history. The property also does not exhibit distinctive characteristics or high artistic values that would indicate that it is the work of a significant builder or landscape designer. Therefore, there would be *no impact* on historical resources. No mitigation is required.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, the 130-Unit Alternative would require removal of the currently existing structures including (three facilities maintenance buildings on Lot 130). These structures do not appear to be historic resources for the purposes of CEQA. These structures are less than 45 years old, and not associated with significant persons or patterns and events of history. Therefore, there would be *no impact* on historical resources. No mitigation is required.~~

B, C, and D. Archaeological Resources, Human Remains, and Paleontological Resources

Impact CR-2: Ground Disturbing Activities, Such as Grading, Trenching, or Excavation (less than significant with mitigation)

~~**Proposed Project**~~

Ground disturbing activities have the potential to adversely affect unknown archaeological or paleontological resources, including the discovery of human remains. While no known archaeological resources, human remains, or paleontological resources would be affected by the Proposed Project, there is always the possibility that previously unrecorded sites will be disturbed during construction. This would be a *potentially significant* impact. Implementation of **Mitigation Measures CR-1** through **CR-4** would reduce the impact to a *less-than-significant* level.

~~**130-Unit Alternative**~~

~~No known archaeological resources, human remains, or paleontological resources are known to exist in the 130-Unit Alternative site. However, there is always the possibility that previously unrecorded sites would be disturbed during construction. This would be a *potentially significant* impact. Implementation of **Mitigation Measures CR-1 through CR-4** would reduce the impact to a *less-than-significant* level.~~

Mitigation Measure CR-1: Archaeological Resources—Stop Work if Buried Cultural Deposits are Encountered during Construction Activities

If buried cultural resources are encountered during construction activities, the Project Applicant or its contractor will stop work. If cultural resources such as chipped stone or groundstone, historic debris, building foundations, or human bone are inadvertently discovered during ground-disturbing activities, the Project Applicant or its contractor will stop work within a 100-foot radius of the find until a qualified archaeologist can assess the significance of the find and recommend additional treatment measures appropriate to the nature of the find. The Project Applicant will be responsible for ensuring that treatment measures are implemented, in accordance with the archaeologist's recommendations.

Mitigation Measure CR-2: Archaeological Monitoring During Ground-Disturbing Activities within the Project Area during Construction

The alluvial plain of the Carmel River Valley is highly sensitive for the presence of buried prehistoric archaeological resources, which do not always have surface expression and can be difficult to identify through a Phase I archaeological survey. Due to the sensitive nature and location of the project area, there is a possibility that buried prehistoric archaeological materials could be discovered during ground-disturbing activities during the construction phase of the project. Prior to the start of construction activities, the Project Applicant or its contractor will obtain the services of an archaeological monitor who can identify resources and minimize impacts on buried deposits, if present.

Mitigation Measure CR-3: Archaeological Resources—Stop Work if Human Remains are Encountered during Construction Activities

If human remains are encountered during construction, the Project Applicant or its contractor will notify the County Coroner immediately, as required by County Ordinance No. B6-18.Because this measure will be implemented along with Mitigation Measure CR-2, a qualified archeologist will already be onsite. If the County Coroner determines that the remains are Native American, the Coroner will then contact the NAHC, pursuant to HSC Section 7050.5[c]. S/he will also contact the County Coordinator of Indian Affairs. There will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie human remains until the County Coroner has determined that no investigation of the cause of death is required.

If the Coroner determines that the remains are not subject to their authority, they will notify the NAHC, who will attempt to identify descendants of the deceased Native American, who will be consulted as to proper treatment of Native American remains and any associated grave goods. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this state law, then the land owner will re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.

Mitigation Measure CR-4: Paleontological Resources—Stop Work if Vertebrate Remains are Encountered during Construction

If vertebrate fossils are discovered during construction, work will stop within a 100-foot radius of the find until a qualified professional paleontologist can assess the nature and importance of the find and recommend appropriate treatment. Treatment will include preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university

collection, and may also include preparation of a report for publication describing the finds. The project proponent will be responsible for ensuring that the paleontologist's recommendations regarding treatment and reporting are implemented.

Impact CR-3: Erosion or Usage of the Project Area that Could Expose Buried Archaeological Resources Due to Long-Term Use of the Area (less than significant with mitigation)

~~**Proposed Project**~~

Long-term use of the area could result in the exposure of buried archaeological resources that were not visible or uncovered during archaeological survey, or construction of the project. This could result from frequent human use, foot traffic, vehicular traffic, maintenance or construction activities, and any activities that could cause erosion within the project area. This would be a *potentially significant* impact. Implementation of **Mitigation Measure CR-5** would reduce the impact to a *less-than-significant* level.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, long-term use of the 130-Unit Alternative area could result in the exposure of buried archaeological resources that were not visible or uncovered during archaeological survey, or construction of the project. This could result from frequent human use, foot traffic, vehicular traffic, maintenance or construction activities, and any activities that could cause erosion within the project area. This would be a *potentially significant* impact. Implementation of **Mitigation Measures CR-5** would reduce this impact to a *less-than-significant* level.~~

Mitigation Measure CR-5: Consult with a Qualified Archaeologist to Identify Resources and Assess Impacts

If archaeological resources are uncovered as a result of long-term use of the project area, resulting from the implementation of the Project ~~or the 130-Unit Alternative~~, the Project Applicant will consult with a qualified archaeologist to identify the resource, assess the potential significance of the discovery, and assess and mitigate the impacts as appropriate to the resources and level of impacts, as required by CEQA.

Chapter 3.12
Population and Housing

Introduction

This chapter provides a discussion of the population and housing issues related to the Proposed Project ~~and the 130-Unit Alternative~~ in the Carmel Valley. This chapter includes a review of existing conditions based on available literature and a summary of local, state, and federal policies and regulations related to population and housing. Analyses of the environmental impacts of the Proposed Project ~~and the 130-Unit Alternative~~ are discussed in this section.

Impact Summary

Table 3.12-1 provides a summary of the potential population and housing impacts of the Proposed Project ~~and the 130-Unit Alternative~~. As shown in **Table 3.12-1**, the Proposed Project ~~and the 130-Unit Alternative~~ would have no significant adverse impacts related to population and housing within the project area.

Table 3.12-1. Population and Housing Impact Summary

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance after Mitigation
A. Induce Population Growth				
POP-1: Induce Substantial Population Growth In Excess of Adopted Land Use Plans And That Would Result in Significant Secondary Physical Effects on the Environment	~~Potentially significant (for induced traffic)~~	LTS	~~None feasible to avoid all traffic impacts (Proposed Project)~~ None required ~~(130-Unit Alternative)~~	~~--~~ ~~SU (for traffic for Proposed Project~~
B. Cause Displacement of People or Housing				
POP-2: Displacement of Existing Housing or Population	~~LTS~~	LTS	None Required	--
LTS = Less than Significant; SU				

Environmental Setting

Population Trends

According to the U.S. Census, the total population of Monterey County was 415,057 for the year 2010, a 3% increase from the 2000 Census. The project site is located within Census Tract[1] (CT) 116.02. **Table 3.12-2** shows population numbers for 2000 and 2010 and projected population estimates for 2020 and 2030 based on U.S. Census and Association of Monterey Bay Area Governments (AMBAG) projection data for the County, Carmel Valley Village[2], Carmel Valley[3], Carmel-by-the-Sea, and CT 116.02.

Table 3.12-2. Population Trends in Monterey County by Area

Area	Population, 2000	Population, 2010	Population, 2020 estimate	Population, 2030 estimate
Monterey County	401,762	415,057	447,516	479,487
Census Tract 116.02[4]	--	5,266	--	--
Carmel-by-the-Sea	4,081	3,722	3,541	3,789
Carmel Valley Village CDP (Census Designated Place)	4,700	4,407	--	--
Carmel Valley CCD (County Census Division)	6,281	5,933	--	--
Unincorporated Monterey County	100,252	100,213	102,847	104,028

Sources: Association of Monterey Bay Area Governments 2014; U.S. Census Bureau 2000, 2010.

Between 2010 and 2035, the population of the County as a whole is expected to increase with a compound annual growth rate of 0.71% (Association of Monterey Bay Area Governments 2014). This will lead to an overall 19.28% increase in population by the year 2035.

Race and Ethnicity

Monterey County is an ethnically diverse community. In 2010, approximately 32.9% of the population in Monterey County identified themselves as "white." Approximately 55.4% identified themselves as "Hispanic or Latino" of any race. **Table 3.12-3** shows percentage of population in Monterey County by race and actual numbers for 2010 (U.S. Census Bureau 2010).

[1] A Census Tract (CT) is a small, relatively permanent subdivision of a county. The boundaries of a CT may follow either visible features, governmental unit features, or other non-visible features. A Census Tract is designed to be a relatively homogenous unit with respect to population characteristics, economic status, and living conditions (U.S Census Bureau).

[2] Carmel Valley Village CDP is a census-designated place. A CDP is a "closely settled, named, unincorporated communit[y] that … contain[s] a mixture of residential, commercial, and retail areas similar to those found in incorporated places of similar sizes" (U.S. Census Bureau).

[3] Carmel Valley CCD is a census county division. A CCD is a "geographic statistical subdivision of [a] count[y] established cooperatively by the Census Bureau and officials of state and local governments," created in order to "establish and maintain a set of subcounty units that have stable boundaries and recognizable names" (U.S. Census Bureau).

[4] Census Tract 116.02 was not documented in 2000 Census and is not mentioned in AMBAG projections.

Table 3.12-3. 2010 Race Characteristics of Monterey County

Race	Population, 2010	Percentage, 2010
Hispanic or Latino (of any race)	230,003	55.4%
Not Hispanic or Latino	185,054	44.6%
White	136,435	32.9%
Black or African American	11,300	2.7%
American Indian and Alaska Native	1,361	0.3%
Asian	23,777	5.7%
Native Hawaiian and Other Pacific Islander	1,868	0.5%
Some Other Race	741	0.2%
Two or More Races	9,572	2.3%
Total population	**415,057**	**--**

Source: U.S. Census Bureau 2010.

Employment and Income

In 2012, a total of 6,000 wage and salary jobs were created in Monterey County, representing an increase of 3.6%. On an annual basis, this is the fastest increase since 1999, and total employment has now surpassed its pre-recession peak. In 2012, growth was primarily driven by the farm sector, which increased at a rate of 10.1%. The unemployment rate also improved, falling from 12.7% in 2011 to 11.5% in 2012. Between 2013 and 2018, job growth is expected to average 1.2% per year (California Department of Transportation 2013).

Data from the 2009–2014 Housing Element indicates that 28 % of households within unincorporated Monterey County were considered to be low or very low income[5] (Monterey County 2010). **Table 3.12-4** describes the income and poverty status of the greater project area.

Table 3.12-4. 2012 Income Characteristics in Monterey County

Geographic Area	Median Household Income	Percentage at or below poverty
County of Monterey	$ 60,143	13.9%
Census Tract 116.02	$ 108,558	1.6%
Carmel Valley Village	$ 82,097	--
Carmel Valley	$ 81,129	8.9%
Carmel-by-the-Sea	$ 72,582	4.9%

Source: 2006–2010 American Community Survey (ACS) 5-Year Estimates, U.S. Census Bureau 2010.

In 2012, the median household income for Monterey County ($60,143) was slightly below the statewide median during the same time ($61,400) (American Community Survey 2008–2012). Within CT 116.02, the median household income was approximately 35% greater than the countywide median.

[5] Very low income = households at or below 50% of areawide median income. Low income households are those that are between 51 and 80% of the areawide median income.

According to state and federal definitions, a household is considered to be overpaying for housing when they spend more than 30% of their annual income on housing costs. In 2010, approximately 32% of all households within the County were overpaying for housing. The percentage of households overpaying significantly increased with those making less than $35,000 annually (Monterey County 2010).

Housing

Future growth, including the creation of housing, is determined by the County and included in the 2010 Monterey County General Plan. The County experienced a significant growth in housing between 1970 and 1980 as housing units were added at an average rate of 2,700 units per year (Monterey County 2003). However, from 1990 to 2003, the housing pace slowed to an average of 1,048 new units per year (Monterey County 2003). Between October 2005 and 2006, 240 new housing units were developed in the unincorporated area of the County (Monterey County 2007). New housing permit applications slowed in 2009 (95 new housing permits were issued) after 239 new housing permits were issued in 2008. There was a moderate recovery in new housing permits issued in 2010 at 169 permits (Monterey County 2011).

Table 3.12-5 illustrates selected housing characteristics for the County, CT 116.02, Carmel Valley Village, Carmel Valley, and Carmel-by-the-Sea.

Table 3.12-5. 2010 Selected Housing Characteristics in Monterey County

Geographic Area	Total Housing Units	Percentage Owner-Occupied Units	Percentage Renter-Occupied Units	Percentage for Seasonal or Recreational Use	Median Housing Value (2010$)	Median Gross Rent (2010$)
County of Monterey	139,048	50.9%	49.1%	3.7%	$566,300	$1,123
Census Tract 116.02	2,767	69.4%	30.6%	--	$1,000,000+	$1,728
Carmel Valley Village	2,156	70.0%	30.0%	5.0%	$941,100	$1,202
Carmel Valley	3,176	70.4%	29.5%	11.3%	$953,200	$1,289
Carmel-by-the-Sea	3,417	56.4%	43.6%	31.1%	$1,000,000+	$1,692

Source: 2006–2010 American Community Survey (ACS) 5-Year Estimates, U.S. Census Bureau 2010.

In 2010, only 8.4% of all residential units in unincorporated Monterey County were multi-family units, while single-family units comprised 84% of the total housing stock (Monterey County 2010). Single-family units have accounted for the majority of new construction in the unincorporated areas of the County in recent years. Since 2000, there has been a decrease in mobile homes in the unincorporated areas (Monterey County 2010).

In 2002, 241 units in Carmel Valley were reported to be “affordable” rental housing units, and were designated for elderly, disabled, and family housing. No affordable housing units were available for homeownership within Carmel Valley (Monterey County 2003). In 2009, the County facilitated and assisted a number of affordable housing developments. These projects include Cynara Court (58 rental units in downtown Castroville); Sunflower Gardens—formerly called Casas del Sol (18 supportive housing units in Salinas); Axtell Apartments (58 rental units in Castroville), and the Camphora Project (44 units near Soledad) (Monterey County 2010).

The median housing price in Monterey County was $566,300 in 2010, whereas the median housing price in CT 116.02 was $1,000,000+ (U.S. Census Bureau 2010). It can be inferred from historical data, that the median housing price within CT 116.02 and Carmel Valley are significantly higher than the countywide median.

According to the AMBAG, Monterey County is projected to experience a higher percentage increase in population and employment than housing within the next few decades. Between the planning years of 2010 and 2035, the County as a whole will experience a population increase of 19.28%, while housing stock will increase by approximately 13.62% (Association of Monterey Bay Area Governments 2014).

Regulatory Setting

This section discusses the local policies and regulations that are relevant to the analysis of population and housing issues of the Proposed Project ~~and the 130-Unit Alternative~~.

Federal and State Regulations

There are no relevant federal or state policies or regulations that regulate housing and population-related resources that would apply to the Proposed Project ~~or the 130-Unit Alternative~~.

Local Policies and Regulations

The 2010 *Monterey County General Plan* (2010 General Plan) and 2013 *Carmel Valley Master Plan* (2013 CVMP) guide development in the project area. The General Plan encompasses all of the unincorporated areas in the County. The following discussion summarizes the goals and policies of the relevant general and master plans with respect to population and housing.

Current County Plans and Policies

2010 Monterey County General Plan

The 2010 General Plan presents goals and policies that guide the general distribution and intensity of land uses, including residential, agricultural, commercial and industrial, public facilities, and open space uses, for lands in the County outside the Coastal Zone (Monterey County 2010). The 2010 General Plan thereby enables the County to direct growth to areas within or near existing developed areas in order to preserve and minimize impacts on natural and agricultural resources, public services, and infrastructure.

Housing Element

The 2010 General Plan Housing Element presents goals and policies intended to address housing related issues through the 2009–2014 planning period. The following policies are applicable to populations and housing resources, within and near the Project site.

> ***Goal H-3:*** Provide suitable sites for housing development which can accommodate a range of housing by type, size, location, price, and tenure that achieves an optimal jobs/housing balance, conserves resources, and promotes efficient use of public services and infrastructure.

Policy H-3.2: Place the first priority for planning for residential growth in Community Areas near existing or planned infrastructure to ensure conservation of the County's agricultural and natural resources.

Policy H-3.4: Blend new housing into existing residential neighborhoods within established Community Areas, reflecting a character and style consistent with the existing areas and providing a diverse mix of price levels and unit types.

Policy H-3.7: Work to achieve balanced housing production proportional to the job based housing demand in each region of the unincorporated areas.

Policy H-3.8: Continue to explore collaboration with the cities to prepare growth strategies encouraging the development of a range of housing types within and adjacent to cities and near jobs in order to assure that housing will be available for all segments of the population.

Land Use Element

Policy LU-1.19: Community Areas, Rural Centers and Affordable Housing Overlay districts are the top priority for development in the unincorporated areas of the County. Outside of those areas, a Development Evaluation System shall be established to provide a systematic, consistent, predictable, and quantitative method for decision-makers to evaluate developments of five or more lots or units and developments of equivalent or greater traffic, water, or wastewater intensity. The system shall be a pass-fail system and shall include a mechanism to quantitatively evaluate development in light of the policies of the General Plan and the implementing regulations, resources and infrastructure, and the overall quality of the development. Evaluation criteria shall include but are not limited to:

a. Site Suitability
b. Infrastructure
c. Resource Management
d. Proximity to a City, Community Area, or Rural Center
e. Mix/Balance of uses including Affordable Housing consistent with the County Affordable/Workforce Housing Incentive Program adopted pursuant to the Monterey County Housing Element
f. Environmental Impacts and Potential Mitigation
g. Proximity to multiple modes of transportation
h. Jobs-Housing balance within the community and between the community and surrounding areas
i. Minimum passing score

Residential development shall incorporate the following minimum requirements for developments in Rural Centers prior to the preparation of an Infrastructure and Financing Study, or outside of a Community Area or Rural Center:

1) 35% affordable/Workforce housing (25% inclusionary; 10% Workforce) for projects of five or more units to be considered.
2) If the project is designed with at least 15% farmworker inclusionary housing, the minimum requirement may be reduced to 30% total.

This Development Evaluation System shall be established within 12 months of adopting this General Plan.

2013 Carmel Valley Master Plan

The 2013 CVMP was enacted as part of the 2010 General Plan and is intended to guide future land use within the 2013 CVMP plan area boundary. Specifically the plan area boundary is defined as "the primary watershed of the Carmel River from SR 1 to just east of Carmel Valley Village, except for the upper reaches of Garzas Creek and Robinson Canyon" (Monterey County 2010). Key 2013 CVMP land use policies and regulations relevant to the Proposed Project ~~and 130-Unit Alternative~~ are noted below.

General Land Use

CV- 1.6 New residential subdivision in Carmel Valley shall be limited to creation of 190 new units as follows:

a. There shall be preference to projects including at least 50% affordable housing units.

b. Lots developed with affordable housing under the Inclusionary Housing Ordinance or an Affordable Housing Overlay (Policy LU-2.12) may have more than one unit per lot. Each unit counts as part of the total unit cap.

c. Existing lots with five (5) acres or more may have the first single family dwelling plus one accessory dwelling unit. Units added on qualifying existing lots shall not count as part of the total unit cap. New accessory dwelling units or single family dwellings beyond the first single family dwelling shall be prohibited on lots with less than five (5) acres, except that this provision shall not apply to projects that have already been approved, environmental review for such units has already been conducted, and in which traffic mitigation fees have been paid for such units prior to adoption of this Carmel Valley Master Plan.

d. New lots shall be limited to the first single family dwelling. Accessory dwelling units and single family dwellings beyond the first single family dwelling shall be prohibited.

e. Of the 190 new units, 24 are reserved for consideration of the Delfino property (30 acres consisting of APN: 187-521-014-000, 187-521-015-000, 187-512-016-000, 187-512-017-000, 187-512-018-000, and 187-502-001-000) in Carmel Valley Village (former Carmel Valley Airport site) to enable subdivision of the property into 18 single family residential lots and one lot dedicated for six affordable/inclusionary units, provided the design of the subdivision includes at least 14 acres available for community open space use subject to also being used for subdivision related water, wastewater, and other infrastructure facilities.

Residential Land Use

CV-1.27: Special Treatment Area: Rancho Cañada Village – Up to 40 acres within properties located generally between Val Verde Drive and the Rancho Cañada Golf Course, from the Carmel River to Carmel Valley Road, excluding portions of properties in floodplain shall be designated as a Special Treatment Area. Residential development may be allowed with a density of up to 10 units/acre in this area and shall provide a minimum of 50% Affordable/Workforce Housing. Prior to beginning new residential development (excluding the first unit on an existing lot of record), projects must address environmental resource constraints (e.g.; water, traffic, flooding). (APN: 015-162-017-000, 015-162-025-000, 015-162-026-000, 015-162-039-000 and 015-162-040-000, 015-162-033-000, 015-162-035-000, 015-162-036-000, 015-162-037-000, 015-162-038-000, 015-021-005-000).

Inclusionary Housing Ordinance

The County also assures consistent application of an Inclusionary Housing Ordinance (Chapter 18.40 of the Monterey County Code), which requires that 20% of units/lots in new residential developments be affordable to very low, low, and moderate income households. The Inclusionary Housing Ordinance applies to developments of three or more units/lots and exempts farm worker housing and mobile home parks. Requirements of the Inclusionary Housing Ordinance can be met through on-site provision, off-site provision, and payment of in-lieu fees. Developments of three or four units/lots are expected to meet the inclusionary obligations through payment of in-lieu fees, although the developer has the option to build an inclusionary unit instead. Developments of five or more units/lots are expected to meet the inclusionary obligation through the development of inclusionary housing units. Inclusionary units are restricted for affordability in perpetuity.

Prior County Plans and Policies

As stated in Chapter 1, *Introduction*, discussion pertaining to the 1982 General Plan and the 1986 CVMP is provided for informational purposes only.

1982 Monterey County General Plan

Residential

Goal 27: to encourage various types of residential development that are accessible to major employment centers and at locations and densities which allow for the provision of adequate public services and facilities.

Objective 27.1: Designate adequate sites for a variety of residential development

Policy 27.1.1: Sufficient areas for residential use shall be designated consistent with the County's growth policies and projections.

Policy 27.1.3: Residential development should be concentrated in growth areas.

Policy 27.1.4: If appropriate, high density residential areas shall be designated closest to urban areas or unincorporated communities.

Objective 27.2: Provide for adequate access and circulation within residential areas

Policy 27.2.1: Residential areas shall be located with convenient access to employment, shopping, recreation, and transportation. High density residential areas should also be located with convenient access to public transit.

1986 Carmel Valley Master Plan

The 1986 CVMP is a component of the 1982 General Plan. The major function of the 1986 CVMP is to guide the future development of the valley using goals and policies that reflect an understanding of the physical, cultural and environmental setting of the area.

Residential Land Use

27.3.5 (CV): The Carmel Valley development limit shall consist of the existing 572 buildable lots of record, plus 738 additional lots which shall be subject to the quota and allocation system and the policies of this Plan governing deduction from the quota for additional units, caretakers, senior citizen, and low and moderate income units. This constitutes the 20-year buildout

allowed by this Plan. The existing lots of record shall include the remaining 150 lots in the amended Carmel Valley Ranch Specific Plan.

27.3.6 (CV): All development proposals shall make provision for low or moderate income housing in accordance with the Inclusionary Housing Ordinance, except that all development shall build such units on- site. Low and moderate-income residential units shall be counted as part of the total new residential units and subtracted yearly from the quota and not the allocation.

27.3.9 (CV): Projects for low- or moderate-income family housing shall be exempt from any annual allocation provisions, but shall be subtracted from the 20-year buildout quota on a basis of one such unit reducing the remaining buildout by one unit.

Impact Analysis

Methods of Analysis

Identifying a project's impacts on population and housing involves a review of the AMBAG's 2014 population, housing, and employment projection forecasts and the U.S. Census data for 2000 and 2010.

Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, applicable local plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

A. Induce Population Growth

- Induce substantial population growth in an area, either directly or indirectly, in excess of that anticipated in local land use plans, and that would result in significant secondary physical effects on the environment.

B. Cause Displacement of People or Housing

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Impacts and Mitigation Measures

A. Induce Population Growth

Impact POP-1: Induce Substantial Population Growth In Excess of Adopted Land Use Plans and That Would result in Significant Secondary Physical Effects on the Environment. (~~Significant and Unavoidable for the Proposed Project;~~ less than significant ~~for the 130-Unit Alternative~~)

~~Proposed Project~~

~~The Proposed Project would result in the addition of 281 residential units within the project area and would accommodate an approximate 849 residents. According to AMBAG, Monterey County is expected to experience an approximate 15% growth increase between the planning years 2010 and 2030 (Association of Monterey Bay Area Governments 2014). Specifically, unincorporated Monterey County (which includes Carmel Valley) is anticipated to experience a 4% growth increase (a population increase of 3,815) between the planning years 2010 and 2030 (Association of Monterey Bay Area Governments 2014). The population upon build-out of the Proposed Project would account for approximately 20% of the projected growth for the unincorporated area of the County.~~

~~The Proposed Project would include 56 Affordable and Workforce units (20% of the total of 281 units) dedicated to inclusionary housing (6% of houses for very low-income, 6% of houses for low-income, and 8% of houses for moderate-income households), and 84 units (30% of the total) dedicated to Workforce I and II housing. Thus, the Proposed Project would meet and exceed the requirements in the Inclusionary Housing Ordinance.~~

~~The proposed addition of 281 new residential units would induce population growth by creating housing opportunities in excess of what is currently available. However, this increase would not be substantially above the level of development currently projected by AMBAG for the region.~~

~~However, the 2013 CVMP Policy CV-1.6 only allows for 190 units in the CVMP area from new subdivision. The Proposed Project's 281 units would exceed that limitation and thus the project would result in an exceedance of 91 units of the planned residential growth in the 2013 CVMP (see **Appendix E**). Therefore, approval of the Proposed Project would require the County to amend CVMP Policy CV-1.6 to allow for the creation of 305 new residential subdivision units in CVMP. The increase would accommodate the 281 units for the Proposed Project and the 24 units reserved for the Delfino property which would be an increase of 125 housing units in the CVMP area above that allowed by the current plan.~~

~~Inconsistency with land use policies is not inherently considered a significant physical impact on the environment under CEQA unless the policy was adopted for the purpose of avoiding a significant physical impact and the project exceedance would result in a new significant physical impact or would make an existing significant impact substantially more severe. The housing unit limitation in the CVMP has a role in managing physical impacts, including water supply and traffic along Carmel Valley Road and adjoining roads. While the Proposed Project would not have a significant impact on water supply (see discussion in Chapter 3.10, *Public Services, Utilities and Recreation*) it would result in certain significant unavoidable traffic impacts, especially where current traffic conditions already exceed CVMP standards. As such, the exceedance of Policy CV-1.6 would result in growth inducement beyond local planning policies and this would contribute to significant traffic impacts. As this is primarily a traffic impact, the consideration of mitigation is provided in Chapter 3.7 (*Transportation and Traffic*); as concluded therein, even after mitigation, this is considered a *significant and unavoidable* impact.~~

~~130 Unit Alternative~~

<u>According to AMBAG, Monterey County is expected to experience an approximate 15% growth increase between the planning years 2010 and 2030 (Association of Monterey Bay Area Governments 2014). Specifically, unincorporated Monterey County (which includes Carmel Valley) is anticipated to experience a 4% growth increase (a population increase of 3,815) between the</u>

planning years 2010 and 2030 (Association of Monterey Bay Area Governments 2014). The population upon build-out of the Proposed Project would account for approximately 10.3% of the projected growth for the unincorporated area of the County.

The Proposed Project would include 25 moderate inclusionary units, and thus would ~~The 130-Unit alternative would~~ comply with the County's Inclusionary Housing Ordinance and provide 20% of the proposed housing units as moderate inclusionary units.

~~Similar to the Proposed Project, the 130-Unit Alternative~~ The Project would result in the addition of 130 residential units in Carmel Valley, which~~. However, the number of residential units would be reduced from 281 to 130. The proposed addition of 130 new residential units~~ would induce population growth by creating housing opportunities in excess of what is currently available. However, this increase would not be substantially above the level of development currently projected by AMBAG for the region.

As noted above, CVMP Policy CV-1.6 allows for 190 units in the CVMP area from new subdivision from the time of adoption of the 2010 General Plan, of which 24 units are reserved for the Delfino property. Through 2014, no units have been permitted or built, leaving 190 units for new development and the Project,~~130-Unit alternative~~ if approved, would leave a remaining 60 units for new development, of which 24 units would be reserved for the Delfino property.~~.~~[6] Thus, the Project ~~130-Unit Alternative~~, including only the consideration of the 130 units at the project site, would not result in a higher level of housing or population growth in the CVMP area than anticipated in the adopted CVMP. This impact would be *less than significant*. No mitigation is required.

The Project ~~130-Unit Alternative~~ includes a proposal to transfer 60 acre-feet per year (AFY) of potable water to Cal-Am. As discussed in Chapter 3.10, *Public Services, Utilities*, *and Recreation,* Cal-Am is currently overwithdrawing water and there is no water available for new growth. Thus, the transfer of the 60 AFY of potable water to Cal-Am would remove a barrier to growth and would induce population growth in the region. However, the growth facilitated by the provision of water would only be that which is allowed by local plans in Monterey County and within cities in Monterey County where the water may be used. As such, the water transfer would induce growth, but not growth in excess of that anticipated in local plans and thus, the impact would be *less than significant*. No mitigation is required.

Regarding the secondary impacts of induced growth on the environment, please see discussion in Chapter 4 under *Growth Inducing Impacts*.

B. Cause Displacement of People or Housing

Impact POP-2: Displace Existing Housing or Population (less than significant)

~~**Proposed Project**~~

~~The Proposed Project would be built on a golf course that does not currently support residential housing. No residences or individuals would be displaced by the Proposed Project. This impact would be *less than significant*. No mitigation is required.~~

[6] Since the prior EIR was certified, 31 units have been permitted or built, leaving 159 units for new development and the Project, if approved, would leave a remaining 34 units for new development, of which 24 units would be reserved for the Delfino property.

~~130-Unit Alternative~~

~~Similar to the Proposed Project, the 130-Unit Alternative~~ The Project would be built on a golf course that does not currently support residential housing. ~~Maintenance facilities are located on Lot 130.~~ Therefore, the Project ~~130-Unit Alternative~~ would not displace residences or individuals. This impact would be *less than significant*. No mitigation is required.

Chapter 3.13
Greenhouse Gas Emissions and Climate Change

Introduction

This chapter provides a discussion of the greenhouse gas (GHG) emissions and climate change issues related to the Proposed Project ~~and the 130-Unit Alternative~~ in Carmel Valley. This chapter provides a review of existing conditions based on available literature; a summary of applicable local, state, and federal policies and regulations related to GHG emissions and climate change; and an analysis of direct and indirect environmental impacts that could result from the Proposed Project ~~and the 130-Unit Alternative~~. Where feasible, mitigation measures are recommended to reduce the level of significant impacts to a less than significant level.

Important to note is that increasing GHG emissions are inherently a cumulative impact concern. There are billions of sources of individual anthropogenic (i.e., human created or caused) GHG emissions that are currently contributing to increased concentrations of GHGs in the atmosphere. The majority of scientific research has found that this cumulative increase in atmospheric concentrations of carbon dioxide (CO_2) and other GHGs due to human-made emissions is currently resulting in increasing global temperatures and associated indicators of climate change.

Given the scale of the planet's atmosphere, an individual project's GHG emissions cannot change the atmospheric concentrations of GHGs in any meaningful way when considered in complete isolation from all other existing and future GHG emissions. However, the aggregation of cumulative existing and future sources of emissions, including a project's emissions, is significant based on the projections of current climate change research. Consequently, the focus of this section is to evaluate if the Proposed Project's ~~and the 130-Unit Alternative's~~ GHG emissions would contribute considerably to the significant cumulative impact of climate change.

This section also analyzes whether localized effects of future climate change, such as sea level rise, are expected to have impacts on the Project ~~and 130-Unit Alternative~~, but this information is provided only for informational purposes as the impacts of the environment on the project are not impacts on the environment as defined under CEQA according to recent case law (California Supreme Court ruling in CBIA vs. BAAQMD case).

Impact Summary

Table 3.13-1 provides a summary of the potential GHG emissions and climate change impacts of the Proposed Project ~~and the 130-Unit Alternative~~. As shown in **Table 3.13-1**, the Proposed Project ~~and the 130-Unit Alternative~~ would result in potentially significant impacts related to GHG emissions. However, with the implementation of mitigation measures described in this ~~Recirculated Draft~~ Second Revised Draft EIR, all GHG emissions impacts listed would be reduced to less-than-significant levels.

Table 3.13-1. Greenhouse Gas Emissions and Climate Change Impact Summary

Impact	~~Proposed Project Level of Significance~~	~~130-Unit Alternative~~ Level of Significance	Mitigation Measure	Level of Significance After Mitigation
A. Contribute to Climate Change Impacts				
GHG-1: Result in Project-Related Greenhouse Gas Emissions, during Construction and Operation, that Could Contribute to Climate Change Impacts and be Inconsistent with the Goals of Assembly Bill 32	~~Potentially Significant~~	Potentially Significant	GHG-1: Implement Best Management Practices for Greenhouse Gas Emissions during Construction GHG-2: Reduce Annual Greenhouse Gas Emissions to below the Efficiency Threshold Using a Combination of Design Features, Replanting, and/or Offset Purchases	LTS
B. Effects of Climate Change				
GHG-2: Result in Significant Exposure of Persons or Property to Reasonably Foreseeable Impacts of Climate Change	~~Not applicable~~	Not Applicable	None Required	–

LTS = Less-than-Significant

– = not applicable

Environmental Setting

Research Methods

The following literature was reviewed to assess GHG emissions and climate change conditions in the project area.

- *2005 Draft Unincorporated Monterey County Greenhouse Gas Emissions Inventory* (Association of Monterey Bay Area Governments 2010).
- *2010 Monterey County General Plan Final EIR* (Monterey County 2010).
- CEQA Air Quality Guidelines (Monterey Bay Unified Air Pollution Control District 2008).
- *Our Changing Climate 2012: Vulnerability & Adaptation to the Increasing Risks from Climate Change in California* (California Energy Commission 2012).
- *Climate Change 2014: Synthesis Report* (Intergovernmental Panel on Climate Change 2013).

Background Information

Greenhouse Gas and Climate Change

According to the U.S. Environmental Protection Agency (EPA), a GHG is any gas that absorbs infrared radiation in the atmosphere. This absorption traps heat within the atmosphere, maintaining Earth's surface temperature at a level higher than would be the case in the absence of GHGs. GHGs include water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3), perfluorochemicals (PFCs), hydrofluorocarbon (HFCs), and halogenated chlorofluorocarbons. Naturally occurring GHGs include water vapor, CO_2, CH_4, N_2O, and O_3. Human activities add to the levels of most of these naturally occurring gases.

Increasing levels of GHGs in the atmosphere result in an increase in the temperature of Earth's lower atmosphere, a phenomenon that is commonly referred to as *global warming*. Warming of the Earth's lower atmosphere induces a suite of additional changes, including changes in global precipitation patterns; ocean circulation, temperature, and acidity; global mean sea level; species distribution and diversity; and the timing of biological processes. These large-scale changes are collectively referred to as *global climate change*.

The Intergovernmental Panel on Climate Change (IPCC) was established by the World Meteorological Organization and United Nations Environment Programme to assess scientific, technical, and socioeconomic information relevant to the understanding of climate change and its potential impacts and to provide options for adaptation and mitigation. As the leading authority on climate change science, IPCC's best estimates are that average global temperature rise between 2000 and 2100 could range from 0.5 °F to 8.6 °F (Intergovernmental Panel on Climate Change 2013). Large increases in global temperatures, as high as 8.6 °F, could have massive deleterious impacts on natural and human environments.

Since the Industrial Revolution began in approximately 1750, the concentration of CO_2 in Earth's atmosphere has increased from 270 parts per million (ppm) to roughly 391 ppm. Atmospheric concentrations of CH_4 and N_2O have similarly increased since the beginning of the industrial age. Since 1880, the global average surface temperature has increased by 1.5 °F, global average sea level has risen by nearly 190 millimeters (since 1901), and northern hemisphere snow cover (data available since 1920) has decreased by nearly 3 million square kilometers. These recently recorded changes can be attributed with a high degree of certainty to increased concentrations of GHGs in the atmosphere (Intergovernmental Panel on Climate Change 2013). Sinks of CO_2 (which remove rather than emit CO_2) include uptake by vegetation and dissolution into the ocean. Global GHG emissions greatly exceed the removal capacity of natural sinks.[1] As a result, concentrations of GHGs in the atmosphere are increasing (California Energy Commission 2006).

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs). Criteria air pollutants and TACs occur locally or regionally, and local concentrations respond to locally implemented control measures. The long atmospheric lifetimes of GHGs allow them to be transported great distances from sources and become well-mixed, unlike criteria air pollutants, which typically exhibit strong concentration gradients away from point sources. GHGs and global

[1] A sink removes and stores GHGs in another form. For example, vegetation is a sink because it removes atmospheric CO_2 during photosynthesis and stores the gas as a chemical compound in its tissues.

climate change represent cumulative impacts. GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change.

Principal Greenhouse Gases

The GHGs listed by the IPCC include CO_2, CH_4, N_2O, HFCs, PFCs, and sulfur hexafluoride (SF_6) (Intergovernmental Panel on Climate Change 2013). California law and the State CEQA Guidelines contain a similar definition of GHGs (Health and Safety Code Section 38505[g]; 14 California Code of Regulations Section 15364.5). Water vapor, the most abundant GHG, is not included in this list because its natural concentrations and fluctuations far outweigh its anthropogenic sources.[2] The sources and sinks of each of these gases are discussed in detail below. Generally, GHG emissions are quantified and presented in terms of metric tons of carbon dioxide equivalent (CO_2e) emitted per year.

The primary GHGs associated with the Project are CO_2, CH_4, and N_2O. HFCs, PFCs, and SF_6 are associated primarily with industrial processes and, therefore, are not discussed in this chapter.

To simplify reporting and analysis, GHGs are commonly defined in terms of a global warming potential (GWP). The IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of CO_2e. The GWP of CO_2 is, by definition, 1. The GWP values used in this Second Revised Draft ~~Recirculated Draft~~ EIR are based on the IPCC Fifth Assessment Report (AR5) and United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines and are defined in **Table 3.13-2** (Intergovernmental Panel on Climate Change 2013). The AR5 GWP values are used in the California Air Resource Board's (ARB's) California inventory and Assembly Bill (AB) 32 Scoping Plan estimate update (Air Resources Board 2014).

Table 3.13-2. Lifetime, Global Warming Potential, and Abundance of Key Greenhouse Gas Emissions

Gas	Global Warming Potential (100 years)	Lifetime (years)[a]	2014 Atmospheric Abundance
CO_2 (ppm)	1	50–200	394
CH_4 (ppb)	28	9–15	1,893
N_2O (ppb)	265	121	326

Sources: Myhre et al. 2013; Air Resources Board 2014.
Notes:

[a] Defined as the half-life of the gas.

CH_4 = methane.

CO_2 = carbon dioxide.

N_2O = nitrous oxide.

ppb = parts per billion.

ppm = parts per million.

[2] Although water vapor plays a substantive role in the natural greenhouse effect, the change in GHGs in the atmosphere due to anthropogenic actions is enough to upset the radiative balance of the atmosphere and result in global warming.

Existing Conditions

Climate Change in California and Monterey County

Climate change is a complex phenomenon that has the potential to alter local climatic patterns and meteorology. Even with the efforts of jurisdictions throughout the state, a certain amount of climate change is inevitable due to existing and unavoidable future GHG emissions worldwide.

Climate change effects in California include, but are not limited to, sea level rise, extreme heat events, increase in infectious diseases and respiratory illnesses, and reduced snowpack and water supplies.

In the greater Monterey County area, including the project site, climate change effects are expected to result in the following conditions.

- A hotter climate, with average annual temperatures increasing by 2.9 to 4.9 °F in Monterey County by 2090, relative to baseline conditions (1961–1990) (California Energy Commission 2014).
- Increased sea level rise risk, with acreage vulnerable to a 100-year flood event increasing by 11 percent in Monterey County by 2100 (California Energy Commission 2014).
- More frequent and intense wildfires, with the area burned projected to increase by an estimated 10 to 15 percent in Monterey County by 2050 and 19 to 28 percent by 2100 (California Energy Commission 2014).
- Changes in growing season conditions and species distribution (PRBO Conservation Science 2011).
- Increased heat and decreased air quality, with the result that public health will be placed at risk, and native plant and animal species may be lost (PRBO Conservation Science 2011).

Emissions at Project Site

The project site's existing (baseline) emission sources include visitor vehicle trips, water consumption, waste generation, and landscaping as a result of the 18-hole golf course currently operating at the site. According to the Traffic Impact Study (TIS), the existing golf course attracts 414 trips per day. As described in Section 3.10, *Public Services and Utilities*, the golf course consumes an average of 204.8 acre-feet of irrigation per year, which results in indirect GHG emissions associated with electricity consumption to pump, treat, and supply the water. **Table 3.13-3** presents annual GHG emissions associated with existing activity at the project site.

Existing emissions are assumed to be replaced with implementation of ~~either~~ the Proposed Project ~~or the 130-Unit Alternative~~.

Table 3.13-3. Existing Operational Greenhouse Gas Emission at Project Site

Emissions Category	CO_2	CH_4	N_2O	CO_2e
Area	<1	0.3	<0.0	<1
Mobile	368	<0.1	<0.1	368
Waste	<1	<0.1	<0.1	1
Water	45	0.6	<0.1	46
Existing GHG Emissions from Golf Course Operations	**413**	**<0.1**	**<0.1**	**415**

Source: CalEEMod Emissions Modeling (**Appendix F** to this Second Revised ~~Recirculated~~ Draft EIR).

Notes:

CH_4 = methane.

CO_2 = carbon dioxide.

CO_2e = carbon dioxide equivalent.

GHG = greenhouse gas.

N_2O = nitrous oxide.

Regulatory Setting

Federal Policies and Regulations

Although climate change and GHG reductions are concerns at the federal level, no comprehensive federal legislation or regulations have been enacted related to GHG emissions reductions and climate change specifically. Foremost among past developments have been the U.S. Supreme Court's decision in *Massachusetts et al. v. U.S. Environmental Protection Agency*, the "Endangerment Finding," and the "Cause or Contribute Finding," which are described below. Despite these findings, the future of GHG regulation at the federal level remains uncertain and continues to evolve. Recent activity includes proposed standards for CO_2 emissions from new fossil fuel–fired electricity power plants by EPA. EPA and President Obama's Climate Action Plan aims to reduce GHG emissions in the United States by 26–28 percent below 2005 levels by 2025. In addition, EPA proposed the Clean Power Plan in 2014, which would be the first to establish national GHG limits for the electric power industry.

Massachusetts et al v. Environmental Protection Agency (2007)

In *Massachusetts et al. v. Environmental Protection Agency* 549 U.S. 497 (2007), the U.S. Supreme Court held that GHG emissions are pollutants within the meaning of the Clean Air Act (CAA). In issuing the opinion, the court also acknowledged that climate change results, in part, from anthropogenic causes. The Supreme Court's opinion in this case allowed EPA to regulate GHG emissions.

U.S. Environmental Protection Agency Endangerment Finding and Cause or Contribute Finding (2009)

On December 7, 2009, EPA signed the Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the CAA.

- Under the Endangerment Finding, EPA finds that the current and projected concentrations of the six key well-mixed GHGs, CO_2, CH_4, N_2O, PFCs, SF_6, and HFCs, in the atmosphere threaten the public health and welfare of current and future generations.
- Under the Cause or Contribute Findings, EPA finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

Although EPA has yet to issue specific regulations regulating GHG emissions, the EPA Administrator's findings were the first step toward future regulations that are currently under development.

Corporate Average Fuel Economy Standards (2010/2011)

The current Corporate Average Fuel Economy (CAFE) standards for vehicles, which went into effect in 2012, incorporate stricter fuel economy standards into one uniform federal standard. The standards are equivalent to those previously promulgated by the State of California (see the Assembly Bill 1493 discussion below).

In October 2012, EPA and the National Highway Traffic Safety Administration (NHTSA) established the final rule for fleet-wide passenger car and light-truck model years 2017 to 2025. The new CAFE standards aim to reach an emissions rating of 163 grams of carbon monoxide (CO) per mile, or the equivalent of 54.5 miles per gallon (mpg), by model year 2025. Fleet-wide fuel economy standards will become more stringent with each subsequent model year through 2025. Because of a statutory requirement that requires NHTSA to set average fuel economy standards 5 model years at a time, NHTSA requires model years 2017 to 2022 to have an industry fleet-wide average of 40.3 to 41.0 mpg and estimates that 2025 model year vehicles will range from 48.7 to 49.7 mpg (U.S. Environmental Protection Agency 2012).

EPA Clean Power Plan (2014)

On June 2, 2014, EPA, under President Obama's Climate Action Plan, proposed a Clean Power Plan, which would be the first to establish national GHG limits for the electric power industry. The proposed rule contains state-specific emission-reduction goals and will help cut carbon pollution from the power sector by 30 percent from 2005 levels.

EPA and NHTSA Fuel Economy for Medium and Heavy Duty Engines and Vehicles (2011/2015)

On August 9, 2011, EPA and NHTSA announced a new national program to reduce GHG emissions and improve fuel economy for new medium- and heavy-duty engines and vehicles sold in the U.S. EPA and NHTSA finalized a joint rule (Phase 1) that established a national program consisting of new standards for engines in model years 2014 through 2018, which would reduce CO_2 emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of vehicles built for the 2014 to 2018 model years.

EPA and NHTSA are currently working on Phase 2 standards, which would reduce CO_2 emissions associated with model year 2018 and beyond.

State Policies and Regulations

California has adopted statewide legislation to address issues related to various aspects of climate change and GHG emissions mitigation. Much of this legislation establishes a broad framework for the state's long-term GHG emissions-reduction and climate change adaptation program. Previous California Governors have also issued several executive orders related to the state's evolving climate change policy. Of particular importance to local governments is the direction provided by the 2008 AB 32 Scoping Plan, which recommends that local governments reduce their GHG emissions to a level consistent with state goals (i.e., 15 percent below current levels).

Absent federal regulations, GHG emissions are generally regulated at the state level and typically approached by setting emissions-reduction targets for existing sources of GHG emissions, establishing policies to promote renewable energy and increase energy efficiency, and developing statewide action plans. Summaries of key policies, legal cases, regulations, and legislation at the state level relevant to the County are provided below. Key statewide GHG regulations that are directly applicable to the Project are included.

Senate Bill 350

SB 350 (De Leon, also known as the "Clean Energy and Pollution Reduction Act of 2015") was approved by the California legislature in September 2015 and by the Governor in October 2015. Its key provisions are to require the following by 2030: (1) a renewables portfolio standard of 50 percent and (2) a doubling of efficiency for existing buildings.

Assembly Bill 1493—Pavley Rules (2002, Amendments 2009)/Advanced Clean Cars (2011)

AB 1493 required ARB to develop and implement regulations to reduce automobile and light-truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009 model year. In June 2009, the EPA Administrator granted a CAA waiver of preemption to California. This waiver allowed California to implement its own GHG emissions standards for motor vehicles beginning with model year 2009. ARB approved joint rulemaking efforts to reduce GHG emissions from passenger cars (model years 2017 to 2025) on December 31, 2012 (Air Resources Board 2014).

Renewable Energy Standard/Renewable Portfolio Standard (2002/2006/2011)

Senate Bill (SB) 1078 (2002) and SB 107 (2006) created the Renewable Energy Standard (RES), which required electric utility companies to increase procurements from eligible renewable energy resources by at least 1 percent of their retail sales annually until reaching 20 percent by 2010. SB 2X 1 (2011) requires a Renewable Portfolio Standard (RPS), functionally the same thing as the RES, of 33 percent by 2020. In 2012, the statewide average for the three largest electrical suppliers (Pacific Gas and Electric, Southern California Edison, and San Diego Gas & Electric) was 20 percent.

Assembly Bill 32—The Global Warming Solutions Act of 2006

AB 32 codified the state's GHG emissions target by requiring California's global warming emissions to be reduced to 1990 levels by 2020. Since AB 32 was adopted, ARB, the California Energy Commission, the California Public Utilities Commission, and the California Building Standards

Commission have been developing regulations that will help the state meet the goals of AB 32 and Executive Order (EO) S-03-05 (described below). The scoping plan for AB 32 identifies specific measures to reduce GHG emissions to 1990 levels by 2020 and requires ARB and other state agencies to develop and enforce regulations and other initiatives to reduce GHG emissions. Specifically, the scoping plan articulates a key role for local governments by recommending that they establish GHG emissions-reduction goals for both their municipal operations and the community that are consistent with those of the state (i.e., approximately 15 percent below current levels) (Air Resources Board 2008).

ARB reevaluated its emissions forecast in light of the economic downturn and updated the projected 2020 emissions to 545 million MTs of carbon dioxide equivalent ($MMTCO_2e$). Two reduction measures (Pavley I and RPS [12 percent to 20 percent]) that were not previously included in the 2008 scoping plan baseline were incorporated into the updated baseline, further reducing the 2020 statewide emissions projection to 507 $MMTCO_2e$. The updated forecast of 507 $MMTCO_2e$ is referred to as the AB 32 2020 baseline. An estimated reduction of 80 $MMTCO_2e$ is necessary to lower statewide emissions to the AB 32 target of 427 $MMTCO_2e$ by 2020 (Air Resources Board 2011).

ARB approved the *First Update to the Scoping Plan* on May 22, 2014, and finalized the environmental analysis following public review on May 15, 2014 (Air Resources Board 2014). The first update includes both a 2020 element and a post-2020 element. The 2020 element focuses on the state, regional, and local initiatives that are being implemented now to help the state meet the 2020 goal. The post-2020 element provides a high-level view of the long-term strategy for meeting the 2050 GHG goals, consistent with the goals set forth in EO S-3-05 and EO B-16-2012 (described below).

Executive Order B-30-15 (2015)

EO B-30-15 established a medium-term goal for 2030 of reducing GHG emissions by 40 percent below 1990 levels and requires ARB to update its current AB 32 Scoping Plan to identify the measures to meet the 2030 target. The executive order supports EO S-3-05, described above, but is currently only binding on agencies.

Executive Order S-03-05 (2005) and Executive Order B-16-2012 (2012)

EO S-03-05 was designed to reduce California's GHG emissions to (1) 2000 levels by 2010, (2) 1990 levels by 2020, and (3) 80 percent below 1990 levels by 2050. EO B-16-2012 establishes benchmarks for reducing transportation-related GHG emissions. It requires agencies to implement the Plug-in Electric Vehicle Collaborative and California Fuel Cell Partnership by 2015 and sets forth targets specific to the transportation sector, including the goal of reducing transportation-related GHG emissions to 80 percent less than 1990 levels.

Executive Order S-01-07, Low-Carbon Fuel Standard (2007)

Former Governor Arnold Schwarzenegger set forth the low-carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020. On July 15, 2013, the Fifth District Court of Appeals ruled to allow LCFS regulations to remain operative while ARB analyzes the smog-related impacts of LCFS implementation, including formulation of appropriate enforceable mitigation measures, and subsequently completes a full CEQA review, provided ARB attempts to meet its statutory requirements in good faith (see *Poet, LLC et al. v. California Air Resources Board* et al.). The CEQA

process is currently under way. Additionally, on September 18, 2013, the Ninth Circuit Court of Appeals denied a petition for review *in Rocky Mountain Farmers Union v. Corey,* lending finality to the Ninth Circuit Court's decision that the LCFS does not facially violate the dormant Commerce Clause, which most likely removes the most substantial hurdle to the LCFS's constitutional validity under the dormant Commerce Clause (California Environmental Law Blog 2014).

Senate Bill 375, Statutes of 2008

Senate Bill (SB) 375 requires metropolitan planning organizations to incorporate a sustainable communities strategy (SCS) in their regional transportation plans that will achieve the GHG emissions-reduction targets set by ARB. In February 2011, ARB finalized the regional targets. SB 375 also includes provisions for streamlined CEQA review for some infill projects, such as transit-oriented development.

The Association of Monterey Bay Area Governments (AMBAG) is the metropolitan planning organization for the Monterey Bay Area. AMBAG adopted its regional transportation plan/sustainable communities strategy (RTP/SCS) in compliance with SB 375 in June 2014. The RTP/SCS calls for GHG emissions associated with the passenger and light-duty sector that match 2005 per capita levels in 2020 and that are 5 percent below 2005 per capita levels by 2035.

State CEQA Guidelines (2011)

The 2011 State CEQA Guidelines include a new section (Section 15064.4) that specifically discusses the significance of GHG emissions. Section 15064.4 calls for a good-faith effort when describing, calculating, or estimating GHG emissions. Section 15064.4 also states that a determination of the significance of GHG impacts should consider whether the project would increase or reduce GHG emissions, exceed a locally applicable threshold of significance, or comply with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The revisions also state that a project may be found to have a less-than-significant impact if it complies with an adopted plan that includes specific measures to reduce GHG emissions sufficiently (Section 15064(h)(3)). However, the revised guidelines neither require nor recommend a specific analysis methodology or provide quantitative criteria for determining the significance of GHG emissions.

Cap and Trade (2012)

On October 20, 2011, ARB adopted the final cap-and-trade program for California. The California cap-and-trade program is a market-based system with an overall emissions limit for affected sectors. Examples of affected entities include carbon dioxide suppliers, in-state electricity-generators, hydrogen production, petroleum refining, and other large-scale manufacturers and fuel suppliers. The cap-and-trade program is currently regulating more than 85 percent of California's emissions. Compliance requirements began according to the following schedule: (1) electricity generation and large industrial sources (2012) and (2) fuel combustion and transportation (2015).

Local Policies and Regulations

Monterey Bay Unified Air Pollution Control District

As discussed in Section 3.8, *Air Quality*, Monterey Bay Unified Air Pollution Control District (MBUAPCD) has primary responsibility for developing and implementing rules and regulations to attain the national ambient air quality standards and California ambient air quality standards, permitting new or modified sources, developing air quality management plans, and adopting and enforcing air pollution regulations for all projects in Monterey County.

The AB 32 Scoping Plan does not provide an explicit role for local air districts with respect to implementing AB 32, but it does state that ARB will work actively with air districts in coordinating emissions reporting, encouraging and coordinating GHG reductions, and providing technical assistance in quantifying reductions. The ability of air districts to control emissions (both criteria pollutants and GHGs) is provided primarily through permitting, but also through their role as a CEQA lead or commenting agency, the establishment of CEQA thresholds, and the development of analytical requirements for CEQA documents (Monterey Bay Unified Air Pollution Control District 2008).

MBUAPCD drafted potential quantitative thresholds for projects undergoing CEQA review in February 2014. The draft thresholds include a 10,000-metric ton (MT) threshold for stationary sources and a tiered approach for land use projects, whereby one of the following is applied: a bright-line (numeric) of 2,000 MT; incorporation of mitigation measures to achieve 16 percent reduction from Business as Usual (BAU); or compliance with an adopted climate action plan (Monterey Bay Unified Air Pollution Control District 2014). However, MBUAPCD has not formally adopted these thresholds, and they remain in draft form. Additional consultation with MBUAPCD staff indicates use of these draft thresholds would be inappropriate for use in determining significance (Clymo pers. comm.). MBUAPCD staff has suggested potential use of the CEQA thresholds adopted by the San Luis Obispo Air Pollution Control District (SLOAPCD). However, the SLOAPCD's thresholds were specifically developed in the context of San Luis Obispo County, not Monterey County and, thus, use of its thresholds is not necessarily appropriate within Monterey County. Instead, as explained below, this Second Revised Draft ~~Recirculated Draft~~ EIR uses a different threshold that is related to the land use sector GHG efficiency. This threshold uses the same efficiency concept recommended by SLOAPCD, although the threshold used is slightly different for the reasons explained below.

Current County Plans and Policies

2010 Monterey County General Plan

The 2010 General Plan provides a general direction for future growth throughout the unincorporated areas of the County. The General Plan includes *Policy OS-10.11*, which adopted a GHG emissions reduction target of 15 percent below 2005 levels by 2020 and required development of a GHG reduction plan for the county by 2013. The 2010 General Plan *Policy OS-10.11* applies to the Proposed Project ~~and 130-Unit Alternative~~.

2013 Carmel Valley Master Plan

The 2013 *Carmel Valley Master Plan* contains no relevant policies pertaining to GHG emissions and climate change that are applicable to the Proposed Project ~~and 130-Unit Alternative~~.

Prior County Plans and Policies

As stated in Chapter 1, *Introduction*, discussion pertaining to the 1982 Monterey County General Plan is provided for informational purposes only.

1982 Monterey County General Plan

The 1982 Monterey County General Plan contains no relevant policies pertaining to GHG emissions and climate change that are applicable to the Proposed Project ~~and 130-Unit Alternative~~.

1986 Carmel Valley Master Plan

The 1986 Carmel Valley Master Plan contains no relevant policies pertaining to GHG emissions and climate change that are applicable to the Proposed Project ~~and 130-Unit Alternative~~.

Impact Analysis

Methodology

This evaluation of GHG emissions and climate change is based on professional standards and information cited throughout this chapter. The key effects were identified and evaluated based on the environmental characteristics of the project site and the magnitude, intensity, and duration of activities related to the construction and operation of the Proposed Project ~~and 130-Unit Alternative~~.

Construction-Related Emissions

Construction of the Proposed Project ~~and 130-Unit Alternative~~ would generate GHG emissions from mobile and stationary construction equipment exhaust and on-road vehicle exhaust associated with material deliveries and worker commute trips. Construction-related GHG emissions were estimated using a combination of emission factors within the CalEEMod emissions model (version 2013.2.2), emission factors from EMFAC 2014, a detailed inventory of construction phasing information for the Proposed Project ~~and 130-Unit Alternative~~ from the Project Applicant, and default assumptions for building construction within CalEEMod. A detailed inventory of construction phasing, equipment, and vehicle trips was obtained from the Project Applicant. A detailed inventory of data used to estimate construction-related emissions is presented in **Appendix F**.

Operation-Related Emissions

The project ~~Project~~ site's existing (baseline) emission sources include visitor vehicle trips, water consumption, waste generation, and landscaping due to the 18-hole golf course currently operating at the site. Existing emissions, as shown in **Table 3.13-3**, are assumed to be replaced with implementation of ~~either~~ the Proposed Project ~~or 130-Unit Alternative~~. Once constructed, the Proposed Project ~~and 130-Unit Alternative~~ would result in the long-term generation of GHG

emissions associated with residential motor vehicle travel, energy consumption, water consumption, and wastewater and solid waste generation.

GHG emissions associated with Proposed Project ~~and 130-Unit Alternative~~ operations were estimated using the CalEEMod model, based on motor vehicle trip generation data from the traffic impact analysis (**Appendix F**) and CalEEMod defaults for electricity, natural gas, water consumption, and wastewater and solid waste generation for the Proposed Project ~~and 130-Unit Alternative~~ land uses. ~~2016~~Analysis was based on an estimation of 2016 as the first year of project's operation ~~Either alternative is assumed to be fully constructed and operational in~~. Assuming a 2016 operational year represents a conservative assumption, in that emissions per rate of activity (e.g., per vehicle mile traveled) would decline over time through fleet turnover and modernization. Thus, the use of a 2016 operational year will slightly overstate the operational emissions.

With regard to emission sources, indirect operational GHG emissions were also estimated for the Proposed Project ~~and 130-Unit Alternative~~ operations. Indirect emission sources include energy, waste, and water and wastewater-related emissions. Energy emissions include emissions associated with building electricity and non-hearth natural gas usage. Water and wastewater GHG emissions are those associated with supplying and treating water and wastewater for land use facilities. Waste GHG emissions are those associated with disposal of solid waste into landfills. GHG emission factors and methodology used to calculate indirect GHG emissions associated with the Proposed Project ~~Project and 130-Unit Alternative~~ are based on CalEEMod default values for the proposed land uses.

Net emissions are presented at the annual time scale and are compared with the GHG thresholds discussed below.

Approach to Developing Significance Criteria

There are no established statewide, regional, or county significance criteria for evaluating GHG emissions or climate change impacts. The approach to developing significance criteria to evaluate climate change and GHG impacts in this Second Revised Draft ~~Recirculated Draft~~ EIR is discussed below. This section also addresses the approach to determining impacts of climate change on the Project ~~and 130-Unit Alternative~~.

Project Contribution to Climate Change Impacts

The State CEQA Guidelines do not define the amount of GHG emissions that would constitute a significant impact on the environment. Instead, the guidelines leave the determination of the significance of GHG emissions up to the lead agency and authorize the lead agency to consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence (State CEQA Guidelines 15064.4[a], 15064.7[c]).

As noted above, MBUAPCD has not yet established a threshold by which to evaluate impacts related to climate change and does not recommend use of their draft thresholds. The County has adopted no GHG Reduction Plan for the community as a whole. Consequently, impacts related to climate change are evaluated based on the Project's ~~and 130-Unit Alternative's~~ consistency with the GHG efficiency necessary for the state's land use sector overall.

GHG emissions for the land use sector include those portions of the overall statewide inventory that are related to residential and commercial land uses. This is the portion of the statewide inventory

most related to the Proposed Project. It includes emissions associated with electricity, transportation, landfill disposal of solid waste, wastewater treatment, and direct fuel use of commercial and residential land uses. It excludes other parts of the statewide inventory that are not related to residential and commercial land uses such as aviation and marine transportation fuel use, industrial fuel use, industrial solid waste, industrial wastewater treatment, agricultural, and other non-related uses. Using this definition, land use sector GHG emissions in 1990 statewide were approximately 264.1 $MMTCO_2e$ (see **Appendix F**).

As noted above, the AB 32 target overall is for 2020 emissions to return to 1990 levels. In the land use sector, this would mean that the land use sector would need to return to 264.1 $MMTCO_2e$. However, there will be more residential and commercial activity in 2020 compared to 1990 due to population and economic growth. A common way to benchmark the GHG efficiency needed for land use development projects is by dividing the land use emissions by the "Service Population" (SP, which is the sum of population and employees. At a statewide level, the Department of Finance estimates that the 2020 estimated population would be 40,619,346 and the Employment Development Division (EDD) estimates that the 2020 estimated number of employees would be 18,223,080, for a 2020 SP of 58,842,426. Dividing the 2020 emissions for the land use sector consistent with AB 32 (264.1 $MMTCO_2e$) by the SP (58,842,426), the resultant necessary GHG efficiency for the land use sector is 4.5 $MTCO_2e$/SP. This is the threshold used for evaluating significance in this Second Revised Draft EIR.

This approach has been recommended by a number of regional air pollution control agencies including two air districts adjacent to the MBUAPCD. The Bay Area Air Quality Management District (BAAQMD) recommends a significance threshold of 4.6 $MMTCO_2e$/SP. The SLOAPCD recommends a significance threshold of 4.9 $MTCO_2e$/SP. Both BAAQMD and SLOAPCD calculated these thresholds using the exact same methodology as described above. However, BAAQMD and SLOAPCD used a slightly different estimate for the land use sector than noted above; specifically, they did not exclude certain emissions that are excluded in the land use sector estimate noted above, so they have slightly higher estimates of the land use sector emissions. In addition, BAAQMD and SLOAPCD estimated their thresholds several years ago and the current estimates of 2020 population and employment are different than those used by BAAQMD and SLOAPCD. Since the methodology used by BAAQMD and SLOAPCD is the same, and only the data used to derive the threshold used in this Second Revised Draft EIR differs, the rationale used by BAAQMD and SLOAPCD for their efficiency threshold is hereby incorporated by reference as supporting evidence for the appropriateness of using an efficiency threshold for this Second Revised Draft EIR (BAAQMD 2011, SLOAPCD 2012). Furthermore, the proposed threshold used in this Second Revised Draft EIR is slightly more conservative than the threshold recommended by the two adjacent air districts using the adjusted land use inventory and current population and employment estimates.[3]

U.S. Supreme Court rulings (*Nollan vs. California Coastal Commission* and *Dolan vs. City of Tigard*) establish the principles that the U.S. Constitution limits exactions on new development to only those that have a "nexus" and "rough proportionality" to the impact actually caused by the new development. While there is a nexus for requiring GHG reductions for new development that results in new GHG emissions, the reductions mandated must be proportional to the impact caused by new

[3] As noted above, MBUAPCD recommended the project utilize the SLOAPCD thresholds. While this Second Revised Draft EIR does not use SLOAPCD thresholds, this Second Revised Draft EIR does use a method consistent with the project-efficiency threshold recommended by SLOAPCD.

development. As a result, it is proportional to require new development to meet the average statewide GHG efficiency, but requiring more than average levels of efficiency would be mitigating the effects of existing development by imposing requirements beyond the fair share of new development. As such, the efficiency threshold is an appropriate and fair threshold for evaluation of the significant of new land use development.

Climate Change Impacts on the Project

As described in the *Environmental Setting* section, at the local level, climate change effects on Monterey County water supplies, flooding, wildfire potential, environmental health, and other areas are reasonably foreseeable, although not quantifiable in many aspects at present. New development could expose persons and property to these effects. Developing strategies to adapt to foreseeable changes in climate would make new and existing development more resilient to future conditions. It should be noted that due to a number of recent appellate court rulings (most prominently *Ballona Wetlands Land Trust et al. v. City of Los Angeles* (2011) 201 Cal.App.4th 455 (*Ballona Wetlands*), and especially due to the 2015 California Supreme Court ruling in the California Building Industry Association vs. Bay Area Air Quality Management District (CBIA vs. BAAQMD), the general rule is that the impacts of the environment on a project, such as sea level rise due to climate change, are not CEQA impacts because they are not impacts of the project on the environment. This Second Revised Draft ~~Recirculated Draft~~ EIR provides an analysis for informational purposes only as such an analysis is not legally required under CEQA.

Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, 2010 General Plan goals ~~plans~~ and policies, and agency and professional standards, a project impact would be considered significant if the project would:

A. Contribute to Climate Change Impacts

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Specifically, project-related GHG emissions are considered significant if they are more than 4.5 metric tons per Service Population. This level is the statewide average for land use development needed to meet AB 32 targets in 2020.
- Conflict with an applicable plan, policy, or regulation adopted for reducing the emissions of GHGs.

B. Effects of Climate Change (Informational Only)

- Result in new development that is unprepared for reasonably foreseeable environmental changes due to climate change and, thus, would subject property and persons to additional risk of physical harm related to flooding, public health, wildfire risk, and other impacts. As noted above, this analysis is provided for informational purposes only and no significance determination is provided.

Impacts and Mitigation Measures

A. Contribute to Climate Change Impacts

Impact GHG-1: Result in Project-Related Greenhouse Gas Emissions, during Construction and Operation That Could Contribute to Climate Change Impacts and be Inconsistent with the Goals of Assembly Bill 32 (less than significant with mitigation)

~~**Proposed Project**~~

~~As noted in **Table 3.13-3**, the current GHG emissions at the project site associated with the existing golf course are an estimated 415 MT of CO_2 per year. With construction and operation of the Proposed Project, the GHG emissions would change as existing operation of the golf course would be replaced with development associated with the Proposed Project.~~

~~***Temporary Construction Emissions***~~

~~Construction of the Proposed Project would result in emissions from fuel combustion of off- and on-road construction equipment and vehicles that contribute to GHG impacts. **Table 3.13-4** presents an estimate of GHG emissions associated with construction of the Proposed Project elements. This construction impact would be *potentially significant* but would be reduced to a less-than-significant level with implementation of **Mitigation Measure GHG-1**, which would help reduce construction-related GHG emissions.~~

~~**Table 3.13-4. Proposed Project Construction Greenhouse Gas Emissions (metric tons)**~~

~~Category~~	~~CO_2~~	~~CH_4~~	~~N_2O~~	~~CO_2e~~
~~Site Development~~	~~398~~	~~0.1~~	~~0.1~~	~~416~~
~~Building Construction~~	~~2,969~~	~~0.4~~	~~<0.1~~	~~2,979~~
~~Haul Trucks for Off-site Fill Import~~	~~605~~	~~<0.1~~	~~<0.1~~	~~605~~
~~**Total Construction GHG Emissions**~~	~~**3,972**~~	~~**0.5**~~	~~**0.1**~~	~~**4,000**~~

~~Source: ICF Emissions Modeling (**Appendix F** to this Recirculated Draft EIR).~~
~~Notes:~~
~~CH_4 = methane.~~
~~CO_2 = carbon dioxide.~~
~~CO_2e = carbon dioxide equivalent.~~
~~GHG = greenhouse gas.~~
~~N_2O = nitrous oxide.~~

~~**Permanent Emissions Sources**~~

~~Two key components would affect GHG emissions.~~

- ~~Project operational emissions due to direct and indirect emissions associated with building energy, transportation, waste generation, and water.~~
- ~~Increase in carbon sequestration due to new habitat creation.~~

As shown in **Table 3.13-5**, unmitigated long-term operations (assuming a 2016 operating year) of the Proposed Project would result in net increase of 5,151 $MTCO_2e$ per year over existing conditions. Also shown in **Table 3.13-5** is the estimated additional carbon sequestration associated with new habitat to be created as part of the Proposed Project and the one-time carbon stock loss associated with removal of the existing trees.

Table 3.13-5. Proposed Project Operational Greenhouse Gas Emissions Increases over Existing Conditions (metric tons/year)

Emissions Category	CO_2	CH_4	N_2O	CO_2e
Area	417	0.3	<0.0	430
Electricity	332	<0.1	<0.1	334
Natural Gas	446	<0.1	<0.1	448
Mobile	4,234	0.2	<0.1	4,240
Waste	56	3.3	<0.1	148
Water	35	0.6	<0.1	56
Sequestration from new habitat	*-88*	*<0.1*	*<0.1*	*-88*
Gross Annual Emissions	5,431	4.4	0.1	**5,556**
Existing Emissions from Golf Course Operations	413	<0.1	<0.1	415
Existing Trees Removed	*11*	*<0.1*	*<0.1*	*11*
Net Annual Emissions[1]	5,029	4.4	<0.1	**5,152**
Service Population				*849*
Net Annual Emissions/Service Population				**6.07**

Source: CalEEMod Emissions Modeling (**Appendix F** of this Recirculated Draft EIR).

Notes:

CH_4 = methane.

CO_2 = carbon dioxide.

CO_2e = carbon dioxide equivalent.

GHG = greenhouse gas.

N_2O = nitrous oxide.

[1] Gross annual emissions – existing golf course emissions + existing removed tree emissions.

Alone, the Proposed Project–related emissions would not result in climate change or global warming. However, climate change is a cumulative impact resulting from the collective emissions of the state, the country, and the planet as a whole. These emissions would contribute cumulatively to Monterey County, California, and global emissions that would result in significant changes to the local, state, national, and global physical environment. Without mitigation, these emissions would also have an adverse effect on the ability of California as a whole to meet the reduction targets in AB 32 because they would exceed the GHG efficiency needed overall in the land use sector.

This operational impact would be *potentially significant*. **Mitigation Measure GHG-2** would mitigate emissions to a *less-than-significant* level through a combination of design features (such as energy efficiency or renewable energy), tree replanting, and/or offset purchases sufficient to achieve necessary emission reductions. The County would apply this mitigation in whole or by phases and the County will not approve the development without having an overall plan in place or a plan for the next development in place.

~~**Table 3.13-6** below shows that if the state measures and project-level mitigation noted above are incorporated into the design, operational GHG emissions would be less than the significance threshold. The table shows the results of statewide measures (Pavley, Advanced Clean Cars, LCFS, RPS, Title 24) as well as project-level mitigation (GHG-2). Although this scenario is hypothetical in relation to the project-level, it shows that reduction of emissions to below the significance criterion is feasible.~~

~~**Table 3.13-6. Proposed Project Operational Greenhouse Gas Emissions Increases over Existing Conditions with State Measures and Potential Project Mitigation (metric tons/year)**~~

~~Emissions Category~~	~~CO_2~~	~~CH_4~~	~~N_2O~~	~~CO_2e~~
~~Area~~	~~203~~	~~<0.1~~	~~<0.1~~	~~204~~
~~Electricity~~	~~247~~	~~<0.1~~	~~<0.1~~	~~249~~
~~Natural Gas~~	~~371~~	~~<0.1~~	~~<0.1~~	~~373~~
~~Mobile~~	~~3,332~~	~~0.2~~	~~<0.1~~	~~3,336~~
~~Waste~~	~~28~~	~~1.6~~	~~<0.1~~	~~69~~
~~Water~~	~~27~~	~~0.5~~	~~<0.1~~	~~42~~
~~*Sequestration from new habitat*~~	~~*-88*~~	~~*<0.1*~~	~~*<0.1*~~	~~*-88*~~
~~Gross Annual Emissions (with mitigation)~~	~~4,119~~	~~2.3~~	~~<0.1~~	~~**4,185**~~
~~Existing Emissions from Golf Course~~	~~413~~	~~<0.1~~	~~<0.1~~	~~415~~
~~*Existing Trees Removed*~~	~~*11*~~	~~*<0.1*~~	~~*<0.1*~~	~~*11*~~
~~Net Annual Emissions (with mitigation)[1]~~	~~3,717~~	~~2.3~~	~~<0.1~~	~~**3,781**~~
~~*Service Population*~~				~~*849*~~
~~**Net Annual Emissions/Service Population**~~				~~**4.45**~~

~~Source: CalEEMod Emissions Modeling (**Appendix F** of this Recirculated Draft EIR). Assumes implementation of state measures and project-specific measures (described under GHG-2).~~

~~Notes:~~

~~CH_4 = methane.~~

~~CO_2 = carbon dioxide.~~

~~CO_2e = carbon dioxide equivalent.~~

~~GHG = greenhouse gas.~~

~~N_2O = nitrous oxide.~~

~~[1] Gross annual emissions – existing golf course emissions + existing removed tree emissions~~

~~[2] See **Table 3.13-5**.~~

~~**130-Unit Alternative**~~

As noted in **Table 3.13-3**, the current GHG emissions at the project site associated with the existing golf course are an estimated 415 MT of CO_2e per year. With construction and operation of the Project ~~130-Unit Alternative~~, the GHG emissions would change as the existing operation of the golf course would be replaced with development associated with the Project ~~130-Unit Alternative~~.

Temporary Construction Emissions

Construction of the Project~~130-Unit Alternative, including Lot 130,~~ would result in emissions from fuel combustion of off- and on-road construction equipment and vehicles that contribute to GHG

impacts, but in quantities different from those for the Proposed Project. **Table 3.13-47** presents an estimate of GHG emissions associated with Project construction ~~of 130-Unit Alternative~~. This construction impact would be *potentially significant* but would be reduced to a *less-than-significant* level with implementation of **Mitigation Measure GHG-1**, which would help reduce construction-related GHG emissions.

Table 3.13-47. ~~130-Unit Alternative~~ Construction GHG Emissions (metric tons)

Category	CO_2	CH_4	N_2O	CO_2e
Site Development	365	0,1	<0.1	381
Building Construction	1,485	0.2	<0.1	1,490
Total Construction GHG Emissions	1,850	0.3	<0.1	1,871

Source: CalEEMod Emissions Modeling (**Appendix F** of this Second Revised ~~Recirculated~~ Draft EIR).

Notes:

CH_4 = methane.

CO_2 = carbon dioxide.

CO_2e = carbon dioxide equivalent.

GHG = greenhouse gas.

N_2O = nitrous oxide.

Permanent Emissions Sources

~~Similar to the Proposed Project, for the 130-Unit Alternative, two~~ Two key components would affect GHG emissions.

- Project operational emissions due to direct and indirect emissions associated with building energy, transportation, waste generation, and water.
- Increase in carbon sequestration due to new habitat creation.

As shown in **Table 3.13-58**, unmitigated long-term operations (assuming a 2016 operating year) of the Project ~~130-Unit Alternative~~ would result in a net increase of 2,501 $MTCO_2e$ over existing conditions. Also shown in **Table 3.13-58** is the estimated additional carbon sequestration associated with new habitat to be created as part of the Project ~~130-Unit Alternative, which is assumed the same as for the Proposed Project~~.

Table 3.13-5~~8~~. ~~130-Unit Alternative~~ Operational GHG Emissions Increases over Existing Conditions (metric tons/year)[1]

Emissions Category	CO_2	CH_4	N_2O	CO_2e
~~**130-Unit Alternative**~~				
Area	193	0.1	<0.1	199
Electricity	172	<0.1	<0.1	173
Natural Gas	235	<0.1	<0.1	236
Mobile	2,280	0.1	<0.1	2,283
Waste	31	1.8	<0.1	77
Water	17	0.3	<0.1	25
Sequestration from new habitat	*-88*	*<0.1*	*<0.1*	*-88*
Gross Annual Emissions	2,839	2.4	<0.1	**2,906**
Existing Emissions from Golf Course Operations	*413*	*<0.1*	*<0.1*	*415*
Existing Trees Removed	*11*	*<0.1*	*<0.1*	*11*
Net Annual Emissions[2~~1~~]	2,437	2.3	0.1	**2,501**
Service Population				*393*
Net Annual emissions/Service Population				**6.36**

Source: CalEEMod Emissions Modeling (**Appendix F** of this Second Revised ~~Recirculated~~ Draft EIR).

Notes:

CH_4 = methane.

CO_2 = carbon dioxide.

CO_2e = carbon dioxide equivalent.

GHG = greenhouse gas.

N_2O = nitrous oxide.

[1] Per the 2019 Building Energy Efficiency Standards of the California Building Code, Title 24, Part 6, installation of solar photovoltaic systems is required for all new single-family homes and multi-family homes up to three stories in height. This requirement would apply to all new housing units within the Proposed Project. This analysis does not account for this requirement, and thus represent a conservative estimate of GHG emissions

[2] Gross annual emissions – existing golf course emissions + existing removed tree emissions.

The Project's ~~130-Unit Alternative~~ emissions would not result in climate change or global warming. However, climate change is a cumulative impact resulting from the collective emissions of the state, the country, and the planet as a whole. These emissions would contribute cumulatively to Monterey County, California, and global emissions that would result in significant changes to the local, state, national, and global physical environment. Without mitigation, these emissions would also have an adverse effect on the ability of California as a whole to meet the reduction targets in AB 32 because they would exceed the land use sector GHG efficiency needed overall.

This operational impact would be *potentially significant*. **Mitigation Measure GHG-2** would mitigate emissions to a *less-than-significant* level through a combination of design features (such as energy

efficiency or renewable energy),[4] tree replanting, and/or offset purchases sufficient to achieve necessary emission reductions. The County would apply this mitigation in whole or by phases, and the County would not approve the development without having an overall plan in place or a plan for the next development in place.

Table 3.13-69 below shows that if the state measures and project-level mitigation noted above are incorporated into the design, operational GHG emissions could be reduced to below the significance threshold. The table shows the results of statewide measures (Pavley, Advanced Clean Cars, LCFS, RPS, Title 24) as well as example project mitigation (described under GHG-2).

Table 3.13-69. ~~130-Unit Alternative~~ Operational Greenhouse Gas Emissions Increases over Existing Conditions with State Measures and Potential Project Mitigation (metric tons/year)

Emissions Category	CO_2	CH_4	N_2O	CO_2e
~~**130-Unit Alternative**~~				
Area	94	<0.1	<0.1	94
Electricity	125	<0.1	<0.1	126
Natural Gas	195	<0.1	<0.1	197
Mobile	1,786	0.1	<0.1	1,788
Waste	16	0.9	<0.1	39
Water	11	0.2	<0.1	18
Sequestration from new habitat	*-88*	*<0.1*	*<0.1*	*-88*
Gross Annual Emissions	2,139	1.3	<0.1	**2,174**
Existing Emissions from Golf Course	*413*	*0.1*	*<0.1*	*415*
Existing Trees Removed	*11*	*<0.1*	*<0.1*	*11*
Net Annual Emissions ~~(130-Unit Alternative)~~[1]	1,736	1.2	<0.1	**1,770**
Service Population				*393*
Net Annual Emissions/Service Population				***4.50***

Source: CalEEMod Emissions Modeling (**Appendix F** of this Second Revised Draft ~~Recirculated~~ EIR). Assumes implementation of state measures and project-specific measures (described under GHG-2).

Notes:

CH_4 = methane.

CO_2 = carbon dioxide.

CO_2e = carbon dioxide equivalent.

GHG = greenhouse gas.

N_2O = nitrous oxide.

[1] Gross annual emissions – existing golf course emissions + existing removed tree emissions.

[2] See **Table 3.13-58**.

[4] Per the 2019 Building Energy Efficiency Standards of the California Building Code, Title 24, Part 6, installation of solar photovoltaic systems is required for all new single-family homes and multi-family homes up to three stories in height. This requirement would apply to all new housing units within the Proposed Project. The estimates in **Table 3.13-5** do not account for this requirement, and thus represent a conservative estimate of GHG emissions.

Mitigation Measure GHG-1: Implement Best Management Practices for GHG Emissions during Construction

Prior to starting construction activities, the Project Applicant will ensure the construction contractor includes the following BMPs in the construction specifications, to the extent feasible, to reduce construction-related GHG emissions. The contractor will implement the following measures.

- Use alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment for at least 15 percent of the fleet.
- Use local building materials where reasonably available (i.e., within the general Monterey Bay area defined as Monterey County, Santa Cruz County, and San Benito County).
- Recycle at least 50 percent of construction waste or demolition materials.

Prior to issuance of grading or building permits of any phase of this Project ~~or the 130-Unit Alternative~~, the Project Applicant would submit to Monterey County for review and approval a report of construction specifications demonstrating implementation of BMPs.

Mitigation Measure GHG-2: Reduce Annual Greenhouse Gas Emissions to below the Efficiency Threshold Using a Combination of Design Features, Replanting, and/or Offset Purchases

The Project Applicant will develop and implement a GHG Reduction Plan to reduce annual emissions of the Proposed Project to ~~3,820MTCO$_2$e per year for the Proposed Project or~~ 1,770 MTCO$_2$e per year ~~for the 130-Unit Alternative~~. The GHG Reduction Plan would be provided to Monterey County for review and approval prior to grading, or ground disturbance or vegetation removal for any phase of the Proposed Project ~~or 130-Unit Alternative~~. The GHG Reduction Plan would identify the specific design measures proposed to reduce GHG emissions from the Proposed Project ~~or 130-Unit Alternative~~, their timing, and the responsible party.

The GHG Reduction Plan could include the following measures.

<u>Building Energy Use</u>

- Exceed Title 24 building envelope energy efficiency standards (applicable at the time of the building permit issuance) by 20 percent.
- Install programmable thermostat timers and smart meters.
- Obtain third-party heating, ventilation, and air conditioning commissioning and verification of energy savings.
- Install energy-efficient appliances.
- Require cool roof materials.[5]
- Install green roofs.
- Install solar water heaters.

[5] Per EPA ENERGY STAR requirements, cool roofs should have albedo >= 0.25 for sloped roofs and >= 0.65 for low-slope roofs.

- Install tankless water heaters.
- Install solar panels.[6]
- HVAC duct sealing.
- Increase roof/ceiling insulation.

Alternative Energy Generation[7]

- Install onsite solar facilities.
- Utilize a combined heat and power system for commercial facilities.

Lighting

- Install high-efficiency area lighting to reduce indoor and outdoor lighting energy use by 40 percent.
- Limit outdoor lighting.
- Replace traffic lights with LED traffic lights.
- Maximize interior day light.

Transportation

- Provide electric vehicle charging stations.
- Provide preferred electric vehicle parking.
- Implement transit access improvements.
- Expand transit network.
- Provide local shuttle service to and from visitor-serving areas using a hybrid electric, electric, or alternative-fueled shuttle.
- Provide free transit passes for facility employees.

Water

- Install low-flow water fixtures.
- Design water-efficient landscapes and landscape irrigation systems.
- Install rainwater collection systems.
- Install low-water use appliances and fixtures.
- Restrict the use of water for cleaning outdoor surfaces and prohibit systems that apply water to non-vegetated surfaces.

Area Landscaping

[6] Per the 2019 Building Energy Efficiency Standards of the California Building Code, Title 24, Part 6, installation of solar photovoltaic systems is required for all new single-family homes and multi-family homes up to three stories in height. This requirement would apply to all new housing units within the Proposed Project.

[7] Onsite wind facilities are not to be included in any mitigation to avoid potential aesthetic impacts and impacts on coastal birds.

- Use only electric-powered landscaping equipment (not gas powered).

Solid Waste

- Institute or extend recycling and composting services.

Carbon Sequestration

- Plant trees to replace trees removed by the Proposed Project.

Off-Site Mitigation

- Off-site mitigation could take many forms, including:
  - Paying for energy-efficiency upgrades of existing homes and business.
  - Installing off-site renewable energy.
  - Paying for off-site water efficiency.
  - Paying for off-site waste reduction.
  - Other methods.
- Offsite mitigation must be maintained in perpetuity to match the length of project operations to provide ongoing annual emission reductions.

Carbon Offsets

- Purchase offsets from a validated source[8] to offset annual GHG emissions.
- Purchase offsets from a validated source to offset one-time carbon stock GHG emissions.

The GHG Reduction Plan would consist of the measures described below unless the Project Applicant demonstrates that alternative measures will collectively meet the overall performance standard. The Project Applicant will document the application of all final measures to proposed new development and demonstrate their effectiveness.

- State measures that would lower Project emissions (compared to unmitigated conditions):
  - Renewable Portfolio Standard (9.2-percent reduction in electricity emissions).
  - Vehicle efficiency measures (Pavley/Advanced Clean Cars) (17.3-percent reduction in mobile emissions).
- Project measures that could lower Project emissions (compared to unmitigated conditions):
  - Features and measures to exceed Title 24 standards by 20 percent.
  - Features and measures to reduce lighting energy by 40 percent.
  - Features and measures to reduce indoor water usage and consumption by at least 20 percent.

[8] Validated sources are carbon-offset sources that follow approved protocols and use third-party verification. At this time, appropriate offset providers include only those that have been validated using the protocols and methods of the Climate Action Registry, the Gold Standard, or the Clean Development Mechanism (CDM) of the Kyoto Protocol. Credits from other sources will not be allowed unless they are validated by protocols and methods equivalent to or more stringent than the CDM standards.

- Features and measures to reduce outdoor water usage and consumption by at least 44 percent.
- Expanding recycling and composting services to ensure recycling of 50 percent of materials.
- Generate 10 percent of energy needs via on-site renewable energy.
- VMT reductions associated with the inclusion of 25 ~~140~~ affordable (below-market) units ~~for the proposed project and 25 units for the 130-unit alternative~~, consistent with California Air Pollution Control Officers Association (CAPCOA 2010).
- Other VMT reductions include increased transit accessibility (0.25% VMT reduction) and implement neighborhood electric vehicle (NEV) network (0.01% VMT reduction).

B. Effects of Climate Change

Impact GHG-2: Result in Significant Exposure of Persons or Property to Reasonably Foreseeable Impacts of Climate Change (informational only)

~~**Proposed Project**~~

As noted above, in light of the *Ballona Wetlands* appellate court ruling and the CBIA vs. BAAQMD supreme court ruling, current CEQA court precedent has indicated that analysis of the environment's impact on a project, including the effects of climate change, is not required. Nevertheless, this Second Revised Draft ~~Recirculated Draft~~ EIR provides this analysis for informational purposes only.

Climate change impacts in California and Monterey County include sea level rise, extreme heat events, increase in infectious diseases and respiratory illnesses, and reduced snowpack and water supplies. Localized effects at the project site could include increased temperatures and heat stress days.

Because of its geographic location and site elevations ranging from 25 to 40 feet above mean sea level, the project site is not expected to be inundated by the most extreme predicted sea level rise of up to 65.7 inches by 2100 (California Coastal Commission 2013).

In addition, residents and visitors to the project area could be subjected to a range of other potential effects of climate change. For climate-specific changes for California coastal regions, summer temperatures are expected to rise by 1 ° to 3.3 °C (2 ° to 11 °F) by the end of this century (California Energy Commission 2009a:12). Given the coastal location of the project area, while temperature changes could be substantial, they would not be likely to increase the number of heat stress days substantially due to the relatively cooler coastal temperatures. Warmer temperatures may also lead to reduction in coastal fog, which is essential to providing moisture for maintaining the terrestrial ecosystem along the California coastline (California Natural Resources Agency 2009).

Studies also suggest that such decreases in precipitation could result in increased risk of water pollution and spread of infectious diseases in water and seafood (Intergovernmental Panel on Climate Change 2007; California Natural Resources Agency 2009; California Energy Commission 2009a, 2009b; Kahrl and Roland-Holst 2008). Although changes in temperature, fog, water pollution, and disease vectors are possible, projecting the specific effect on the property and persons associated with the Proposed Project is not feasible at this time. While these effects are considered

possible at some point in the future (and thus not entirely speculative), preparing for effects that have not been fully locally characterized yet is not feasible. As such, this does not give rise to a significant effect.

Although other climate change effects are also likely, at this time their local characteristics and extent cannot be specifically estimated with any accuracy. Thus, based on current understanding of climate change effects, the Proposed Project does not appear to result in a significant vulnerability to reasonably foreseeable effects of climate change such that undue risks to persons or property would occur.

~~130-Unit Alternative~~

~~Similar to the Proposed Project, because of its geographic location and elevation, the 130-Unit Alternative site is not expected to be inundated by the most extreme predicted sea level rise of up to 65.7 inches by 2100 (California Coastal Commission 2013).~~

~~The 130-Unit Alternative, including Lot 130, would not exacerbate climate change effects nor create a particular hazard to those potential effects.~~

Chapter 4
Other CEQA-Required Sections

Introduction

This chapter contains analyses of the Proposed Project's ~~and the 130-Unit Alternative's~~ potential to contribute to cumulative impacts in the region, induce growth, and result in significant, irreversible environmental changes. Resource topics for which no significant impacts were identified are also included in this chapter.

Key data sources reviewed in the preparation of this chapter include the following:

- DKS Associates 2007. *Carmel Valley Master Plan Traffic Study*.
- Monterey County 2008. *2007 Monterey County General Plan Draft Environmental Impact Report*.
- Monterey County 2010. *2010 Monterey County General Plan*.
- Monterey County 2013. Amended *Carmel Valley Master Plan*.
- USACE 2014. *Carmel Lagoon Ecosystem Protective Barrier, Scenic Road Protection Structure, and Interim Sandbar Management Plan Project*.
- Monterey County 2014. *County Service Area 50 Lower Carmel River Stormwater and Flood Control Program Update*.
- Central Coast Transportation Consultants 2015. *Rancho Cañada Traffic Impact Study*.
- Carmel River Watershed Conservancy 2015. *Active Projects in the Carmel River Watershed* (re: Lower Carmel River Floodplain Restoration and Environmental Enhancement Program).
- State Water Resources Control Board. 2014/2015. *Eastwood/Odello Water Right Change Petition EIR*.

Cumulative Impacts

CEQA Requirements

Section 15130 of the California Environmental Quality Act (CEQA) Guidelines requires lead agencies to evaluate a proposed undertaking's potential to contribute to cumulative impacts in the project or program area.

Cumulative impact refers to the combined effect of "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (State CEQA Guidelines Sec. 15355). As defined by the State, cumulative impacts reflect:

> [t]he change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future

projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (State CEQA Guidelines Sec. 15355(b)).

CEQA requires the lead agency to identify projects and programs related to the undertaking being analyzed and evaluate the combined (cumulative) effects of those related projects on the environment. If cumulative impacts are identified as significant, the lead agency must then assess the degree to which the proposed undertaking would contribute to those impacts and identify ways of avoiding or reducing any contribution evaluated as "cumulatively considerable" (State CEQA Guidelines Sec. 15130(b)). Lead agencies may use a "list" approach to identify related projects, or may base the identification of cumulative impacts on a summary of projections in an adopted general plan or related planning document.

Assumptions and Methods

The following assumptions and methods were used in this analysis of cumulative impacts.

- A cumulatively considerable impact occurs only if the Proposed Project ~~or 130-Unit Alternative~~ would contribute something to the total cumulative effect. A cumulatively considerable impact is more likely to occur if ~~either~~ the Proposed Project's ~~or 130-Unit Alternative's~~ contribution or the prevailing negative conditions are substantial.
- Pursuant to State CEQA Guidelines Sections 15064 and 15130, a project's incremental contribution to a cumulative impact is not cumulatively considerable if the project would comply with the requirements of a previously approved plan or mitigation program that provides specific requirements that would substantially lessen the cumulative impact, or if the project would contribute its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.
- All direct effects of the Proposed Project ~~and 130-Unit Alternative~~ have the potential to contribute to cumulatively considerable impacts, even if they are individually less than significant.
- The indirect effects of the proposed water transfer of 60 acre-feet (AF) ~~included in the 130-Unit Alternative~~ are addressed under *Growth Inducement* separate from the cumulative analysis. The cumulative analysis, as discussed below, includes the general buildout within the Carmel Valley Master Plan (2013) CVMP area and in the County in general, which would include any development facilitated by the proposed water transfer.
- The geographic region affected by cumulative impacts varies by resource; for instance, the region affected by cumulative air quality impacts may be larger than the region affected by cumulative noise effects.
- This analysis incorporates past projects by acknowledging their contribution to existing negative or sensitive conditions.

Two geographic settings were identified for the cumulative analysis (**Table 4-1**).

- **Project vicinity.** This setting consists of the project site and any adjacent areas for which there could be a combined effect on a particular resource.
- **Carmel Valley and beyond.** This setting encompasses the Monterey Peninsula and extends beyond Monterey County.

There are two approaches to identifying related past, present, and reasonably foreseeable projects and their impacts. The list approach identifies individual projects to identify potential cumulative impacts. The projection approach uses a summary of projections in an adopted general plan or related planning document to identify potential cumulative impacts. In this document, both the list and the projection approach were used, depending on the resource topic.

As described in Section 3.7, *Transportation and Traffic*, the future-year scenarios address conditions in 2030 with existing traffic increased by increased growth to 2030.

Table 4-1. Cumulative Analysis Approach and Applicable Geographic Setting by Resource Area

Resource Topic	Cumulative Analysis Approach	Geographic Setting	
		Project Vicinity	Carmel Valley and Beyond
Geology, Seismicity, Soils	List	X	
Hydrology and Water Quality	List	X	X
Biological Resources	List/Projection	X	X
Aesthetics	List	X	
Land Use	Projection	X	
Hazards and Hazardous Materials	Projection		X
Transportation and Traffic	Projection	X	X
Air Quality	Projection		X
Noise and Vibration	Projection/List	X	
Public Services and Utilities	Projection	X	X
Cultural Resources	List	X	
Population and Housing	Projection		X
Greenhouse Gas Emissions and Climate Change	Projection		X

Potential Plans and Projects with Related or Cumulative Impacts

The potential for project-generated construction effects to contribute to a significant cumulative impact would arise if several projects with similar effects were being constructed concurrently with the Proposed Project ~~or 130-Unit Alternative~~ and within the same geographic area. This geographic area may vary, depending on the issue area discussed and the geographic extent of the potential impact. The potential for project operational effects to contribute to a significant cumulative impact would arise if buildout of the area were to result in significant cumulative impacts over time.

Approach

Cumulative Buildout in the Carmel Valley Master Plan Area

The 2013 CVMP has specific limits on development in the CVMP area as follows:

Residential Development Potential with the 2013 CVMP

The 2013 CVMP allows the following residential development.

- New residential subdivision in Carmel Valley is limited to the creation of 190 new units. The first single-family dwelling unit on existing legal lots do not count as part of the total unit cap.
- Of the 190 new units in new subdivisions, 24 units are reserved for consideration of the Delfino property in Carmel Valley Village (former Carmel Valley Airport site), leaving 166 units.
- ~~As described in Chapter 2, Project Description, approval of the Proposed Project would require modification of the CVMP limit from 190 units to 305 units (to allow for 281 units for the Proposed Project and 24 units for the Delfino Property. If the CVMP were amended and the project approved, there would be no new units allowed in other new subdivisions. There would still be new units on existing legal lots and in previously approved subdivisions at other locations.~~
- With the Proposed Project, ~~130-Unit Alternative,~~ there would be 60 units remaining in the quota. Of those 60 units, 24 are reserved for the Delfino property, so 36 units could be used for other new subdivisions (including the Val Verde property). Thus, cumulative development with the Proposed Project ~~130-Unit Alternative~~ includes the potential for the Val Verde subdivision. There would also still be new units on existing legal lots and in previously approved subdivisions at other locations.

Visitor-serving and Commercial Development Potential under the 2013 CVMP

- Visitor-serving Units – Based on the 2013 CVMP, 285 visitor-serving units may be built in the CVMP area. Since 2010, 16 visitor-serving units have been approved, leaving 269 allowable new visitor-serving units.
    - Bed and breakfast facilities will be counted as visitor accommodation units and be limited to a maximum of five units clustered on five acres, unless served by public sewers.
    - A maximum of 110 additional visitor accommodation units approved east of Via Mallorca, including units at Carmel Valley Ranch. Since 2010, 16 visitor-serving units have been approved in this area, leaving 94 allowable visitor-serving units east of Via Mallorca.
    - All development of visitor accommodations in the area west of Via Mallorca and north of Carmel River will be limited to moderately sized facilities, not to exceed 175 units. No new visitor-serving units have been approved in this area since 2010.
- Commercial Development – The 2010 *Monterey County General Plan* allows 52 acres of new commercial in Carmel Valley (Monterey County 2010).
- The Proposed Project ~~and the 130-Unit Alternative~~ would not affect the visitor-serving or commercial buildout potential because they do not include visitor-serving units or development on commercially designated land.

Cumulative Buildout in the 2010 Monterey County General Plan

The Environmental Impact Report (EIR) for the Monterey County General Plan Update projected that by 2030, there would be approximately 74,573 housing units and a population of 207,424 in the unincorporated areas of the county, including development in the CVMP (Monterey County 2008).

Specific Projects Considered in the Cumulative Impact Analysis

Figure 4-1 shows the approximate location of the following projects considered in this analysis. This list only includes projects in relative close proximity to the proposed project. Other development in other more distant parts of Carmel Valley (or the rest of the County) are accounted for in the cumulative analysis through the consideration of land use projections for cumulative growth. These specific projects are considered in relevance to localized impacts for the cumulative analysis.

Trust for Public Land Proposed Purchase of the Rancho Canada East Golf Course (Hatton Parcel)

The Trust for Public Land (TPL) announced in April 2016 that it will buy a 140-acre parcel (the Hatton Parcel) that contains most of the Rancho Canada East golf course. The long-term plan is to transfer the property to the Monterey Peninsula Regional Park District. Santa Lucia Conservancy and Trout Unlimited are also partners to this effort. If the acquisition comes to fruition, there are possibilities of a creation of a trail connecting Palo Corona park with the Jack Peak County park and the Joyce Stevens Monterey Pine Forest Preserve as well as trails onsite and onsite restoration of riparian and other habitat. The acquisition would also reduce the amount of water currently pumped from the Carmel River aquifer for golf course irrigation. Reportedly, escrow may close on the land deal as soon as May 2016.

There have also reportedly been talks with conservation groups to also buy an adjacent 50-acre parcel of land owned by the Lombardo family.

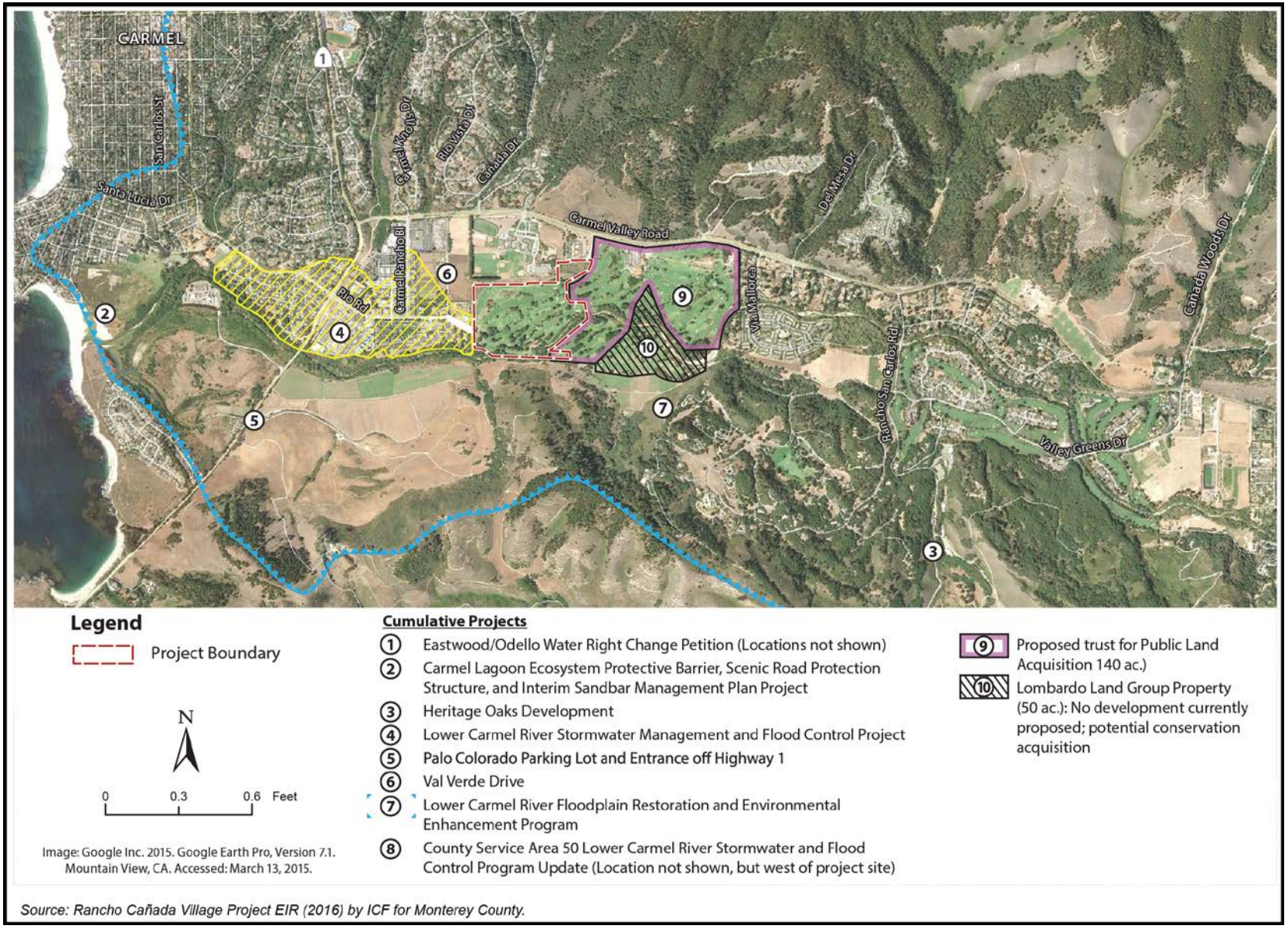
Carmel Lagoon Ecosystem Protective Barrier, Scenic Road Protection Structure, and Interim Sandbar Management Plan Project

This project proposes a comprehensive plan to promote improvement in ecological function of the lagoon, including natural floodplain function and improvement of habitat for federally listed species associated with the lagoon, by allowing the lagoon to breach naturally, without increase in flood and erosion risk to private structures and public facilities. The project area includes Carmel Lagoon and adjacent wetland, riparian, and coastal strand habitats. The project is intended to provide a long-term solution to flooding and habitat impact issues that avoid unauthorized take of listed species in compliance with federal law, while maintaining the existing level of protection to properties and infrastructure (U.S. Army Corps of Engineers 2014). This project is approximately 1.5 miles downstream of the project site and is in the planning phase.

County Service Area 50 Lower Carmel River Stormwater and Flood Control Program Update

Monterey County Water Resources Agency and the Monterey Peninsula Water Management District completed a stormwater and flood control project in the County Service Area 50 – Lower Carmel River (CSA-50). The report reviewed the flood risks and hazards in the area. The project elements are described in terms of the infrastructure required to minimize flood hazards in the area. The CSA-50 area is immediately west of the Proposed Project. The Proposed Project's ~~and 130-Unit Alternative's~~ proposed tieback levee on Rio Road west would be on the eastern borderline of the CSA-50. This project is in the study phase (Monterey County 2014).

Figure 4-1 Cumulative Projects in the Project Area



Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Val Verde Drive ("Carmel Rio Road")

This project proposes to develop 31 units on a 7-acre site. This project is approximately 0.9 mile west of the project site and is in the planning phase (Carmel Valley Association 2014). The Val Verde Drive area is planned for residential use at a basic density of one unit per acre. With suitable clustering, up to two units per acre may be allowed. However, a density of up to four units per acre may be allowed if at least 25 percent of the units are developed for individuals of low and moderate income or for Workforce Housing. The units on this property would count against the residential unit quota. As noted above, with approval of the Proposed Project, ~~no new subdivisions would be allowed for the Val Verde project but with approval of the 130-Unit Alternative,~~ there would be 36 units remaining in the quota (190 units allowed overall minus 24 units for Delfino minus 130 units = 36 remaining).

Lower Carmel River Floodplain Restoration and Environmental Enhancement Program

This is a multi-objective project that proposes to restore natural floodplain function to 90 acres of the Odello East property owned by the Big Sur Land Trust and the Eastwood Family. The main components of the project include the construction of a 520-foot flood bypass or causeway under State Route 1 (SR 1) to reduce potential flood hazards and improve site connectivity with adjacent floodplain to the west, the removal of approximately 2,900 feet of non-engineered farm levees located along the northern boundary of the site in conjunction with improvements on the East and South levees in the Odello East property, and the creation of public trails for public access and recreation. The project area is bounded by SR 1 to the west, the main channel of the Carmel River and the Crossroads Shopping Center to the north, State Park lands to the west, and Monterey Peninsula Regional Park District land to the south and east. The Carmel River is located immediately north of the site. The project boundary is immediately south of the golf course west, approximately 0.03 mile south of the project site. A Draft EIR is being prepared and scheduled for release in Spring 2016 (The Carmel River Watershed Conservancy 2015).

Eastwood/Odello Water Right Change Petition (Water Right Application No. 30497).

The proposed project includes State Water Board action on the petition of Clint Eastwood and the Margaret Eastwood Trust (collectively "Eastwood") to split existing License 13868 into two new licenses, 13868A and 13868B. Existing License 13868 authorizes the diversion of water from the Carmel River subterranean flow for the purpose of use of irrigation of a 99-acre area south of the Carmel River and east of State Route 1 (SR 1). License 13868 authorizes a maximum annual diversion rate and a maximum instantaneous diversion rate from points of diversion located on the Eastwood property during the year round season (January –December).

Proposed new License 13868A would maintain both of the existing points of diversion, place of use and purpose of use currently authorized under License 13868 and would add new points of diversion, expand the place of use, and add a new purpose of use to allow municipal use to serve existing lots of record in the parts of Cal-Am's service area that are within the Carmel River watershed or the City of Carmel-by-the-Sea. Proposed new License 13868B would dedicate a portion of water under License 13868 to instream uses. While the project would result in the creation of two new licenses, which would supersede the existing license, the proposed project would not increase the maximum authorized annual diversion rate or the maximum authorized instantaneous rate beyond the rates established in License 13868. All diversions in connection with the project would occur through existing Cal-Am wells and all conveyances would be through

existing Cal-Am facilities. Consequently, the project does not include the construction of any new water distribution system improvements or other physical elements. In addition to the changes to the existing license, the project also would involve the adoption of a new rule by the MPWMD. The new rule, which would be similar to District Rule 23.5, would allow MPWMD to issue water use permits to owners of existing lots of record within the parts of Cal-Am's service area that are within the Carmel River watershed or the City of Carmel-by-the-Sea, and that have entered into subscription agreements with the licensee

According to the project EIR, the project would not result in any significant and unavoidable direct impacts to biological resources or hydrology (or other environmental subjects). The project provided water supply could be used to serve a combination of commercial, residential, and public facility-related uses within the Carmel River watershed and the City of Carmel-by-the-Sea. As identified in the EIR, the precise combinations and types of growth that could occur in connection with the project are unknown, and the identification of potential growth due to the project is inherently speculative. The EIR estimates that the project could potentially accommodate approximately 171 to 342 new residential units on existing lots. The EIR notes that the project would also facilitate commercial growth and development. Due to the restricted nature of municipal use under proposed License 13868A and the limited amount of water that could be made available under proposed License 13868A, the proposed project would not induce population growth beyond existing planned levels. Rather, the proposed project would accommodate development on existing legal lots of record, including remodels or expansions of use, renovation of existing uses, and similar activities.

The EIR for this project notes environmental impacts to a variety of environmental resources within the subject area, but describes that all development activities proposed on existing lots of record would be subject to existing City and/or County requirements (i.e., General Plan and Zoning Ordinances) and project-specific environmental review; in addition, these projects would also be required to comply with project-specific conditions of approval, as well as any mitigation measures identified during project-level CEQA review. As a result, the EIR for this project concludes that the potential indirect effects associated with facilitated group would be less-than-significant. (State Water Resources Control Board 2014/2015).

The project applicant agreed to put a significant portion of the proposed municipal diversions toward offsetting Cal-AM's unlawful diversions in the first years after project approval. The application was approved in July 2015.

Palo Colorado Parking Lot and Entrance off Highway 1

This project includes construction of a 57-space public parking area and improvements to an existing access road to the Palo Corona Regional Park. The property is located at Palo Corona Regional Park, east of SR 1, between Ribera (south) and Oliver (north) Roads (Assessor's Parcel Number 243-081-008-000), Carmel Area Land Use Plan, Coastal Zone. This project is southwest of the project site and was adopted in February 2015. (Monterey County, 2015b).

Heritage Oaks Development (PLN060603)

This project proposes to subdivide three existing lots, totaling approximately 103 acres, into a four-lot subdivision for development. The project is along the south side of the Carmel River, west of Rancho San Carlos Road in the Santa Lucia Preserve, south of the project site. The project also involves road installation, minor removal of tree and grading on slopes in excess of 30%. The project

has been approved by the County. The one additional unit (4 units compared to three allowable on the three existing lots) would count against the 2013 CVMP residential unit quota.

Traffic Improvement Plan, Carmel Valley

This project includes a public improvement program that includes a specified list of road improvements along Carmel Valley Road and Laureles Grade within the Carmel Valley Master Plan Area in Monterey County and a proposed update of traffic impact fees to pay for the proposed improvements through collection of fees from new development. The plan is under development and has yet to complete the environmental review process (County of Monterey 2015).

Carmel Casitas Affordable Housing Development, Carmel Valley

The Carmel Casitas Affordable Housing Development project, is under development by the Terrex Development Corp. for an 8.4 acre site adjacent to Carmel Valley Road and the Carmel Middle School, just east of the Carmel Rancho Shopping Center. A development was previously proposed in this location in 2004, but the plan did not move forward due to a lack of a water allocation. The project is being reconsidered now with water made available from the Malpaso Water company through the Eastwood-Odello Water Right Petition discussed above. The size of the project has not yet been determined although the developers have indicated that approximately 150 units could be built on the site while maintaining a two-story height limit. Carmel Casitas is planning to be 1, 2, and 3 bedroom units for working families. The developer has been presenting the project informally to the public and certain local groups and will be engaging in design charrettes in spring 2016. No formal application has been submitted to the County planning department and thus this project is not formally considered in this cumulative analysis because to do so would be speculative and premature in nature.

Analysis of Cumulative Impacts

The following analysis describes the potential for the Proposed Project ~~or 130-Unit Alternative~~, in combination with the cumulative projects and/or buildout, to result in cumulatively significant environmental impacts. Each analysis considers the cumulative setting of the potential impacts. The evaluations identify where the cumulative impact would be significant, and whether the Proposed Project's ~~or 130-Unit Alternative's~~ contribution to a significant cumulative impact would be considerable.

Geology, Soils, and Seismicity

Cumulative Impact GEO-C1: Cumulative Development in Carmel Valley would include new structures that may result in exposure of structures or people to seismic or geologic hazards (less than considerable)

~~Proposed Project~~

Cumulative impacts related to geology and soils could occur where regional development patterns place structures and occupants in areas susceptible to geological hazards. A jurisdiction's general plan process includes the mapping of such areas to influence development patterns away from particularly hazardous locations or to identify where special study and architectural and engineering measures would be required to ensure building safety. Regional geological concerns include seismic ground cracking, intense seismic shaking, soil liquefaction, slope stability, and soil

shrinking/swelling. The 2010 Monterey County General Plan requires the preparation of geotechnical reports for development projects with potential geologic hazards. These reports identify potential hazards associated with projects and recommend policies and measures to be followed to ensure structural safety.

Because of widespread seismic activity within California, past, present, and future development continues to place structures and residents/occupants in areas that are susceptible to seismic ground shaking. Strict building code regulations are in place to ensure that structures properly account for seismic shaking and other seismically related hazards. Common adherence to mandatory building code regulations throughout the region would prevent a significant cumulative impact associated with placing new structures on land susceptible to geologic hazards. Given that the Proposed Project would comply with these established policies and the project-specific mitigation measures (see Section 3.1, *Geology, Soils, and Seismicity*), the Proposed Project's contribution to a significant cumulative impact would be *less than considerable*. No mitigation is required.

~~**130-Unit Alternative**~~

~~The 130-Unit Alternative is consistent with the findings for the Proposed Project on cumulative impacts with respect to geological hazards. Past, present, and future development within California is susceptible to seismic ground shaking. Common adherence to mandatory building code regulation throughout the region would prevent a significant cumulative impact associated with placing new structures on land susceptible to geologic hazards. Similar to the Proposed Project, the 130-Unit Alternative would comply with these established policies and with project-specific mitigation measures (see Section 3.1, *Geology, Soils, and Seismicity*). The 130-Unit Alternative would have a *less-than-considerable* contribution to a cumulative impact.~~

Cumulative Impact GEO-C2: Cumulative Accelerated Runoff, Erosion, and Sedimentation (less than considerable with mitigation)

~~**Proposed Project**~~

As described in Section 3.1, *Geology, Soils, and Seismicity*, of this Second Revised ~~Recirculated~~ Draft EIR, impacts on runoff, erosion, and sedimentation would be *less than significant* with the implementation of mitigation measures. Additionally, any new development would be required to adhere to City, County, State, and federal requirements for the containment of runoff, erosion, and sedimentation as part of the CEQA process. These impacts would be mitigated at the project level, and therefore implementation of the Proposed Project would have *less-than-considerable* contribution to a cumulative impact.

~~**130-Unit Alternative**~~

~~The 130-Unit Alternative is consistent with the findings for the Proposed Project on cumulative impacts with respect to accelerated runoff, erosion, and sedimentation. Implementation of mitigation measures described in Section 3.1, *Geology, Soils, and Seismicity*, of this Recirculated Draft EIR would reduce impacts on runoff, erosion, and sedimentation to less-than-significant levels. Additionally, any new development would be required to adhere to City, County, State, and federal requirements for the containment of runoff, erosion, and sedimentation as part of the CEQA process. These impacts would be mitigated at the project level, and therefore implementation of the 130-Unit Alternative would have a *less-than-considerable* contribution to a cumulative impact.~~

Hydrology and Water Quality

Cumulative Impact HYD-C1: Cumulative Impacts on Hydrology and Water Quality (less than considerable with mitigation)

~~**Proposed Project**~~

Future development in the region would require construction, conversion of undeveloped areas, and the creation of impervious surfaces. Portions of the region also lie within the 100-year floodplain, and development within these areas can affect local and regional hydrology during flood events. There will also be projects that will improve flood conditions and ecosystem habitat within the project vicinity.

Residential, commercial, and other cumulative development in the Carmel River watershed could result in increased impervious areas and increased flood flows or levels. However, all development is subject to similar local, State, and federal requirements as the Proposed Project in regard to flood control. Offsetting potential increases in flooding, three different cumulative projects would lower flood potential in the lower Carmel Valley area.

- The CSA-50 Lower Carmel River Stormwater and Flood Control Program Update will reduce flood hazards immediately west of the project site. In the future, should the Monterey County Resource Management Agency (MCRMA) choose to raise Val Verde Road as part of the CSA-50 flood protection project, the Project Applicant has indicated a voluntary willingness to accommodate a 10-foot by 10-foot culvert under the Rio Road west extension to accommodate the 100-year off-site flows from DA-27 (Zischke pers. comm.). As described in Section 3.2, *Hydrology and Water Quality*, the Proposed Project does not have an adverse effect on drainage or flooding in the CSA-50 area and as such, the proposed culvert is not a mandatory mitigation for project effects. In addition, the Proposed Project includes a 84-inch buried pipe to convey DA-27 drainage along the western side of the project site to the Carmel River, which would help in management of DA-27 flows that could otherwise result in flooding in CSA-50.~~1~~
- The Lower Carmel River Floodplain Restoration and Environmental Enhancement Program will restore natural floodplain function by constructing a flood bypass under SR 1, levee removal, and other improvements and would ultimately provide flood benefits in the project vicinity.
- The Carmel Lagoon Ecosystem Protective Barrier Project will restore natural floodplain function and improve habitat within the Carmel Lagoon. This project is approximately 1.5 miles downstream of the project site, which will provide for increased downstream flood capacity.

As described in Section 3.2, *Hydrology and Water Quality*, of this Second Revised ~~Recirculated~~ Draft EIR, the Proposed Project includes mitigation measures to ensure that hydrology and water quality impacts would be less than significant. Such policies and mitigation measures are mandated by local, State, and federal regulations, both during construction and operation of projects. This includes compliance with National Pollutant Discharge Elimination System (NPDES) General Construction Permits, NPDES Municipal Stormwater Permits, Waste Discharge Requirements from the Regional Water Quality Control Board and Federal Emergency Management Agency policies regarding construction in a flood plain. Future developers in the region would be required to design and

~~1~~ A subsequent hydrology report submitted by the applicant (Balance Hydrologics, Inc., 2017) indicates that a smaller diameter pipe could provide sufficient capacity.

implement measures to ensure that project-level impacts on hydrology and water quality would be less than significant.

Because the Proposed Project, as mitigated, would accommodate stormwater flows, provide for treatment of stormwater, and control water quality during construction, and thus would not contribute considerably to flooding, erosion, or sedimentation, the Proposed Project have a *less-than considerable* contribution to any cumulative impacts.

~~**130-Unit Alternative**~~

~~The 130-Unit Alternative is generally consistent with the findings for the Proposed Project for cumulative impacts on hydrology and water quality, with the exception of management of offsite drainage from the drainage area north of Lot 130.~~

~~As described in Section 3.2, *Hydrology and Water Quality*, the impact on drainage and flooding for the residential element of the 130-Unit Alternative would be lower than that of the Proposed Project because of the smaller number of residential units and the smaller increase in impervious space.~~

~~As described above, the 130-Unit Alternative would leave open the potential to develop the Val Verde project, as a residential allotment with up to 31 units. This could result in additional impervious space to the west of the project. However, like the 130-Unit Alternative, local, State, and federal requirements and project-level environmental review would require any such project to address potential hydrology and water quality effects.~~

~~While Section 3.2, *Hydrology and Water Quality*, includes mitigation for the 130-Unit Alternative to reduce project-level impacts to less-than-significant levels, the overall development in the region could result in a significant cumulative impact. However, similar to the Proposed Project, future flood protection and habitat enhancement projects would reduce flooding potential in lower Carmel Valley.~~

~~Because the 130-Unit Alternative, as mitigated, would accommodate stormwater flows, provide for treatment of stormwater, control water quality during construction, and thus would not contribute considerably to flooding, erosion or sedimentation, the 130-Unit Alternative would have a *less-than-considerable* contribution to any cumulative impacts.~~

Biological Resources

Cumulative Impact BIO-C1: Cumulative Loss of Biological Resources Including Habitats and Special Status Species (less than considerable with mitigation)

~~**Proposed Project**~~

The CVMP area included substantial areas that are undeveloped and rural in character with limited residential and commercial development relative to their size. Various habitat types are located in the CVMP planning area, including riparian woodlands near the Carmel River and chaparral vegetation on the valley floor. Special-status species such as California red-legged frogs, southwestern pond turtles, migratory birds, and steelhead are known to utilize these habitats.

Construction and maintenance activities associated with cumulative development in the region could result in the direct loss or indirect disturbance of special-status species or their habitats within the County. Impacts on special-status species or their habitats could result in a substantial

reduction in local population size, lowered reproductive success, habitat fragmentation, and loss or disturbance of existing wildlife movement corridors.

Construction of the Rancho Cañada Project in combination with other projects would result in cumulative impacts on riparian woodlands, wetlands/ponds, protected trees, habitats for special status species and individual special-status species, and to wildlife movement corridors.

Implementation of the Project's proposed 2006 Rancho Cañada Village Restoration and Mitigation Plan (Zander Associates 2006) would reduce many of these impacts to a less-than-significant level because the proposed restoration would increase the area of riparian habitat and native grassland in the 38 ~~31~~-acre Habitat Preserve along the Carmel River. Upon full implementation of the proposed restoration, the riparian habitat along the Carmel River corridor within the project site would be enhanced compared to existing conditions.

However, as discussed in Section 3.3, *Biological Resources*, even with the proposed Restoration Plan, there would remain certain significant impacts that require additional mitigation. Mitigation measures described in Section 3.3, *Biological Resources* would reduce the Project's biological resource impacts to a less-than-significant level through avoidance, minimization, and replacement of disturbed or lost resources both during construction and during operation of the Proposed Project. Implementation of the proposed 2006 Restoration Plan in combination with these mitigation measures would ensure that no net losses of special-status species habitat or sensitive natural vegetation communities result from project development; therefore, contributions to cumulative impacts on special-status species or sensitive natural vegetation communities would also be avoided. The Proposed Project, with mitigation, would be consistent with local policies and ordinances related to the protection of biological resources and therefore would not contribute to cumulative impacts related to these policies and ordinances.

As discussed in Section 3.3, *Biological Resources*, the Proposed Project, in isolation, would have a less-than-significant impact on wildlife movement through two wildlife corridors: from south of the Carmel River through the parcels along Val Verde Drive and from south of the Carmel River through the Carmel Middle School (CMS) Habitat Area to undeveloped areas north of Carmel Valley Road. These two corridors are part of four corridors that provide the potential for north-south wildlife movement from the undeveloped areas south of the Carmel River to undeveloped areas north of Carmel Valley Road (see **Figure 3.3-2~~3~~**). Cumulative impacts and the Project's contributions are discussed for these four corridors as follows.

- **Val Verde Drive**—Wildlife can currently move from undeveloped areas south of the Carmel River, across the Rancho Cañada Golf Club to agricultural and undeveloped parcels along Val Verde Drive. The Proposed Project would substantially impede wildlife access to these parcels from the Carmel River. The 2013 CVMP allows for residential development on some of the undeveloped parcels along Val Verde Drive, but with approval of the Proposed Project such residential development would be limited to existing legal lots as the subdivision unit quota would be exhausted. The cumulative impact of the Proposed Project and potential limited future residential development along Val Verde Drive would further impede potential wildlife and use of the currently undeveloped parcels. However, as noted in Section 3.3, *Biological Resources*, the effectiveness of this route as a wildlife movement corridor from south of the Carmel River to undeveloped areas north of Carmel Valley Road is diminished as the area immediately north of Carmel Valley Road is a residential development. The combination of Carmel Valley Road and existing development north of the road make this an ineffective wildlife movement corridor.

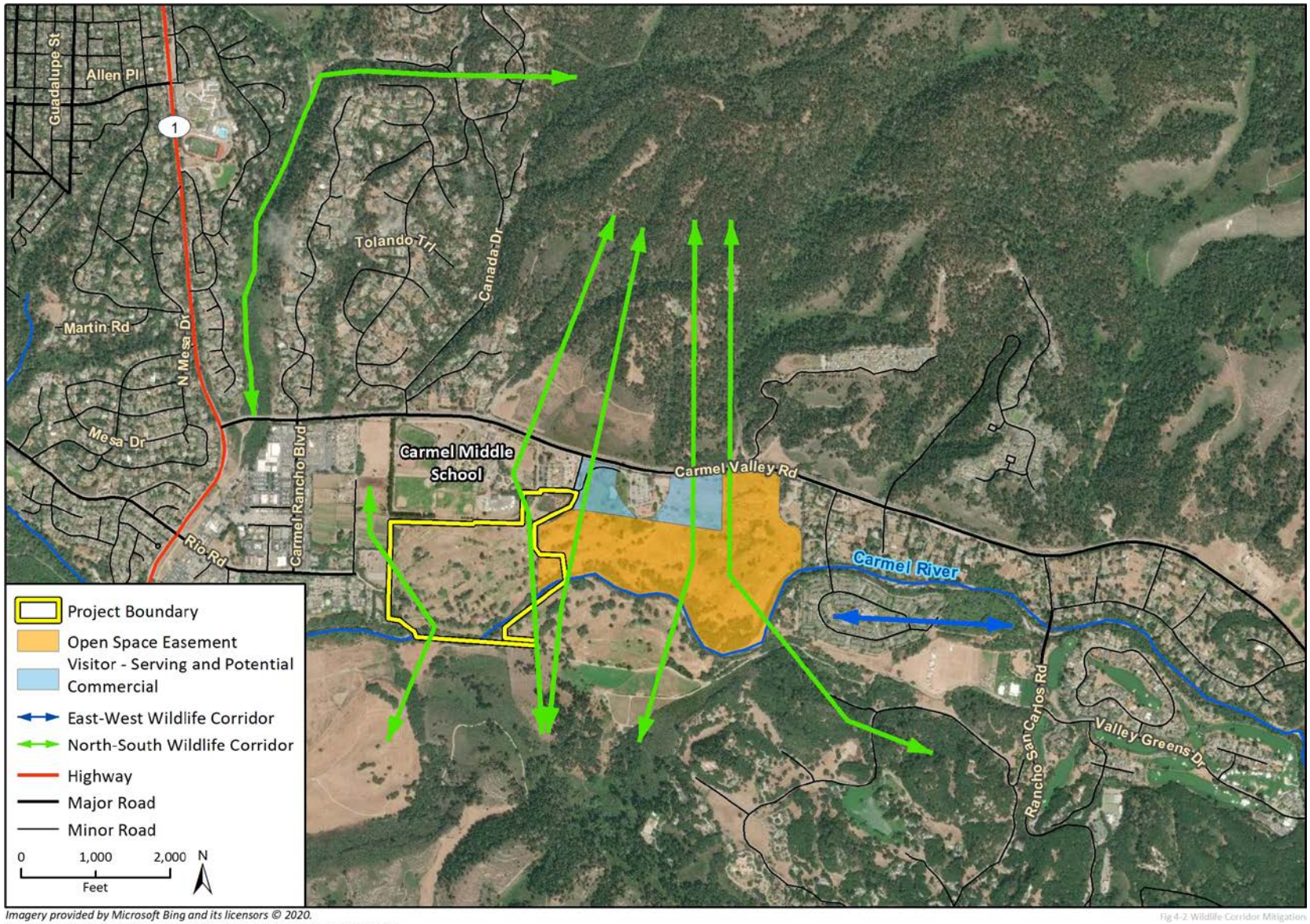
Therefore, loss of this wildlife movement corridor is not considered a cumulatively significant impact.

- **Through CMS Habitat Area**—Wildlife can currently move from undeveloped areas south of the Carmel River, across the Rancho Cañada golf course, through the Hatton and Stemple parcels to the CMS Habitat Area on the school property and northward across Carmel Valley Road to undeveloped areas north of the road. The Proposed Project would substantially impede this wildlife movement corridor. Because of the relatively small size and narrow width of the corridor and the character of this corridor on the CMS habitat in the midst of adjacent development, the loss of this corridor, is considered a less than significant impact, provided that adjacent corridors remained intact. However, as noted below, if the adjacent corridors were to be substantially blocked, then the loss of the corridor through the CMS habitat would be considered significant.
- **Between Rio Road (East) and Rancho Cañada Clubhouse and Between the Clubhouse and Via Mallorca**—Wildlife can currently move from undeveloped areas south of the Carmel River, across the Rancho Cañada golf course between Rio Road (east) and the golf course clubhouse, across the clubhouse access road, and across Carmel Valley Road to undeveloped areas north of the road. The narrowest part (approximately 700 feet) of the corridor is between Rio Road (east) and the clubhouse parking lot. With the TPL acquisition of most of the east golf course , this area will be used for park and restoration purposes, which would preserve the wildlife corridor.
- **Between Rancho Cañada Clubhouse and residences west of Via Mallorca**—Wildlife can currently move from undeveloped areas south of the Carmel River, across the Rancho Cañada golf course between the clubhouse and the residences west of Via Mallorca, and across Carmel Valley Road to undeveloped areas north of the road. The narrowest part (approximately 1,600 feet) of the corridor is between the clubhouse and the residences west of Via Mallorca. New visitor-serving development could be placed within this corridor as allowed by the 2013 CVMP. However, if the TPL acquisition of most of the east golf course occurs, then this area would be used for park and restoration purposes, which would preserve the wildlife corridor.

As noted above, the Trust for Public Land has purchased the 140-acre Hatton parcel containing the clubhouse and most of the east golf course and conservation groups are also in conversations with the Lombardo Land Group II about purchasing an additional 50 acres south of the clubhouse that contains land north and south of the Carmel River (see **Figure 4-1**). If both of these acquisitions were to come to fruition, then the area east of the Proposed Project would be retained as a wildlife corridor. If only the Lombardo Land Group II parcel is not acquired by TPL, there is a possibility of development of 50-acre area, but there would remain a wildlife corridor on either side of the 50-acre parcel.

With the proposed restoration and the TPL purchase and conversion of much of the east golf course to park and open space purposes, the two primary wildlife movement corridors easy and west of the clubhouse would be preserved and the project would not have a considerable contribution to cumulative adverse effects on wildlife movement corridors.

Figure 4-2 Wildlife Corridor Mitigation



Imagery provided by Microsoft Bing and its licensors © 2020.
Source: Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

~~130-Unit Alternative~~

~~The 130-Unit Alternative would make similar contributions to cumulative impacts on biological resources as the Proposed Project. Lot 130 is already developed and would not add to cumulative impacts on wildlife movement. Therefore, impacts and mitigation discussed under the Proposed Project apply to the 130-Unit Alternative. With implementation of mitigation measures described in Section 3.3, Biological Resources , as well as through implementation of the proposed 2006 Restoration Plan, there would be a less-than-significant cumulative impacts on wildlife migration corridors.~~

Aesthetics

Cumulative Impact AES-C1: Cumulative Degradation of the Existing Visual Character of the Region (less than considerable with mitigation)

~~Proposed Project~~

~~Carmel Valley, while having several built-up areas such as the mouth of the Valley and the Village, is dominated by a rural character. As discussed in Section 3.4, *Aesthetics*, the Proposed Project effect on the rural character, in isolation, would be *less than significant.*~~

~~Within the CVMP area, buildout allowed by the 2013 CVMP, as discussed above, could include residential development (on existing legal lots only), office, commercial, recreational, and associated infrastructure development. Some of this growth, such as potential visitor-serving units or public quasi-public development on other parts of the Rancho Cañada Golf Club could change the visual character within the immediate vicinity of the new project area; however, with the limitations and policies in the 2013 CVMP itself, such buildout is unlikely to change the overall character of the area, in particular taking into account the limited buildout allowed by the CVMP policies. As noted above, with approval of the Proposed Project, there would be no allowable subdivision on the Val Verde project, so additional residential subdivisions would not occur adjacent to the project area.~~

~~Regional growth (outside the CVMP area) would continue to result in a cumulative aesthetic effect by converting undeveloped land into developed and occupied areas. Cumulative development entails grading/landform alteration, the erection of structures, and the installation of roadways and other infrastructure that has altered and would continue to permanently alter the region's existing visual character.~~

~~While Section 3.4, *Aesthetics* includes mitigation to reduce project-level impacts on visual resources to less-than-significant levels, the overall development in the region could result in a significant cumulative impact. However, because the Project would be consistent with the 2013 CVMP, and the 2010 Monterey County General Plan and public scenic views of the development would be limited, the Proposed Project would have a *less-than-considerable* contribution to this cumulative impact.~~

~~130-Unit Alternative~~

With the Project ~~130-Unit Alternative~~ site buildout would include 130 units of residential development.

There would be sufficient residential units remaining in the subdivision unit quota that would allow for 31 units on the Val Verde property. There would also be the potential for visitor-serving unit development on the west side of the Rancho Cañada clubhouse.

~~Similar to the Proposed Project, t~~ The residential element of the Project ~~130-Unit Alternative~~ would be consistent with the 2013 CVMP, and 2010 General Plan and views of the residential development would be limited. The Project ~~130-Unit Alternative~~ is consistent with the findings for the Proposed Project on cumulative impacts with respect to visual aesthetics. While Section 3.4, *Aesthetics*, includes mitigation for the Project ~~130-Unit Alternative~~ to reduce project-level impacts on visual resources to less-than-significant levels, the overall development in the region could still result in a significant cumulative impact. However, the residential element of the Project ~~130-Unit Alternative~~ would have a *less-than-considerable* contribution to this impact with mitigation.

Land Use, Population and Housing

Cumulative Impact LU-C1: Cumulative Local Land Use Impacts (considerable and unavoidable with mitigation ~~for the Proposed Project and the 130-Unit Alternative~~)

~~**Proposed Project**~~

~~As described in Section 3.5, *Land Use*, the 2013 CVMP and 2010 General Plan land use designation for the site is Public/Quasi-Public (P/QP), which does not allow for residential subdivision. However, 2013 CVMP Policy CV-1.27 allows for residential use in the Special Treatment Area. Although an amendment to the 2013 CVMP and 2010 General Plan land use diagram and rezoning to a residential zoning district under Title 21 would be required this is not considered a fundamental inconsistency with existing land use plans due to the provision in 2013 CVMP Policy CV-1.27.~~

~~As noted in Chapter 2, Project Description, the Proposed Project would be in conflict with Policy CV-1.6 that establishes the residential unit cap. In order to facilitate the project and to still provide the 24 units reserved in Policy CV-1.6 for the Delfino property, the residential unit cap from residential subdivision would need to be raised to 305 units (281 units for the Proposed Project and 24 units for the Delfino property). The residential unit cap was adopted in part to reduce environmental impacts such as those related to water supply and traffic, as well as open space preservation. While the Proposed Project would not result in significant impacts to water supply or open space preservation (the project would actually increase open space open to the public), the project would result in certain significant and unavoidable traffic impacts inside and outside Carmel Valley. Thus, the project's inconsistency with CVMP Policy CV-1.6 would result in significant secondary environmental impacts and this is considered a significant land use impact. Although the CVMP could be amended to rectify the policy inconsistency, as discussed in Chapter 3.7, *Transportation and Traffic*, there is no feasible mitigation to eliminate all of the significant traffic impacts and this impact is therefore significant and unavoidable with mitigation.~~

~~Apart from this inconsistency with CVMP Policy CV-1.6, the Project is considered otherwise consistent with other applicable 2013 CVMP and 2010 General Plan policies.~~

~~The Project would not divide a community and can be integrated into Carmel Valley without resulting in land use changes overall that would imperil meeting the goals of the 2013 CVMP, other than the traffic issues noted above.~~

~~It is possible that other development could be approved in the future that may potentially conflict with 2013 CVMP and 2010 General Plan land use policies and designations by proposing incompatible land uses. This could result in cumulative significant land use impacts to occur. The Proposed Project would contribute to cumulative land use related impacts due to the policy inconsistency issues in regards to buildout and traffic and therefore would have a *significant* contribution cumulative land use impacts.~~

~~130-Unit Alternative~~

The Project ~~130-Unit Alternative~~ would be consistent with CVMP Policy CV-1.6 regarding CVMP buildout. The Project ~~130-Unit Alternative~~ would require a change in the land use designations and zoning for the residential component but would be consistent with the 2013 CVMP Policy CV-1.27 in regards to land use designations allowing for residential use in the Special Treatment Area. However, the Project ~~130-Unit Alternative~~ would not be consistent with the requirement in Policy CV-1.27 requiring a minimum of 50% affordable/workforce housing at the Special Treatment Area. As discussed in Chapter 3.5, *Land Use*, the specific impacts of this inconsistency with the affordable/workforce housing requirement are difficult to know without speculation, but the lesser amount of affordable housing is considered likely to result in longer commutes for workers and thus contribute to cumulatively significant traffic impacts, some of which cannot be mitigated. The Project ~~130-Unit Alternative~~ would thus contribute to cumulative land use related impacts due to this policy inconsistency and therefore would have a *significant* contribution to cumulative impacts on land use.

Hazards and Hazardous Materials

Cumulative Impact HAZ-C1: Cumulative Significant Hazards to the Public or Environment (less than considerable with mitigation)

~~Proposed Project~~

Cumulative impacts related to hazards and hazardous materials could occur where development patterns place structures and residents/occupants in proximity to significant sources of safety hazards or hazardous materials, emissions, or where regional patterns develop new cumulatively hazardous sources near sensitive receptors.

The construction of the proposed residential development would require the use and temporary storage of hazardous materials. Hazardous material treatment, transport, and storage are highly regulated by city, county, State, and federal regulations. While the Proposed Project would not contribute directly to significant hazards, the potential exists for accidental release from vehicle accidents during operations, construction-related spills, and during ground disturbing activities. Cumulative development of the area would result in increased construction, traffic, and accident potential. However, as with the transport and storage of hazardous materials, the treatment of accidental spills and releases are highly regulated, and procedures and protocol exist to mitigate potential impacts to less-than-significant levels. In addition, implementation of **Mitigation Measure HAZ-1, HAZ-2, HAZ-3, ~~HAZ-4,~~** and **HAZ-4 ~~5~~** would further reduce the potential to expose people or environment to hazardous materials. By adhering to these policies and implementation of these project-level mitigation measures, the Project would have a *less-than-considerable* contribution to a cumulative impact regarding the exposure of the public to hazardous materials.

~~**130-Unit Alternative**~~

~~As stated above, cumulative impact related to hazards and hazardous materials could occur where development places structures and residents in proximity to hazardous substances and hazards.~~

~~Construction of the 130-Unit Alternative, including Lot 130, would require the use of hazardous materials such as petroleum, paint, solvents, and diesel during the construction phase. However, as stated above, hazardous material treatment, transport, and storage are highly regulated. The 130-Unit Alternative would be required to comply with all regulations; however, there is potential for an accidental release to occur. Compliance with regulations and **Mitigation Measures HAZ-1** thru **HAZ-5** described in Section, 3.6, *Hazards and Hazardous Materials*, would reduce potential impacts to less-than-significant levels. Therefore, through compliance with the polices and mitigation described in Section 3.6, the 130-Unit Alternative would have a *less-than-considerable* contribution to a cumulative impact.~~

Transportation and Circulation

Existing and Cumulative Traffic Conditions

As discussed in Section 3.7, *Transportation and Traffic*, traffic conditions were analyzed for the weekday AM and PM peak hours of traffic because it is during these periods that the most congested traffic conditions occur on an average day. Carmel Valley Road was analyzed based on both peak-hour and average daily traffic (ADT).

This cumulative analysis considers the following scenarios: existing, cumulative, and cumulative with Proposed Project~~, and cumulative with the 130-Unit Alternative~~.

- *Existing Conditions.* Reflect 2014 traffic counts and the existing transportation network.
- *Cumulative Conditions.* Cumulative conditions consist of existing traffic volumes plus the trips associated with approved, pending, and planned developments.
- *Cumulative Plus Proposed Conditions.* Represent future traffic conditions reflective of buildout of land uses in the area, including the Proposed Project.
- ~~*Cumulative Plus 130-Unit Alternative Conditions.* Represent cumulative traffic conditions of buildout land uses in the area, including the 130-Unit Alternative.~~

Cumulative Roadway Network

Monterey County implements select roadway improvements in Carmel Valley through the Carmel Valley Transportation Improvement Program (CVTIP), which was described in Section 3.7, *Transportation and Traffic*.

The Transportation Agency for Monterey County (TAMC) collects development impact fees to help fund transportation projects of regional significance. TAMC's 2014 Regional Transportation Improvement Plan program includes the following improvements.

- Add a second northbound through lane to SR 1 between Rio Road and Carmel Valley Road.
- Add capacity to the Rio Road/SR 1 intersection as follows.
    - Convert the northbound right turn lane to a shared through/right turn lane.
    - Add a second westbound right turn lane.

- Widen the southbound approach to provide a right turn lane, through lane, and dual left turn lanes.

- Convert the Carmel Valley Road/SR 1 intersection's northbound right turn lane to a shared through/right turn lane.

The TAMC impact fees also fund improvements to SR 68, including the SR 68/Laureles Grade Road intersection. This intersection would be modified to convert the eastbound right turn lane to a shared through/right lane and an associated receiving lane for eastbound traffic.

These improvements were assumed to be operational under cumulative conditions. No other roadway network changes affecting study location operations were assumed to be in place under cumulative conditions.

Cumulative Volume Forecast

Cumulative traffic volume forecasts were developed using the 2014 AMBAG RTDM and the 2007 CVTIP traffic study. The 2007 CVTIP traffic study forecasts travel based on a detailed review of potential land use intensities within Carmel Valley, while the RTDM is by nature focused more on regional travel patterns. The local traffic cumulative forecast for Carmel Valley has not been updated since the 2007 CVTIP study (the EIR for the 2010 General Plan was a regional analysis). The CVTIP traffic study forecasted substantially more growth along the Carmel Valley Road corridor than the RTDM, which shows future traffic levels within 5 percent of year 2010 levels.[2] These increases flow to SR 1, again resulting in significantly higher volumes than those projected in the RTDM.

The 2007 CVTIP traffic study forecasts were used in this analysis over the RTDM forecasts because of the local nature of those forecasting efforts. Although the 1986 CVMP is no longer in effect and does not apply to the Proposed Project, the 2007 cumulative forecast based on the prior CVMP provides a reasonable analysis base for use in this EIR.

The 1986 CVMP had a quota of 1,310 residential units after 1986. Specifically, the 2007 CVTIP traffic study forecast included the following growth.

- Unbuilt residential units for previously approved subdivisions.
- Unbuilt residential units for previously approved single-family units and adjunct units.
- Future potential residential units in new subdivisions: At the time of the 2007 CVTIP traffic study, and accounting for prior approvals and issued building permits since 1986, the remaining potential for residential units was identified as 533 of the quota of 1,310 units (of which 281 would have been consumed by the Proposed Project.
- Future units on existing buildable residential legal lots. These units would also have counted against the 1,310-unit quota, so the amount of allowable units would depend on how many new units were approved in new subdivisions.

[2] A key reason for the difference in 2030 forecasts is that the 2007 CVTIP traffic study assumed full buildout of allowable land uses in the CVMP by 2030, whereas the 2014 RTDM assumes a more modest level of growth by 2030. It is possible with market conditions and issues surrounding water supply in particular that full buildout of the CVMP will not occur by 2030. However, by assuming full buildout by 2030, the cumulative analysis in this EIR is erring on the conservative side. If full buildout occurs later (like 2040 or 2050), the cumulative traffic analysis would reflect that later year.

- Up to 285 visitor-serving units and commercial growth related to commercially designated lands.

Important to note is that the 1986 CVMP residential quota system applied to units both in new subdivisions as well as existing legal lots. The 2013 CVMP, by contrast, only applies its residential unit quota to new subdivisions and second units on legal lots and does not apply to the first residential unit on an existing legal lot. The 2013 CVMP includes a different quota than the 1986 CVMP and approval of the Proposed Project ~~or the 130-Unit Alternative~~ would count against the new quota for how much other residential development could occur.

The allowable new residential units assumed in the 2007 CVTIP traffic study forecast compared to what could occur at present under the 2013 CVMP is as follows.

- ~~Proposed Project: The 2007 CVTIP study forecast included the Proposed Project plus up to 252 units for other subdivisions and units on existing legal lots. If the Proposed Project is approved, with the proposed CVMP amendment described in Chapter 2, no new units for other subdivisions (other than the Delfino property) would be allowed. The estimated number of remaining existing legal lots as of 2008 was 216.5. The combined potential new units for 2008 and after (not counting units for projects approved prior to 2008[3]) with the Proposed Project would be 521.5 units (281 units for the Proposed Project, 24 units on the Delfino property plus 216.5 units on existing legal lots). The 2007 CVTIP study forecast estimated post-2008 units for 2030 as 533 units (excluding units for projects approved prior to 2008), so the CVTIP forecast is slightly higher to that which would occur with the Proposed Project. The 2007 CVTIP forecast assumptions for 2030 for visitor-serving units are the same as under the 2013 CVMP and likely highly similar in terms of commercial growth.~~

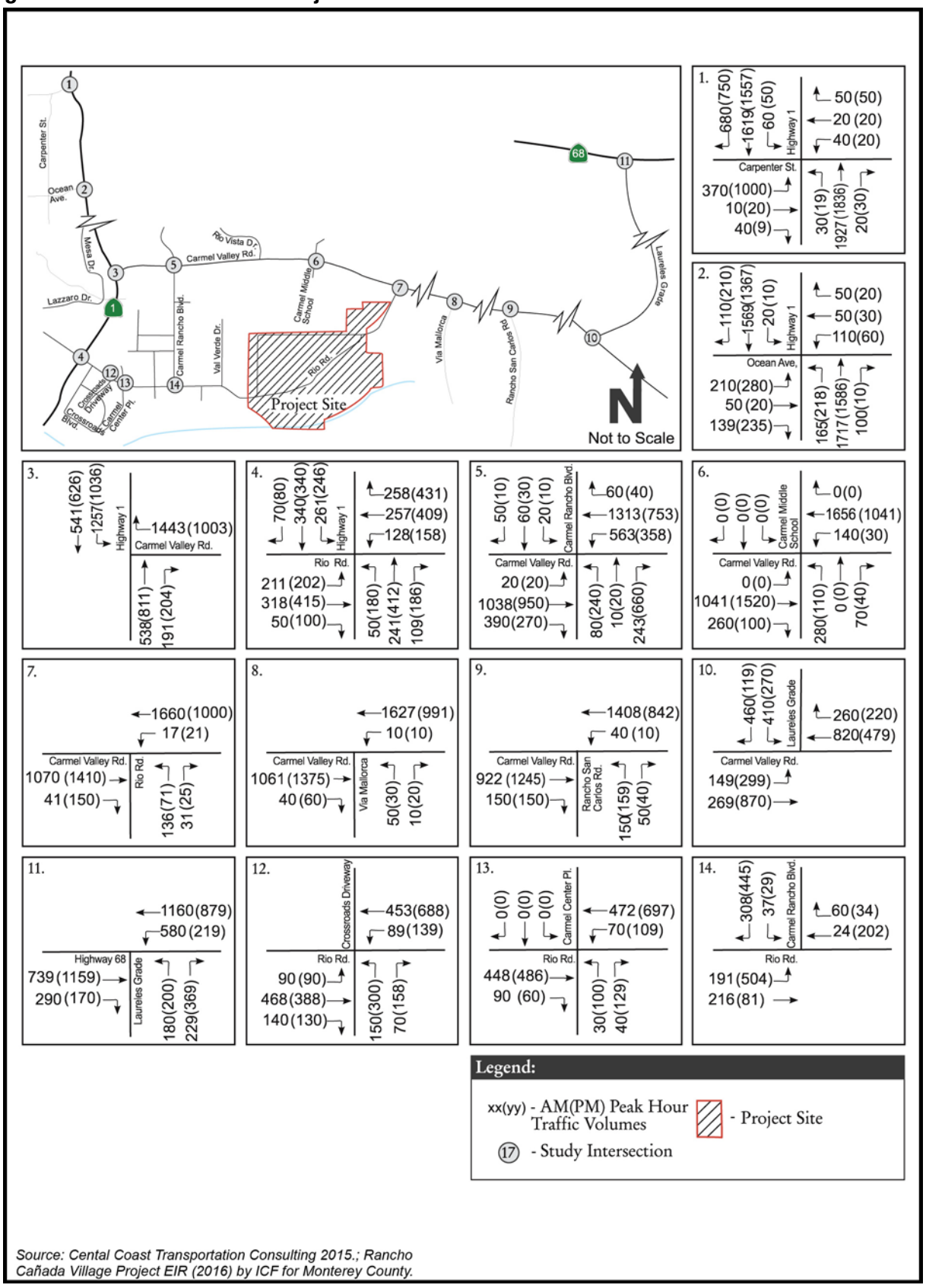
- ~~130-Unit Alternative:~~ If the Project ~~130-Unit Alternative~~ is approved, the potential would remain for 60 new units in new subdivisions. Using the assumptions noted above, the combined potential new units since 2008 (not counting units for projects approved prior to 2008) with the 130-Unit Alternative would be 406.5 units (130 units for the Proposed Project, plus 60 units for other subdivisions, plus 216.5 units on legal lots). The 2007 CVTIP study forecast estimated post-2008 units for 2030 as 533 units (not counting units in projects approved prior to 2008), so it overestimates residential traffic by 127 units compared to that which would occur with the Project ~~130-Unit Alternative~~.

Because the cumulative traffic analysis uses the 2030 forecast from the 2007 CVTIP study, it would include a similar estimate of cumulative traffic levels for the Proposed Project and would slightly overestimate cumulative traffic levels compared to what may actually occur now with the Project ~~130-Unit Alternative~~. Because the 2007 CVTIP traffic study forecast was based on a localized analysis of traffic potential that is more geographically precise than a regional model forecast and is reasonably representative of future conditions, it is considered appropriate for use in this Second Revised ~~Recirculated~~ Draft EIR.

Cumulative Plus Project ~~and Cumulative Plus 130-Unit Alternative~~ volumes are shown on **Figures ~~4-3~~ 4-3 ~~and 4-4, respectively~~**.

~~3~~ Units in previously approved subdivisions prior to 2008 were accounted for in the 2007 CVMP traffic study.

Figure 4-3 Cumulative Plus Project Traffic Volumes



Source: Cental Coast Transportation Consulting 2015.; Rancho Cañada Village Project EIR (2016) by ICF for Monterey County.

Cumulative Traffic Impacts

Table 4-2 summarizes the existing, cumulative and cumulative plus Proposed Project ~~and 130-Unit Alternative~~ intersection traffic conditions.

Table 4-2. Cumulative Intersection Levels of Service

Segment	Peak Hour	Existing Delay [1] (sec/veh)	Existing LOS [2]	Cumulative Delay [1] (sec/veh)	Cumulative LOS [2]	~~Cumulative Plus Project~~ ~~Delay [1]~~ ~~(sec/veh)~~	~~Cumulative Plus Project~~ ~~LOS [2]~~	Cumulative Plus Project ~~130-Unit Alternative~~ Delay [1] (sec/veh)	Cumulative Plus Project ~~130-Unit Alternative~~ LOS [2]
1. SR 1/ Carpenter Street	AM	19.4	B	30.2	C	~~**35.4**~~	~~**D**~~	32.9	C
	PM	**39.9**	**D**	**88.4**	**F**	~~**100.4**~~	~~**F**~~	**92.3**	**F**
2. SR 1/Ocean Avenue	AM	27.7	C	**44.3**	**D**	~~**48.7**~~	~~**D**~~	**46.0**	**D**
	PM	20.7	C	**40.4**	**D**	~~**48.9**~~	~~**D**~~	**44.7**	**D**
3. SR 1/Carmel Valley Road	AM	11.2	B	21.2	C	~~24.4~~	~~C~~	22.6	C
	PM	21.6	C	18.0	B	~~18.9~~	~~B~~	18.6	B
4. SR 1/Rio Road	AM	25.1	C	25.0	C	~~25.4~~	~~C~~	25.1	C
	PM	**41.4**	**D**	**65.5**	**E**	~~**68.6**~~	~~**E**~~	**65.9**	**E**
5. Carmel Valley Road/Carmel Rancho Blvd	AM	15.7	B	24.1	C	~~24.2~~	~~C~~	24.5	C
	PM	21.1	C	**40.8**	**D**	~~**41.5**~~	~~**D**~~	**43.0**	**D**
6. Carmel Valley Road/Carmel Middle School	AM	16.4	B	17.1	B	~~17.7~~	~~B~~	17.7	B
	PM	7.6	A	9.0	A	~~9.4~~	~~A~~	9.4	A
7. Carmel Valley Road/Rio Road	AM	0.5 (33.8)	A (C)	9.5	A	~~10.4~~	~~B~~	11.0	B
	PM	1.5 (65.8)	A (F)	7.1	A	~~8.6~~	~~A~~	9.2	A
8. Carmel Valley Road/Via Mallorca	AM	3.6	A	5.8	A	~~5.8~~	~~A~~	5.8	A
	PM	5.7	A	6.1	A	~~6.0~~	~~A~~	6.1	A
9. Carmel Valley Road/ Rancho San Carlos Road	AM	9.0	A	**49.1**	**D**	~~**49.1**~~	~~**D**~~	**48.6**	**D**
	PM	12.1	B	26.1	C	~~26.7~~	~~C~~	26.0	C
10. Carmel Valley Road/Laureles Grade	AM	**34.2 (122.0)**	**D (F)**	**>200 (>200)**	**F (F)**	~~**>200 (>200)**~~	~~**F (F)**~~	**>200 (>200)**	**F (F)**
	PM	**59.4 (>200)**	**F (F)**	**>200 (>200)**	**F (F)**	~~**>200 (>200)**~~	~~**F (F)**~~	**>200 (>200)**	**F (F)**
11. Laureles Grade/SR 68	AM	16.4	B	29.8	C	~~29.8~~	~~C~~	29.8	C
	PM	21.3	C	21.0	C	~~21.0~~	~~C~~	20.9	C
12. Crossroads Driveway/Rio Road	AM	13.7	B	22.6	C	~~22.0~~	~~C~~	22.4	C
	PM	15.3	B	14.6	B	~~14.5~~	~~B~~	14.6	B
13. Carmel Center Place/Rio Road	AM	5.3	A	5.8	A	~~5.6~~	~~A~~	5.8	A
	PM	8.5	A	8.3	A	~~8.1~~	~~A~~	8.3	A
14. Carmel Rancho Blvd/Rio Road	AM	10.1 (18.6)	B (C)	8.2 (19.5)	A (C)	~~9.4 (23.4)~~	~~A (C)~~	8.2 (19.4)	A (C)
	PM	12.6 (53.9)	B (F)	**>200 (>200)**	**F (F)**	~~**>200 (>200)**~~	~~**F (F)**~~	**>200 (>200)**	**F (F)**

[1] Highway Capacity Manual 2010 average control delay in seconds per vehicle.

[2] For side-street stop-controlled intersections, the worst approach's delay is reported in parenthesis next to the overall intersection delay.

[3] Unacceptable operations are shown in **bold text**

Cumulative Impact TR-C1: LOS Decrease at Signalized Intersections (significant and unavoidable with mitigation)

~~**Proposed Project**~~

The results of the level of service analysis under cumulative conditions for the Proposed Project are summarized in **Table 4-2**. As shown, the results indicate that level of service (LOS) would be deficient at five signalized intersections.

SR 1 Intersections

The SR 1/Carpenter Street intersection operates at LOS D during the existing PM peak hour and LOS B during the AM peak hour. Under cumulative plus Proposed Project conditions, this intersection would operate at LOS D during the AM peak hour and LOS F during the PM peak hour. The morning peak-hour delay would increase by 16 seconds, and the evening peak-hour delay would increase by 60.5 seconds. The Proposed Project would add traffic to the intersection, which is deficient during the evening peak hour, and degrade the operation of the intersection during the morning peak hour.

The SR 1/Ocean Avenue intersection operates at LOS C during the AM and PM peak hours. Under cumulative conditions plus Proposed Project conditions, the AM and PM peak-hour LOS would be D.

Improvement of the LOS at the SR 1/Carpenter Street and SR 1/Ocean Avenue intersections would require widening of SR 1 to six lanes to provide acceptable operations. This mitigation measure is considered infeasible because of the long history of opposition to the widening of SR 1 through Carmel-by-the-Sea, no State, regional or local planning for such improvements, and a general community lack of acceptance of any such improvement. As such, the Project would have a *significant and unavoidable* contribution to cumulative impacts on these two intersections.

The SR 1/Rio Road intersection operates at LOS D under the existing PM peak hour. Under the cumulative plus Proposed Project conditions, the intersection would operate at LOS E. Because the Proposed Project would contribute to a deficient intersection, this would be a significant, considerable contribution to cumulative impacts. However, with the implementation of **Mitigation Measure TR-1~~2~~** (refer to Chapter 3.7), the Proposed Project would contribute a fair-share regional impact fee that would fund improvements to this intersection and thus would have a *less-than-considerable* contribution to a cumulative impact at this intersection.

Monterey County Road Intersections

With two exceptions, all Monterey County signalized intersections would operate with acceptable LOS conditions.

- Under existing conditions, the signalized Carmel Valley Road/Carmel Rancho Boulevard intersection operates at LOS B during the AM peak hour and LOS C during the PM peak hour. This intersection would operate at LOS D during the PM peak hour cumulative plus Project conditions. The addition of cumulative traffic changes the LOS from the existing condition. Adding a second northbound right turn lane would provide LOS C operations but is not included in the CVTIP.
- Under existing conditions, the signalized Carmel Valley Road/Rancho San Carlos Road intersection operates at LOS A during the AM peak hour. This intersection would operate at LOS D during the AM peak hour under cumulative plus Proposed Project conditions. Adding a second westbound through lane would improve operations to LOS B. The transition from a two-lane

section to a four-lane section occurs approximately 1/3 of a mile west of Rancho San Carlos Road. Extending the new westbound lane to the current merge point west of the intersection would be necessary but this improvement is not included in the CVTIP.

As shown in **Table 4-2**, these two intersections would have deficient levels with or without the Project; thus the Project can only be required to contribute a fair share to complete improvements and cannot be required to solely fund such improvements. Since the CVTIP does not include improvements that would reduce the Project impacts to less than significant, this would be *significant and unavoidable* contribution to a cumulative impact.

~~**130-Unit Alternative**~~

~~The 130-Unit Alternative would have similar impacts on SR 1 intersections as the Proposed Project. The 130-Unit Alternative would have a *significant and unavoidable* impact on SR 1/Carpenter Street and SR 1/Ocean Avenue. Similarly to the Proposed Project, the 130-Unit Alternative would implement **Mitigation Measure TR-2** (refer to Section 3.7, *Transportation and Traffic*) to minimize its share of the impact on the SR 1/Rio Road intersection. Therefore, the 130-Unit Alternative would have a *less-than-considerable* contribution to a cumulative impact.~~

~~The 130-Unit Alternative would have a similar cumulative contribution to the Carmel Valley Road/Rancho San Carlos and Carmel Valley Road/Carmel Rancho Blvd intersections. Similarly to the Proposed Project contribution, the 130-Unit Alternative would have a *significant and unavoidable* contribution to a cumulative impact.~~

Cumulative Impact TR-C2: LOS Decrease at Unsignalized Intersections (considerable and unavoidable with mitigation)

~~**Proposed Project**~~

Under cumulative conditions with the Project, as shown in **Table 4-2**, all unsignalized intersections other than two intersections discussed below would have acceptable levels of service.

- Carmel Rancho Blvd/Rio Road Intersection. The unsignalized intersection at Carmel Rancho Blvd and Rio Road would operate at an unacceptable LOS F during the PM peak hour and would meet the peak hour signal warrant under cumulative conditions with the Proposed Project. The side-street-stop controlled intersection would continue to operate at its existing LOS under the cumulative plus Proposed Project scenario. Improvements to the operation of this intersection would require installation of a single lane roundabout, which would result in LOS A. The signalization of this intersection would improve operations to LOS A. Installation of this improvement would require coordination with other signals on Rio Road. Because under cumulative conditions without the Proposed Project the intersection would continue to operate at LOS F, the Project Applicant is only responsible for the Proposed Project's fair-share contribution. Currently, the CVTIP does not include improvements to the operation at this intersection. Therefore, the Proposed Project would have a *considerable and unavoidable* contribution to a significant cumulative impact.
- Laureles Grade/Carmel Valley Road Intersection. The unsignalized intersection at Laureles Grade and Carmel Valley Road currently operates at an unacceptable LOS F and would continue to operate at an unacceptable LOS F under cumulative conditions with the Proposed Project. This intersection meets the peak-hour volume signal warrant under cumulative conditions. As such, the implementation of the Proposed Project would result in a considerable cumulative

contribution at this intersection. Implementation of project-level **Mitigation Measure TR-1** (previously identified in Section 3.7, *Transportation and Traffic*) would include a fair-share CVTIP impact fee payment that would reduce this contribution to a *less-than-considerable* level because the CVTIP includes a grade separation at this intersection that would improve operations to an acceptable level.

~~**130-Unit Alternative**~~

~~The 130-Unit Alternative would result in similar contributions to cumulative impacts on the intersections at Carmel Rancho Blvd/Rio Road and Laureles Grade/Carmel Valley Road. The 130-Unit Alternative would have a *considerable and unavoidable* contribution to a significant cumulative impact at Carmel Rancho Blvd/Rio Road. Similar to the Proposed Project, the 130-Unit Alternative would implement Project impact **Mitigation Measure TR-1**, which would ensure the 130-Unit Alternative reduces its fair share of the impact to the Laureles Grade/Carmel Valley Road intersection to a *less-than-considerable* level.~~

Cumulative Impact TR-C3: Peak Hour LOS Decrease for Segments of SR 1 and Carmel Valley Road (considerable and unavoidable ~~with mitigation~~)

Table 4-3 shows the existing, cumulative, cumulative plus Proposed Project ~~and 130-Unit Alternative~~ segment analysis along SR 1 and Carmel Valley Road.

~~**Proposed Project**~~

SR 1 Segments

As shown in **Table 4-3**, the Proposed Project would contribute traffic to three segments of SR 1 that would have deficient operations with or without the Project.

- SR 1 between Carpenter Street and Ocean. The southbound direction operates at LOS D during the AM peak hour and the northbound direction operates at LOS D during the PM peak hours for all scenarios. The Project add traffic to this deficient segment, which is a significant impact.
- The SR 1 segment between Ocean Avenue to Carmel Valley Road. The northbound direction operates at LOS F during the AM peak hour under all scenarios. The Project add traffic to this deficient segment, which is a significant impact.
- The SR 1 segment from Carmel Valley Road to Rio Road. The northbound direction operates at LOS D during the AM peak hours and both directions operate at LOS E during the PM peak hour under all scenarios. The Project add traffic to this deficient segment, which is a significant impact.

Improvements to these SR 1 segments, discussed above, would require widening SR 1. This mitigation measure is considered infeasible because of a long history of opposition to the widening of SR1 through Carmel-by-the-Sea, no State, regional or local planning for such improvements, and a general community lack of acceptance of any such improvement. Therefore, the Proposed Project would have a *considerable and unavoidable* contribution to a significant cumulative impact.

Table 4-3. Cumulative Plus Proposed Project ~~and 130-Unit Alternative~~ Roadway Segment Analysis

Segment	LOS Standard	Existing LOS				Cumulative LOS				~~Cumulative Plus Project LOS~~				Cumulative Plus Project ~~130-Unit Alternative LOS~~			
		AM		PM		AM		PM		~~AM~~		~~PM~~		AM		PM	
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	~~NB/EB~~	~~SB/WB~~	~~NB/EB~~	~~SB/WB~~	NB/EB	SB/WB	NB/EB	SB/WB
SR 1–Carpenter St to Ocean Ave	C	C	**D**	**D**	C	C	**D**	**D**	C	~~C~~	~~**D**~~	~~**D**~~	~~C~~	C	**D**	**D**	C
SR 1–Ocean Ave to Carmel Valley Road	C	C	C	C	C	**F**	C	C	C	~~**F**~~	~~C~~	~~C~~	~~C~~	**F**	C	C	C
SR 1–Carmel Valley Road to Rio	C	**F**	C	**F**	**E**	**D**	C	**E**	**E**	~~**D**~~	~~C~~	~~**E**~~	~~**E**~~	**D**	C	**E**	**E**
SR 1–Rio to Ribera	C	B	B	B	B	B	B	B	B	~~B~~	~~B~~	~~B~~	~~B~~	B	B	B	B
1. CVR–Valle Vista to Holman	C	A	C	B	B	C	**D**	**D**	C	~~C~~	~~**D**~~	~~**D**~~	~~C~~	C	**D**	**D**	C
2. CVR–Holman to Esquiline	C	A	C	C	B	C	**D**	**D**	C	~~C~~	~~**D**~~	~~**D**~~	~~C~~	C	**D**	**D**	C
3. CVR–Esquiline to Ford	D	B	D	D	C	D	**E**	**E**	D	~~D~~	~~**E**~~	~~**E**~~	~~D~~	D	**E**	**E**	D
4. CVR–Ford to Laureles Grade	D	C	D	D	C	D	**E**	**E**	D	~~D~~	~~**E**~~	~~**E**~~	~~D~~	D	**E**	**E**	D
5. CVR–Laureles Grade to Robinson Canyon	D	C	D	D	C	C	**E**	**E**	D	~~C~~	~~**E**~~	~~**E**~~	~~D~~	C	**E**	**E**	D
6. CVR–Robinson Canyon to Shulte	D	C	D	**E**	D	D	**E**	**E**	D	~~D~~	~~**E**~~	~~**E**~~	~~D~~	D	**E**	**E**	D
7. CVR–Shulte to Rancho San Carlos	D	C	**E**	**E**	D	**E**	**E**	**E**	D	~~**E**~~	~~**E**~~	~~**E**~~	~~**E**~~	**E**	**E**	**E**	D
8. CVR–Rancho San Carlos to Rio	C	B	B	B	B	B	C	B	B	~~B~~	~~C~~	~~B~~	~~B~~	B	C	B	B
9. CVR–Rio to Carmel Rancho Blvd	C	A	B	B	B	B	C	C	B	~~B~~	~~C~~	~~C~~	~~B~~	B	C	C	B
10. CVR–Carmel Rancho Blvd to SR 1	C	B	B	B	B	B	C	B	B	~~B~~	~~C~~	~~B~~	~~B~~	B	C	B	B
11. Carmel Ranch Blvd-CVR to Rio	C	**D**	B	**D**	B	**D**	B	**D**	B	~~**D**~~	~~B~~	~~**D**~~	~~B~~	**D**	B	**D**	B
12. Rio-Val Verde to Carmel Rancho Blvd	C	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	~~**D**~~	~~**D**~~	~~**D**~~	~~**D**~~	**D**	**D**	**D**	**D**
13. Rio-Carmel Rancho Blvd to SR 1	C	B	**D**	B	C	B	**D**	B	C	~~B~~	~~**D**~~	~~B~~	~~C~~	B	**D**	B	C

Source: Monterey County Department of Public Works 2010.

Notes:

Bold text indicates threshold has been exceeded.

See **Appendix E** for detailed segment analysis results.

Carmel Valley Road Segments

As shown in **Table 4-3**, future cumulative conditions with the Proposed Project would result in significant impacts along Carmel Valley Road Segments 1 through 7 compared to existing conditions. The Proposed Project would add traffic to deficient segments of Carmel Valley Road.

These segments of Carmel Valley Road would operate at deficient levels with or without the Project. Thus the Project can only be required to contribute a fair share to complete improvements and cannot be required to solely fund such improvements.

~~**Mitigation Measure TR-2** (described in Section 3.7, *Transportation and Traffic*) would help with certain improvements to Carmel Valley Road through payment of the CVTIP traffic impact fee. As described in Section 3.7, the adopted CVTIP currently includes several improvements to Carmel Valley Road, including left-turn channelization, sight distance improvement, shoulder widening, bike lanes, grade separation at Laureles/Carmel Valley Road, a short passing lane in front of September Ranch (Segment 7), and a short passing lane opposite Garland Park (Segment 5). The two passing lanes in the CVTIP are short improvements that would not remedy the cumulative impacts for Segments 5 or 6 The CVTIP does not include any widening proposals or adequate passing lanes to address the identified cumulative traffic impacts.~~

~~Because the current CVTIP does not include~~ In response to anticipated traffic congestion, Monterey County has sponsored RTP Project CT008, SR-1 Carmel Operational Improvement Project which will begin construction in fiscal year 2016-17. The project will construct a climbing lane on SR 1 between Rio Road and Carmel Valley Road. Although RTP Project CT008 would help alleviate the impact, it would not reduce this impact to a *less-than-significant* level because the TAMC regional fee program does not include any proposed widening of SR1 north of Carmel Valley Road or south of Ribera Road. There is no other state, regional, or local planning or support for improvements to Segments 1 through 7 that would reduce the cumulative impacts to less than significant, the Proposed Project would make a *considerable and unavoidable* contribution to the cumulative impacts.

~~**130-Unit Alternative**~~

~~***SR 1 Segments***~~

~~As shown in **Table 4-3**, the 130-Unit Alternative would have similar impacts as the Proposed Project on SR 1 segments. As discussed above, there is no feasible mitigation to improve the operation of these segments. Therefore, the 130-Unit Alternative would have a *considerable and unavoidable* contribution to a significant cumulative impact to these segments.~~

~~***Carmel Valley Road Segments***~~

~~The 130-Unit Alternative would have similar impacts as the Proposed Project on Carmel Valley Road segments. The 130-Unit Alternative would add trips to Segments 1 through 7 that would have significant cumulative LOS effects, as shown in **Table 4-3**. **Mitigation Measure TR-C2** would require payment of the CVTIP traffic impact fee. However, the CVTIP does not include improvements to Segments 1 through 7 that would reduce the cumulative impacts to less than significant, and thus the 130-Unit Alternative would have a *considerable and unavoidable* contribution to the cumulative impacts on these Carmel Valley Road segments.~~

Cumulative Impact TR-C4: Exceed Average Daily Traffic Thresholds on Segments of Carmel Valley Road (considerable and unavoidable with mitigation)

Table 4-4 shows the cumulative average daily traffic on Carmel Valley Road.

Table 4-4. Cumulative Roadway Segment Average Daily Traffic (ADT)

Segment	CVMP ADT Thresholds[1]	Existing ADT	Cumulative ADT	~~Cumulative Plus Project~~	Cumulative Plus Project ~~130 Unit Alternative~~
1. CVR–Valle Vista to Holman	8,487	3,200	**10,400**	**~~10,420~~**	**10,409**
2. CVR–Holman to Esquiline	6,835	3,700	**12,800**	**~~12,820~~**	**12,809**
3. CVR–Esquiline to Ford	9,065	8,200	**17,100**	**~~17,120~~**	**17,109**
4. CVR–Ford to Laureles Grade	11,600	10,600	**19,000**	**~~19,020~~**	**19,009**
5. CVR–Laureles Grade to Robinson Canyon	12,752	10,900	**18,300**	**~~18,361~~**	**18,318**
6. CVR–Robinson Canyon to Shulte	15,499	13,800	**20,300**	**~~20,361~~**	**20,409**
7. CVR–Shulte to Rancho San Carlos	16,340	15,600	**21,600**	**~~21,846~~**	**21,709**
8. CVR–Rancho San Carlos to Rio	48,487	18,700	23,000	~~23,266~~	23,118
9. CVR–Rio to Carmel Rancho Blvd	51,401	24,100	30,700	~~31,682~~	31,493
10. CVR–Carmel Rancho Blvd to SR 1	27,839	21,900	27,500	**~~28,482~~**	**28,138**
11. Carmel Ranch Blvd-CVR to Rio	33,495	9,877	10,100	~~11,082~~	10,893
12. Rio-Val Verde to Carmel Rancho Blvd	6,416	702	2,000	~~2,266~~	2,118
13. Rio-Carmel Rancho Blvd to SR 1	33,928	11,398	14,000	~~14,246~~	14,109

Source: Monterey County Department of Public Works 2010.

Notes:

Monterey County Department of Public Works 2013 ADT Counts. **Bold** text indicates threshold has been exceeded. See **Appendix E** for detailed segment analysis results.

~~Proposed Project~~

As shown in **Table 4-4**, the cumulative plus Proposed Project condition exceeds the ADT thresholds along all segments, with the exception of Segments 8, 9 and 11 through 13. The Proposed Project trips would increase the ADT on these segments. However, there would be a significant impact along Segments 1 through 7 under cumulative conditions with or without the Proposed Project. Thus the Project can only be required to contribute a fair share to complete improvements and cannot be required to solely fund such improvements. As discussed, the CVTIP does not include widening or passing lane improvements that could address traffic congestion conditions, however widening or passing would not reduce the volume of traffic and thus the exceedance of the ADT volume threshold. Even eliminating the Proposed Project would not reduce the impact to less than the ADT threshold. Thus, there is no feasible project mitigation to address this impact. Therefore, the Proposed Project would have a *considerable and unavoidable* contribution to a significant cumulative impact.

Under existing and cumulative conditions, the ADT threshold on Segment 10 would not be exceeded. However, the Proposed Project trips plus cumulative conditions exceed the ADT threshold. For Segment 10, there is no feasible mitigation measure to reduce the cumulative impact of the Project relative to the ADT threshold short of drastically downsizing the Project. Reducing the single-family element to only 113 units would keep the cumulative impact below

the ADT threshold. Eliminating the condo/townhouse units and restricting the single-family lots to approximately 26 lots would keep the cumulative impact below the ADT level.

~~There is no feasible mitigation measure to reduce the ADT to below the threshold short of restricting the number of single-family dwellings to approximately 115 units (or eliminating the condo/townhouse units and reducing single-family dwellings to approximately 131 units).~~ However, this is a cumulative impact, not a project-level impact, and thus it would be unfair (and illegal under the U.S. Constitutional limits established in the *Nollan* and *Dolan* Supreme Court rulings[4]) to require this cumulative impact to be entirely remedied by this Project, and thus the downsizing options above are not considered feasible. Furthermore, these drastic downsizing options would not meet the Project's objectives. This would be a significant and unavoidable impact. Therefore, the Proposed Project would have a *considerable and unavoidable* contribution to a significant cumulative impact.

~~**130-Unit Alternative**~~

~~The 130-Unit Alternative would result in similar contributions to Segment 1 through Segment 7 as the Proposed Project. Therefore, the 130-Unit Alternative would have a *considerable and unavoidable* contribution to a significant cumulative impact to these segments of Carmel Valley Road.~~

~~For Segment 10, there is no feasible mitigation measure to reduce the cumulative impact of the 130-Unit Alternative relative to the ADT threshold short of drastically downsizing the Project. Reducing the single-family element to only 113 units would keep the cumulative impact below the ADT threshold. Eliminating the condo/townhouse units and restricting the single-family lots to approximately 26 lots would keep the cumulative impact below the ADT level.~~

~~However, as noted above, imposing these downsizing options solely on the 130-Unit Alternative is not considered feasible due to legal limitations. In addition, these restrictions would not meet the alternative's objectives. Therefore, the 130-Unit Alternative would have a *considerable and unavoidable* contribution to a significant cumulative impact to these segments of Carmel Valley Road.~~

Cumulative Impact TR-C5: Adequate Sight Distance (less than considerable)

~~**Proposed Project**~~

As described in Section 3.7, *Transportation and Traffic*, the sight distance at the intersection of Rio Road and Carmel Valley Road is satisfactory for the speeds prevailing on Carmel Valley Road, and the Proposed Project would have a *less-than-considerable* contribution to a cumulative impact.

~~**130-Unit Alternative**~~

~~Similarly to the Proposed Project, under the 130-Unit Alternative, the sight distance at the intersection of Carmel Valley Road and Rio Road is satisfactory. Therefore, the 130-Unit Alternative would have a *less-than-considerable* contribution to a cumulative impact.~~

[4] These rulings established the principle that government development conditions of approval or mitigation must have a nexus and be proportional to the project's impacts. Placing the burden 100 percent on a single contributor to a cumulative impact would violate the proportionality requirement.

Cumulative Impact TR-C6: Changes to Transit and Bicycle Travel Access (less than considerable)

~~**Proposed Project**~~

~~As described in Section 3.7, the site would improve transit and bicycle travel through provision of trail connections and would accommodate bicycle and pedestrian travel within the project area without impeding transit access. Therefore, the Proposed Project would have a *less-than-considerable* contribution to a cumulative impact.~~

~~**130-Unit Alternative**~~

~~Similarly to the Proposed Project, the 130-Unit Alternative~~ The Project would improve transit and bicycle travel through a multi-use trail through the site to Palo Corona ~~Rancho~~ Regional Park and commercial development through Rio Road west. ~~Unlike the Proposed Project, t~~The extension of Rio Road west would only serve bicycles, pedestrians, and emergency vehicle access under this alternative. Because the Project ~~130-Unit Alternative~~ would provide improved bicycle access and would not impeded transit access, it would have a *less-than-considerable* contribution to a cumulative impact.

Cumulative Impact TR-C7~~8~~: Construction Traffic (considerable and unavoidable with mitigation)

~~**Proposed Project**~~

Project construction traffic combined with cumulative traffic would result in short-term increases in traffic volumes that would add traffic to existing intersection and roadway segments with deficient operations at certain locations. **Mitigation Measure TR-2~~3~~** (described in Section 3.7, *Transportation and Traffic*) would reduce construction period impacts, but would not avoid all contributions to locations with existing failing traffic operations so the Proposed Project construction traffic would have a *considerable and unavoidable* contribution to a cumulative impact.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, construction traffic combined with cumulative traffic would result in short-term increases in traffic volumes that would add traffic to existing intersection and roadway segments with deficient operations at certain locations. **Mitigation Measure TRA-4** (described in Section 3.7) would reduce construction period impacts, but would not avoid all contributions to locations with existing failing traffic operations, so the 130-Unit Alternative's construction traffic would have a *considerable and unavoidable* contribution to a cumulative impact.~~

Air Quality

Cumulative Impact AIR-C1: Cumulative Effect on Air Quality (less than considerable)

~~**Proposed Project**~~

According to Monterey Bay Unified Air Pollution Control District guidelines, a land use project is considered to have a significant cumulative impact if the project's emissions are not accommodated in the Air Quality Management Plan (AQMP) or if localized carbon monoxide (CO) hotspots exceed State and federal ambient air quality standards (AAQS) under cumulative traffic conditions.

As described in Section 3.8, *Air Quality*, the Proposed Project, combined with "approved but not built dwelling units" is not anticipated to exceed the Association of Monterey Bay Area Governments' 2020 forecast. Therefore, the Proposed Project emissions are accommodated in the AQMP.

The Proposed Project would add limited traffic volumes to certain roadways and intersections that are already congested. As described in Section 3.8, *Air Quality*, a number of intersections in the project vicinity are expected to operate at LOS D or worse under existing plus project conditions. This would also be true under cumulative plus project conditions. However, as discussed in Section 3.8, prior CO analysis for the Pebble Beach Company buildout project EIR (Monterey County 2011) of intersections with congested conditions and high intersection volumes has shown that ambient CO concentrations would be well below State and federal AAQS.[5] Therefore, localized CO hotspots exceeding State and federal AAQS under cumulative with project traffic conditions for this project are not expected. The Proposed Project would not result in project- or cumulative-level impacts related to CO hotspots.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, as described in Section 3.8, *Air Quality*, the 130-Unit Alternative is not anticipated to exceed AMBAG's 2020 forecast. Furthermore, as described in Section 3.8, the 130-Unit Alternative would not be expected to result in localized CO hotspots exceeding State and federal AAQS under cumulative traffic conditions. Therefore, the 130-Unit Alternative would not result in project- or cumulative-level impacts on air quality.~~

Cumulative Impact AIR-C2: Cumulative Elevated Health Risk from Exposure to Construction-Related Emissions (less than considerable)

~~**Proposed Project**~~

As indicated in Section 3.8, *Air Quality*, construction of the proposed development is anticipated to involve the operation of diesel-powered equipment for various onsite construction and for hauling of materials and importation of soil. As discussed in Section 3.8, *Air Quality*, **Table 3.8-9~~12~~**, the worst-case construction activities are expected to result in a maximum risk of 5.27 ~~8.45~~ cases of cancer per million and a chronic Health Index score of 0.01 ~~0.03~~ at the most affected sensitive receptor location. The Proposed Project level of exposure and risk is below MBUAPCD's cancer risk and health hazard thresholds.

Cumulative development of visitor-serving units might occur on other parts of the Rancho Cañada Golf Club, but it is expected to occur farther away from the sensitive receptors affected by the Proposed Project, with the exception of construction traffic along Carmel Valley Road. Limited residential development also may occur along Val Verde Road, but approval of the Proposed Project would limit the amount of potential development due to subdivision there. Flood control and habitat

[5] In the Pebble Beach 2011 EIR, cumulative plus project volumes (5,382 PM peak hour volume) were analyzed for CO impacts at the SR1/Carpenter intersection and the results were 4.03 ppm, compared to federal and state 1-hour standards of 35 ppm and 20 ppm. The cumulative plus project PM peak hour volumes for the Proposed Project were 5,430 at the SR1/Carpenter intersection and 3,750 at the Carmel Valley Road/SR 1 intersection affected by the Proposed Project under cumulative plus project conditions. These are the highest volume intersections affected by the project. Since the modeled levels in the Pebble Beach EIR were for volumes nearly the same as those under cumulative plus project conditions with this Proposed Project, the CO levels with the project would also be under the federal and state standards and thus less than significant.

restoration projects in lower Carmel Valley may also contribute to diesel emission health effects during construction.

The thresholds for cancer and non-cancer risks are designed to assess the incremental contribution of a project to overall cumulative health risks. Because the Proposed Project would result in risks below these thresholds, the Proposed Project would have a *less-than-considerable* contribution to a cumulative impact.

~~**130-Unit Alternative**~~

~~As shown in Section 3.8, *Air Quality*, **Table 3.8-13**, with the 130-Unit Alternative, construction activities are expected to result in a maximum risk of 5.27 cases of cancer per million and a Chronic Non-Cancer Health Index score of 0.01 at the most affected sensitive receptor. This level of exposure and risk is below MBUAPCD's cancer risk and hazard thresholds. Therefore, the 130-Unit Alternative would have a *less-than-considerable* contribution to a cumulative impact.~~

Noise

Cumulative Impact NOI-C1: Exposure of Noise-Sensitive Land Uses to Cumulative Traffic Noise that Exceed County Noise Compatibility Standards (less than considerable)

~~**Proposed Project**~~

Project-related traffic noise increases to existing land uses would occur at several roadways in the Project vicinity. The Project's contribution to noise levels in the area, in conjunction with cumulative noise in the future is discussed here.

Existing traffic noise levels along Carmel Valley Road near the project are greater than 60 dBA 50 feet from the roadway and would worsen with cumulative traffic. However, the Project's contribution to roadway noise level, as shown in **Table 4-5** below, would be far less than 1 dBA on Carmel Valley Road, and thus would not substantially result in changed noise levels along this roadway. As such, the Project would not contribute to a significant cumulative impact on noise along Carmel Valley Road.

As shown in **Table 4-5** below, future noise levels along Rio Road east to Carmel Valley Road, with and without the Project, are expected to be relatively low and do not result in any land use incompatibilities as they would be less than 55 dBA and below the residential standard.

The Project-related contribution to cumulative traffic noise on Carmel Rancho Boulevard would be 0.1 or less, as shown in **Table 4-5**, and not noticeable.

Although the Proposed Project would connect the new residential area to Rio Road to the west, new project residents would be the only contributor of new traffic noise between the Project and Carmel Rancho Boulevard. Because the segment traffic noise level would be less than 55 A-weighted decibels (dBA) (the residential noise standard), the Project is not considered to contribute considerably to a cumulative impact along this segment of Rio Road. On Rio Road between the project site and Carmel Rancho Boulevard, and west of Carmel Rancho Boulevard to SR 1, future traffic noise levels are expected to be 55.7 dBA and 63.0 dBA (which exceed the residential standard), respectively, and the Project would increase cumulative traffic noise levels by 0.1 dBA ~~and 0.2 dBA, respectively~~, for the residential area along this segment. However, a 0.1 dBA

contribution would be below the threshold of perceptibility along this segment. Thus, the Project contribution is less than considerable.

The Project's contribution to traffic noise would be below 3 dBA at all affected roadways, which is generally considered to be the threshold of perceptibility for noise level changes. The Project would not contribute considerably to substantial cumulative increases in noise.

Table 4-5. Cumulative Traffic Noise Modeling Results for the Proposed Project

Road	Segment	Existing CNEL* (dBA)	Cumulative CNEL* (dBA)	Cumulative Plus Project CNEL* (dBA)	Project Increase in Noise (dBA)
Carmel Valley Road	East of Rio Road	69.3	70.8	70.8	0.0
	Rio Road to Carmel Middle School	69.3	70.9	71.0	0.1
	Carmel Middle School to Carmel Rancho Boulevard	69.6	71.4	71.5	0.1
Rio Road East	South of Carmel Valley Road	48.6	52.6	54.8	2.2
Carmel Rancho Boulevard	South of Carmel Valley Road	64.4	65.3	65.3	0.0
	North of Rio Road	63.3	63.4	63.5	0.1
Rio Road West	Project site to Carmel Rancho Boulevard	51.5	55.7	56.8	1.0
	Carmel Rancho Boulevard to Highway 1	62.5	63.0	63.1	0.2

Source: **Appendix G**.
*50 feet from roadway centerline
CNEL = community noise equivalent level

130-Unit Alternative

The results of the cumulative traffic modeling are shown below in **Table 4-6**. Comparing the results in **Table 4-6** to the results of **Table 4-5** shows that the 130-Unit Alternative would result in less severe cumulative noise increases at all modeled roadways. As a result, the 130-Unit Alternative, like the Project, would not result in any considerable cumulative impacts.

Table 4-5~~6~~. Cumulative Traffic Noise Modeling Results ~~for the 130-Unit Alternative~~

Road	Segment	Existing CNEL* (dBA)	Cumulative CNEL* (dBA)	Cumulative Plus Project CNEL* (dBA)	Project Increase in Noise (dBA)
Carmel Valley Road	East of Rio Road	69.3	70.8	70.8	0.0
	Rio Road to Carmel Middle School	69.3	70.9	71.0	0.1
	Carmel Middle School to Carmel Rancho Boulevard	69.6	71.4	71.5	0.1
Carmel Rancho Boulevard	South of Carmel Valley Road	48.6	65.3	65.4	0.0
	North of Rio Road	64.4	63.4	63.4	0.0
Rio Road East	South of Carmel Valley Road	63.3	52.6	54.6	2.0
Rio Road West	Project site to Carmel Rancho Boulevard	51.5	55.7	55.7	0.0
	Carmel Rancho Boulevard to Highway 1	62.5	63.0	63.0	0.0

Source: **Appendix G**.

*50 feet from roadway centerline

CNEL = community noise equivalent level

Public Services and Utilities

Cumulative Impact PSU-C1: Cumulative Increase in Demand for Public Services and Utility Infrastructure and Capacities (less than considerable with mitigation)

~~Proposed Project~~

Regional development creates cumulative demand on all aspects of public services and utility provisions by increasing the number of residents, occupants, and visitors to the area that is discussed in this section.

Fire, Emergency, and Police Services

The Proposed Project, along with other development projects, would increase demand for fire protection and medical emergency services. As described in Section 3.10, *Public Services, Utilities, and Recreation,* the Project would not change service ratios and response times. The project design must comply with all applicable building code standards and any additional County, CVMP, and local fire district policies related to fire and emergency response. The new residents in the Proposed Project would contribute to the tax base, which would help fund needed expansion in fire and emergency services over time. However, under CEQA, impacts related to these public services occur only if the demand for such services were to result in construction of new fire, emergency services, or police facilities that would result in secondary physical impacts on the environment. Given the relatively limited buildout within Carmel Valley allowed by the CVMP, additional public service facilities are not likely and thus the Proposed Project would have a *less-than-considerable* contribution to a significant cumulative impact.

Emergency Access

As described in Section 3.10, *Public Services, Utilities*, *and Recreation*, the Proposed Project would provide adequate emergency access and egress to the project site. Local cumulative development of visitor-serving units on other parts of the Rancho Cañada Golf Club would also require emergency access and egress, but Rio Road east or direct access from Carmel Valley Road could provide such access and egress. Thus, the Proposed Project would have a *less-than-considerable* contribution to a significant cumulative impact on emergency access.

Wildland Fire Hazard

As described in Section 3.10, *Public Services, Utilities*, *and Recreation*, although the Proposed Project would be located across the river from an open space area, it would not significantly increase the risk of loss, injury, or death involving people or structures resulting from wildfires. Local cumulative development of visitor-serving units on other parts of the Rancho Cañada Golf Club would likely be along Carmel Valley Road and would not be directly adjacent to wildlands. Thus, the Proposed Project would have a *less-than-considerable* contribution to a significant cumulative impact on wildland fire hazard.

Water Demand

Cumulative development in the Carmel Valley and greater Monterey Peninsula would result in increasing demand for water supplies, which is primarily delivered by California American Water (Cal-Am). New supplies of water for Cal-Am will need to be found to meet increasing demand. Although current planning for desalination projects, including Cal-Am's proposal as well as the Deep Water Desal and People's Moss Landing Desal, are under way, the projects have not begun construction and timing for completion is uncertain. Currently, water availability is extremely limited due to legal constraints on withdrawals from the Carmel River and the Seaside aquifer and many new developments are placed on hold until new sources of water can be found. Therefore, any new development reliant on Cal-Am for potable water supply would contribute to cumulative water impacts. The recently approved Eastwood/Odello Water Right Change Petition will provide some additional water within the Carmel River watershed by changing use from irrigation to municipal uses, but this will not remove all current cumulative water supply deficits.

As explained in Section 3.10, *Public Services, Utilities*, *and Recreation*, compared to the existing water demand, the residential development would result in a net reduction in water use and would provide a dedication of water for instream uses. As such, the Project would benefit both water supply and biological resources in the Carmel River. Therefore, the Proposed Project would have a *less-than-considerable* contribution to a significant cumulative impact on water supply.

Demand for Water and Sewer Infrastructure

Cumulative development in the Carmel Valley and greater region would result in increasing demand for water and sewer infrastructure. As discussed in Section 3.10, *Public Services, Utilities*, *and Recreation*, the Proposed Project would provide new connections to existing sewer lines that have capacity sufficient to serve the Project. For water supply, the Project would require local water treatment facilities and pipelines. The secondary impacts of such facilities would be reduced to a *less-than-significant* level by **Mitigation Measure PSU-2** (described in Section 3.10). Because the Project would provide new sewer connections, sewer infrastructure is adequate to serve the Project,

and mitigation would address secondary impacts of new water infrastructure, the Proposed Project would have a *less-than-considerable* contribution to a significant cumulative impact on water supply.

Wastewater Treatment

The Proposed Project, in combination with other development projects, would result in an increased demand for wastewater treatment services provided by Carmel Area Wastewater District (CAWD). As stated in Section 3.10, *Public Services, Utilities, and Recreation*, the CAWD treatment facility is operating at 50 percent below its available capacity and has a remaining capacity of approximately 1.6 million gallons per day (gpd). The addition of a maximum of up to 280,170 gpd from the Proposed Project would still leave more than 1.3 million gpd available to address cumulative future wastewater treatment demands. Thus the Project would have a *less-than-considerable* contribution to a cumulative impact on wastewater services.

Utility Disruption

The Proposed Project, in combination with other development projects, could result in cumulative utility disruption if the Proposed Project is in construction at the same time as other projects. However, **Mitigation Measure PSU-3** would reduce the Project's contribution to any cumulative impact to a *less-than-considerable* level by providing coordination with utility service providers to reduce the potential for service interruptions.

School Services

The Proposed Project would contribute to a 2 percent increase in Carmel Unified School District enrollments. While cumulative development would also contribute to school enrollments, any future homeowners and developers would be required to pay school impact fees at the time of construction on their residential site. Payment of these developer fees would offset any potential physical impacts because of new or expanded school facilities pursuant to Government Code Section 65995(e). Therefore, cumulative impacts related to schools would be *less than significant* and the Project would not contribute to a significant cumulative impact.

Recreational Demand and Open Space

Although the Proposed Project would result in a loss of one 18-hole golf course, it would increase the current quantity of open space in the Carmel Valley area by dedicating approximately 38 ~~31~~ acres for habitat conservation, approximately 1.6 ~~2.5~~ acres for neighborhood parkland, and approximately 11 ~~0.5~~ acres of open space. As discussed in Section 3.10, *Public Services, Utilities, and Recreation*, the County contains numerous parks and open space areas, which greatly exceed population-to-parkland ratio requirements. As such, future cumulative development is not expected to result in a negative cumulative impact on recreational services and facilities because recreational facilities are ample relative to the County population. The Proposed Project would have a net *beneficial* impact on recreational resources by providing recreational areas in excess of County requirements.

Landfill Capacity

Cumulative development would increase the number of residents in the unincorporated Monterey County area. These residents would generate an increased demand for solid waste, green waste, and recycling disposal needs.

Monterey Regional Waste Management District (MRWMD) is currently operating substantially below its maximum daily permitted disposal tonnages. Currently the Monterey Peninsula Landfill and Recycling Facility have estimated remaining capacity of 48 million tons and are expected to be open for approximately 150 years. Increased solid waste, green waste, and recycling needs resulting from cumulative development including the Project can be accommodated by the existing collection and disposal services. Therefore, project contributions to cumulative impacts related to solid waste would be *less than considerable.*

~~**130-Unit Alternative**~~

~~The 130-Unit Alternative would result in similar impacts on public services and utilities as the Proposed Project. Similar to the Proposed Project, the 130-Unit Alternative would make less-than-significant contributions to cumulative impacts related to fire, emergency and police services, emergency access, wildland fire hazards, water demand, wastewater, schools, recreational demand, and open space and landfill capacity. With the implementation of **Mitigation Measures PSU-2** and **PSU-3**, the 130-Unit Alternative would have *less-than-considerable* contributions to impacts related to water infrastructure and utility disruptions.~~

Cultural Resources

Cumulative Impact CR-C1: Cumulative Impacts on Unknown and Undiscovered Cultural Resources (less than considerable with mitigation)

~~**Proposed Project**~~

Cumulative impacts related to cultural resources could occur where excavation or construction activities uncover buried historical, archaeological, or paleontological resources. The background research conducted for the project area revealed no significant historical or archaeological resources. Additionally, mitigation measures in Section 3.11, *Cultural Resources*, specify treatment protocols to address potentially undiscovered cultural resources. Any new development would be required to adhere to City, County, State, and federal requirements related to cultural resources as part of the CEQA process. These impacts would be mitigated at the project level, and therefore the Proposed Project's contribution to cumulative impacts associated with damage or loss of such resources in the region would be *less than considerable.*

~~**130-Unit Alternative**~~

~~The 130-Unit Alternative is consistent with the findings for the Proposed Project for cumulative impacts on cultural resources, in that cumulative impacts related to cultural resources could occur where excavation or construction activities uncover buried historical, archaeological, or paleontological resources. The background research conducted for the 130-Unit Alternative revealed no significant historical or archaeological resources. Additionally, mitigation measures in Section 3.11, *Cultural Resources*, specify treatment protocols to address potentially undiscovered cultural resources. Any new development would be required to adhere to City, County, State, and federal requirements related to cultural resources as part of the CEQA process. These impacts would be mitigated at the project level, and therefore the 130-Unit Alternative contribution to cumulative impacts associated with damage or loss of such resources in the region would be *less than considerable*.~~

Population and Housing

Cumulative Impact POP-C1: Cumulative Impacts Related to Population and Housing (~~considerable and unavoidable for the Proposed Project~~/less than considerable ~~for the 130-Unit Alternative~~)

~~Proposed Project~~

~~However, as discussed above, the Project's 281 housing units would be counted against the 2013 CVMP 190-unit housing unit limitation for new subdivisions and would eliminate any new subdivision residential units in the CVMP area (other than 24 units reserved for Delfino). With the project, the limit for new units would have to be expanded to 305 units, which would be 115 more residential units and population than anticipated in the 2013 CVMP. Thus, in the context of cumulative Project and 2013 CVMP buildout, the Proposed Project would induce population growth in excess of that anticipated in local land use plans. As discussed above, this additional growth would contribute considerably to cumulative traffic impacts, some of which are *significant and unavoidable*. As a result, the Proposed Project would induce substantial population growth in the CVMP area in excess of that anticipated in local land use plans and this additional growth would have significant secondary impacts, in this case on traffic. Thus, the Proposed Project would have a *significant* contribution to cumulative impacts on population and housing. As described above, cumulative traffic impacts would be *significant and unavoidable* and thus the Project's cumulative impacts related to population inducement would be *considerable and unavoidable.*~~

~~130-Unit Alternative~~

The Project's 130 housing units would be counted against the 2013 CVMP 190-unit housing unit limitation for new subdivisions and would eliminate any new subdivision residential units in the CVMP area (other than 24 units reserved for Delfino). The Project ~~130-Unit Alternative~~ would not result in residential development greater than that anticipated in the 2013 CVMP~~, unlike the Proposed Project,~~ because the 130-units would not exceed the 2013 residential subdivision unit cap and thus, the Project ~~130-Unit Alternative~~ would have *less-than-considerable* contribution to cumulative impact.

Greenhouse Gas Emissions and Climate Change

Cumulative Impact GHG-1: Cumulative development could result in cumulatively significant greenhouse gas emissions, but the Project would not contribute considerably to cumulative emissions, with mitigation.

~~Proposed Project~~

As described in Section 3.13, *Greenhouse Gas Emissions and Climate Change*, the unique chemical properties of greenhouse gases (GHGs) enable them to become well mixed within the atmosphere and transported over long distances. Climate change is a cumulative issue and the geographic scope for cumulative GHG emissions impacts is global, as GHGs are emitted by innumerable sources worldwide. Thus the analysis presented in Section 3.13, is inherently cumulative.

No single project, when taken in isolation, can cause climate change because a single project's emissions are insufficient to change the radiative balance of the atmosphere. Because climate change is the result of GHG emissions, and GHGs are emitted by innumerable sources worldwide,

global climate change would have a significant cumulative impact on the natural environment as well as on human development and activity.

As described in Impact GHG-1 in Section 3.13, *Greenhouse Gas Emissions and Climate Change*, the significance threshold used to evaluate Project GHG emissions is tied directly to the need to address cumulative GHG emissions and is based on the land use efficiency needed by 2020 to be consistent with AB 32.

With **Mitigation Measures GHG-1** and **GHG-2**, the Project's GHG emissions would be less than the cumulative contribution threshold. Consequently, the impact would be less than cumulatively considerable and the Project would, therefore, not conflict with an applicable plan, policy, or regulation of an agency adopted for reducing the emissions of greenhouse gases.

~~**130-Unit Alternative**~~

~~Similar to the Proposed Project, with **Mitigation Measures GHG-1** and **GHG-2**, the 130-Unit Alternative's GHG emissions would be less than the cumulative contribution threshold. Consequently, the impact would be less than cumulatively considerable and the Project would, therefore, not conflict with an applicable plan, policy, or regulation of an agency adopted for reducing the emissions of greenhouse gases.~~

Growth-Inducing Impacts

CEQA Requirements

Section 21100 of the California Public Resources Code requires an EIR to include a detailed statement of the proposed project's anticipated growth-inducing impact. More specific guidance is provided by Section 15126.2(d) of the State CEQA Guidelines, which require that the analysis of growth-inducing impacts discuss the ways in which the project could foster economic or population growth or the construction of additional housing in the project area. The analysis must also address project-related actions that, either individually or cumulatively, would remove existing obstacles to population growth. The purpose of this section is to examine the Proposed Project's ~~and 130-Unit Alternative's~~ likely impacts related to population growth, consistent with these statutory requirements.

Approach to the Growth-Inducement Analysis

Regulatory Context

California law requires that each county develop a comprehensive, long-term general plan to guide its land use decision-making and physical development (Government Code Section 65300 *ff*). The intent is to ensure that growth takes place in a controlled manner, with an appropriate balance of land uses maintained and all needed services provided. This goal is reflected in 2010 Monterey County General Plan contents mandated under Government Code Section 65302—of the seven mandatory "elements," or chapters, three relate directly to growth: the land use element establishes the pattern of future land uses, the circulation element plans the road system that will serve approved land uses, and the housing element identifies the means by which the county will meet its fair share of projected regional housing needs for all income groups.

2010 Monterey County General Plan

The 2010 Monterey County General Plan's policies provide a balanced pattern of growth that accommodates the demand for housing, employment opportunities, and public facilities and services while minimize the adverse impacts of increased urban development. The 2010 Monterey County General Plan contains general goals and policies to guide future growth in the unincorporated areas of the county and ensure that new and existing development is served with adequate public services (Monterey County 2010).

Growth Projections

Buildout under the current 2010 Monterey County General Plan in unincorporated areas in Monterey County is expected to result in an increase of 10,015 additional dwelling units, new commercial uses of 1,152 acres, and 26,729 new jobs, with an estimated buildout population of 207,424 persons, compared to a 2005 population of 110,083 persons (Monterey County 2010).

Growth-Related Impacts of the Proposed Project

Direct Growth Inducement

The 2013 CVMP allows up to 190 new residential units in new subdivisions.

~~**Proposed Project**~~

~~The Proposed Project would result in 281 new residential units and require amendment of the CVMP to allow up to 305 units (to include Delfino), which would exceed the allowable residential units by 115 units and would thus result in directly induced population growth greater than anticipated in the currently adopted General Plan and CVMP. The direct impacts of the project's 281 residential units is presented in Chapter 3 and earlier in this chapter related to contributions to cumulative impacts.~~

~~**130-Unit Alternative**~~

The Project ~~130-Unit Alternative~~ would create 130 new residential units, leaving a balance of 60 units in the CVMP residential subdivision unit quota and thus would not directly induce population growth greater than that anticipated in the currently adopted General Plan and CVMP. The direct impacts of the 130 residential units are presented in Chapter 3 and earlier in this chapter related to contributions to cumulative impacts.

Indirect Growth Inducement

~~**Proposed Project**~~

~~The Proposed Project's residential units in Carmel Valley would increase economic activity in and beyond Carmel Valley. Increased economic activity could stimulate growth of services for employees and others. Because the Project would include 110 more residential units than anticipated in the current CVMP, it would create a slightly higher demand for services than anticipated in Carmel Valley or elsewhere. In Carmel Valley, growth limits are highly restrictive in terms of residential unit and visitor-serving unit quotas and thus the Project would not induce additional residential or visitor-serving units in the CVMP but may indirectly induce additional residential units outside the~~

~~CVMP (as a residential project, the Project is not likely to induce visitor-serving unit demand). While 110 more residential units would increase demands for commercial services somewhat, the area of CVMP designated for commercial land would not change and thus the induced demand is not likely to result in additional commercial development in the CVMP. However, commercial development may occur earlier than would otherwise occur with a slightly smaller residential development in the CVMP.~~

~~Outside the CVMP, employment to support the additional population would slightly increase because of the additional 110 residential units, which would result in potential additional commercial development and residential development. However, this induced growth is likely to be dispersed in adjacent parts of the County and incorporated cities and given the amount of demand is unlikely to result in greater commercial and residential development than anticipated in local plans. However, the buildout of commercial and residential development may occur earlier than would otherwise occur with a slightly smaller residential development buildout in the CVMP.~~

~~Indirect growth resulting from the Proposed Project is expected to lead to a number of indirect impacts on the natural and built environment, including those summarized below. These impacts are expected to be slightly higher than identified in the EIR for the 2010 General Plan, due to the slightly higher number of residential units in the CVMP and the related indirect level of growth inducement.~~

- ~~**Aesthetics** – New growth could change scenic vistas, visual character, ridgelines, and other visual resources.~~
- ~~**Air Quality** – Local air quality could worsen because of growth, because of elevated levels of vehicle emissions and increases in diesel particulate matter generated by construction activities.~~
- ~~**Biological Resources** – The conversion of undeveloped land to homes, roads, businesses, and other built uses and expansion of intensive uses could reduce the area of wildlife habitat remaining in the region.~~
- ~~**Cultural Resources** – The conversion of undeveloped land to homes, roads, businesses, and other built uses could affect historic and prehistoric resources that may exist.~~
- ~~**Geology, Soils, and Seismicity** – Expansion of residential and other uses could increase the number of persons and structures subject to earthquakes, landslides, and other geophysical impacts.~~
- ~~**Hazards and Hazardous Materials** – New growth could increase potential for wildland fire, and spills of petroleum and hazardous materials.~~
- ~~**Hydrology and Water Quality** – The conversion of undeveloped land to homes, roads, businesses, and other built uses could increase impervious surfaces, resulting in drainage and flooding impact, and could increase point and non-point source pollution.~~
- ~~**Noise** – Construction of homes, roads, businesses, and other built uses could result in equipment- and vehicle-related noise impacts. Additional noise generated by home maintenance and transportation activities could result from the subsequent population growth.~~
- ~~**Public Services, Utilities, and Recreation** – As population grows, the demand for police and fire protection and for services such as schools, hospitals, and parks would undergo a corresponding increase. Additional utilities, such as increased wastewater treatment capacity and extensions of utility infrastructure, also would be needed.~~

- ~~**Transportation and Traffic** – Area and local traffic would increase because of new development and increased numbers of through-commuters traveling to employment hubs.~~

~~By enabling growth, the Proposed Project would indirectly foster, in varying degrees, all of the growth-related impacts identified above. The County is responsible for effectively implementing 2010 Monterey County General Plan policies and other measures intended to mitigate the potential adverse impacts of future growth, including CEQA review of plans and projects. The Proposed Project would contribute to more indirect growth than the 2013 CVMP and the 2010 General Plan planned for, and this may result in slightly more severe significant impacts such as on cumulative traffic levels. The actual site-specific environmental impacts of this additional growth would depend on the actual additional areas of growth, which cannot be known without speculation.~~

~~130-Unit Alternative~~

The Project ~~130-Unit Alternative~~ would facilitate growth of residential units in Carmel Valley, which would increase economic activity in and beyond Carmel Valley. Increased economic activity could stimulate growth of services for employees and demand for residential growth.

In Carmel Valley, growth limits are highly restrictive in terms of residential unit and visitor-serving unit quotas and thus the Project would not induce additional residential or visitor-serving units in the CVMP but may indirectly induce additional residential units outside the CVMP (as a residential project, the Project is not likely to induce visitor-serving unit demand). While the Project would increase demands for commercial services somewhat, the area of CVMP designated for commercial land would not change and thus the induced demand is not likely to result in additional commercial development in the CVMP. However, commercial development may occur earlier than would otherwise occur with a slightly smaller residential development in the CVMP.

Outside the CVMP, employment to support the additional population would slightly increase, which would result in potential additional commercial development and residential development. However, this induced growth is likely to be dispersed in adjacent parts of the County and incorporated cities and given the amount of demand is unlikely to result in greater commercial and residential development than anticipated in local plans. However, the buildout of commercial and residential development may occur earlier than would otherwise occur with a slightly smaller residential development buildout in the CVMP.

Indirect growth resulting from the Proposed Project is expected to lead to a number of indirect impacts on the natural and built environment, including those summarized below. These impacts are expected to be slightly higher than identified in the EIR for the 2010 General Plan, due to the slightly higher number of residential units in the CVMP and the related indirect level of growth inducement.

In addition, the Project ~~130-Unit Alternative~~ would include transfer of up to 60 AF of the Project Applicant's water entitlement to other users in the Cal-Am service area. This would remove a constraint to growth of existing approved projects, existing legal lots, and/or future planned project consistent with current land use plans. Depending on the character of development, the water transfer could result in perhaps 120 to 240 new single-family residential units (assuming average water demand per unit of 0.25 to 0.5 AF) or more units (if apartments or condominiums). The water transfer could also remove a constraint to growth for commercial, institutional, or other uses in the Cal-Am service area. However, the proposed water transfer would not induce residential, commercial, or other development that is not otherwise allowable in local land use plans.

Indirect growth resulting from the Project ~~130-Unit Alternative~~ is expected to lead to several indirect impacts on the natural and built environment, including those summarized below.

- **Aesthetics** – New growth could change scenic vistas, visual character, ridgelines, and other visual resources.
- **Air Quality** – Local air quality could worsen because of growth, because of elevated levels of vehicle emissions and increases in diesel particulate matter generated by construction activities.
- **Biological Resources** – The conversion of undeveloped land to homes, roads, businesses, and other built uses and expansion of intensive uses could reduce the area of wildlife habitat remaining in the region.
- **Cultural Resources** – The conversion of undeveloped land to homes, roads, businesses, and other built uses could affect historic and prehistoric resources that may exist.
- **Geology, Soils, and Seismicity** – Expansion of residential and other uses could increase the number of persons and structures subject to earthquakes, landslides, and other geophysical impacts.
- **Hazards and Hazardous Materials** – New growth could increase potential for wildland fire, and spills of petroleum and hazardous materials.
- **Hydrology and Water Quality** – The conversion of undeveloped land to homes, roads, businesses, and other built uses could increase impervious surfaces, resulting in drainage and flooding impact, and could increase point and non-point source pollution.
- **Noise** – Construction of homes, roads, businesses, and other built uses could result in equipment- and vehicle-related noise impacts. Additional noise generated by home maintenance and transportation activities could result from the subsequent population growth.
- **Public Services, Utilities, and Recreation** – As population grows, the demand for police and fire protection and for services such as schools, hospitals, and parks would undergo a corresponding increase. Additional utilities, such as increased wastewater treatment capacity and extensions of utility infrastructure, also would be needed.
- **Transportation and Traffic** – Area and local traffic would increase because of new development and increased numbers of through-commuters traveling to employment hubs.

~~Similar to the Proposed Project, b~~ By enabling growth, the Project ~~130-Unit Alternative~~ would indirectly foster, in varying degrees, all of the growth-related impacts identified above. The County is responsible for effectively implementing the 2010 Monterey County General Plan policies and other measures intended to mitigate the potential adverse impacts of future growth, including CEQA review of plans and projects. Although the Project ~~130-Unit Alternative~~ would contribute to growth, this growth would be allowable by the 2013 CVMP for the residential element (because it is within the remaining residential unit quota) and is thus anticipated by local planning. [6]

[6] As noted in Chapter 2, *Project Description*, if the Project ~~130-unit Alternative~~ is approved, the Applicant may comply with the County's Affordable Housing requirements through payment of an in-lieu fee. The potential environmental impacts of building units using the in-lieu fees are not analyzed specifically in this EIR because their location, timing, and character cannot be reasonably ascertained at this time in order to provide any meaningful environmental analysis. Such new development would be subject to any required environmental analysis at the time that actual affordable units would be built in part or in-whole with the in-lieu fee. The general character of

Significant and Unavoidable Impacts

Section 15126.2(b) of the State CEQA Guidelines requires an EIR to describe any significant impacts that cannot be mitigated to a level of insignificance. All of the impacts associated with the Proposed Project ~~and 130-Unit Alternative~~ would be reduced to a less-than-significant level through the implementation of identified mitigation measures and environmental commitments, with the exception of the impacts listed below.

- Impact LU-2: Conflicts with Land Use Plans Policies, or Regulations
- Cumulative Impact LU-C1: Cumulative Local Land Use Impacts
- Impact TR-2: Decrease LOS at Unsignalized Intersections.
- Impact TR-4: Decrease Peak-Hour LOS for Portions of State Route 1.
- Impact TR-8: Construction Traffic Decreases LOS.
- Cumulative Impact TR-C1: LOS Decrease at Signalized Intersections
- Cumulative Impact TR-C2: LOS Decrease at Unsignalized Intersections.
- Cumulative Impact TR-C3: Peak-Hour LOS Decrease for Segments of SR1 and Carmel Valley Road.
- Cumulative Impact TR-C4: Exceed Average Daily Traffic Thresholds on Segments of Carmel Valley Road
- Cumulative Impact TR-C8: Construction Traffic.

~~The Proposed Project would result in the following significant and unavoidable impacts, but the 130-Unit Alternative would not.~~

- ~~Impact POP-1: Induce Substantial Population Growth In Excess of Adopted Land Use Plans And That Would Result in Significant Secondary Physical Effects on the Environment~~
- ~~Cumulative Impact POP-C1: Cumulative Impacts Related to Population and Housing.~~

Irreversible and Irretrievable Commitment of Resources

Section 15126 of the State CEQA Guidelines requires a discussion of potential significant, irreversible environmental changes that could result from a proposed project. Section 15126.2(c) of the State CEQA Guidelines states:

> 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 improvements which provide access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible commitments of resources should be evaluated to assure that such current consumption is justified.

The ~~Proposed~~ Project ~~and 130-Unit Alternative~~ proposes the creation of a housing community. This would require commitments of both renewable and nonrenewable energy and material resources

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such environmental impacts would be the same as residential development facilitated by the water transfer included in this alternative as described in the analysis of growth inducement in this chapter.

for constructing the project. These may include natural woods, concrete, and mineral resources, fossil fuels, water, and other finite resources. Additionally, the Proposed Project ~~and 130-Unit Alternative~~ would involve converting a portion of land onsite into urban land uses, which tend to be irreversible for all practical purposes, unlike a golf course, which is not necessarily an irreversible dedication of land as evidenced by the proposed habitat preserves included in ~~both~~ the Proposed Project ~~and the 130-Unit Alternative~~.

Chapter 5
Alternatives Analysis[1]

Alternatives Analysis

In accordance with Section 15126.6(a) of the State CEQA Guidelines, an environmental impact report (EIR) must evaluate a "range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain most of the basic objectives of the project." The discussion of alternatives should 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 could impede to some degree the attainment of the project objectives or would be more costly" (State CEQA Guidelines Section 15126.6(b). CEQA further directs that "the significant effects of an alternative shall be discussed, but in less detail than the significant effects of the project as proposed" (State CEQA Guidelines Section 15126.6(d). The factors that may be taken into account when addressing the feasibility of alternatives include site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the Project Applicant can reasonably acquire, control, or otherwise have access to the alternative site.

The decision to select alternative locations needs to be based on whether offsite locations would avoid or substantially lessen any of the significant effects of the project. The lead agency also must determine if no feasible alternative locations exist and disclose the reasons for this assessment. The final decision regarding the feasibility of alternatives lies with the decision-maker for a given project who must make the necessary findings addressing the potential feasibility of reducing the severity of significant environmental effects (Public Resources Code [PRC] 21081; see also State CEQA Guidelines 15091).

State CEQA Guidelines define "feasible" to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." When making the decision as to whether an alternative is feasible or infeasible, the decision-making body may consider the stated project objectives in an EIR in light of any relevant economic, environmental, social, and technological factors.

Proposed Project Purpose and Objectives

The underlying purpose of the Project is to provide for the adaptive reuse and redevelopment of the former Rancho Cañada Golf Course site. This purpose gives rise to the following project objectives:

[1] As outlined in Chapter 1, *Introduction*, the Monterey Superior Court held that the range of alternatives within the previously certified EIR were inadequate. As such, the County has formulated a new range of alternatives to the 130-unit proposal, resulting in a complete rewrite of this entire Alternatives Chapter. Because this chapter is entirely new, and for improved readability, the text is not depicted in underline format, as in other sections of this Second Revised Draft EIR.

- Implement smart growth principles through infill development close to shopping facilities, schools, parks, churches, and major transit corridors.
- Integrate open spaces within infill development with surrounding native habitats.
- Assist the County in addressing the statewide housing and affordability crisis.
- Provide employment opportunities for the local workforce.
- Create opportunities allowing for County implementation of regional drainage control solutions.
- Facilitate the construction of a needed traffic light on Carmel Valley road under an accelerated time frame.

Proposed Project

Project Features

The key features of the Proposed Project, as described in Chapter 2, *Project Description*, include the following.

- **Housing—** The Project proposes 130-units of moderate and market rate housing on an approximate area of 25 acres (excluding the habitat preserve and drainage areas). Houses in Rancho Cañada Village would be located on the northern portion of the site, separated from the Carmel River by an open space buffer.
- **Open Space—**Approximately 40 acres of permanent open space to include habitat preserve, active recreation areas, and trails.
- **Roads—**Local streets, a connection to Carmel Valley Road via Rio Road to the east, and a connection to Rio Road to the west.
- **Flood Protection—**The residential site is within the floodplain; the Project would raise elevations at the residential site by removing soil from the current golf course.
- **Utilities—**Connections to public services and utilities.

Impacts of the Proposed Project

State CEQA Guidelines 15126.6(f) states "alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project." As such, alternatives that do not avoid or substantially lessen significant effects of the Proposed Project need not be analyzed in an EIR.

The analysis in this Second Revised Draft EIR identifies the following environmental effects.

- **Geology and Soils—**The Proposed Project would not have any significant short- or long-term adverse impacts related to geologic, seismic, and soil conditions and hazards in the project site with mitigation. The Project would be designed in accordance with applicable seismic design standards to reduce the risk of damage during an earthquake. Excavation may result in

unstable soils, erosion, and sedimentation. These impacts would be mitigated to a less-than-significant level with mitigation identified in Section 3.1, *Geology and Soils*.

- **Hydrology and Water Quality**—The Proposed Project could result in increases in high flow velocities and changes in the level and character of flood events upstream and downstream and increases in local site drainage. Construction of the Proposed Project may result in runoff and sedimentation. However, by incorporating recommended mitigation measures in Section 3.2, *Hydrology and Water Quality*, these impacts would be mitigated to a less-than-significant level.
- **Biological Resources**—The Proposed Project would remove native and non-native vegetation that may support several special-status species but would also restore native vegetation and wildlife habitat along the Carmel River. The Proposed Project would also reduce water withdrawals from the Carmel River aquifer that would benefit biological resources that depend on surface flow. Overall, with the proposed 2006 Rancho Cañada Village Restoration and Mitigation Plan and mitigation in Section 3.3, *Biological Resources*, the Proposed Project would result in less-than-significant impacts on biological resources.
- **Aesthetics**—The residential development would change visual aesthetic features and would add new sources of light and glare. These impacts would be reduced to a less-than-significant level with mitigation identified in Section 3.4, *Aesthetics*.
- **Land Use**—As discussed in Section 3.5, *Land Use*, the Project would be consistent with the allowable residential use in the Rancho Cañada Special Treatment Area and consistent with many of the intentions and purposes in both the 2010 General Plan and the 2013 Carmel Valley Master Plan (CVMP). Because of the high cost of housing in the Carmel Valley, Affordable Housing cannot be developed at low densities typical of rural residential development. By clustering development away from the Carmel River and out of the line of site of Carmel Valley Road, the Project achieves a compromise between the 2013 CVMP policies of maintaining rural character and providing Affordable Housing by providing 25 units, or 20% of the proposed housing units, as Workforce and Affordable Housing. However, without the proposed amendment, the Project would not be consistent with the 50% affordable/workforce housing requirement in CV-1.27. This Second Revised Draft EIR concludes that a reduction of affordable/workforce housing at this location at the mouth of Carmel Valley would result in longer employee commutes to the employment centers in Pebble Beach and the Monterey Peninsula, which would contribute to traffic congestion along Carmel Valley Road and other roadway segments above the level of service standards in the 2013 CVMP. The proposed amendment to CV-1.27 would make the Project directly consistent with the amount of affordable housing, but indirectly inconsistent with the intent of the policy to locate more affordable/workforce housing at the Mouth of the Valley – where services and infrastructure are available. As discussed in Section 3.5, *Land Use,* the physical impact on the environment is related to commutes that would be longer with less affordable housing considering that the Project would result in significant and unavoidable traffic impacts. Because some of the Project's traffic impacts cannot be mitigated to a less-than-significant level, the Project's land use policy inconsistency would result in a *significant and unavoidable* environmental impact (traffic).
- **Hazards and Hazardous Materials**—The Proposed Project would result in public exposure to petroleum and hazardous materials during construction and operation. However, these impacts would be mitigated to a less-than-significant level with the mitigation identified in Section 3.6, *Hazard and Hazardous Materials*.

- **Transportation and Traffic**—The Proposed Project would increase local and regional traffic. Some of these impacts can be mitigated to a less-than-significant level with mitigation, as described in Section 3.7, *Transportation and Traffic*. However, some of the traffic impacts, including cumulative traffic increases to State Route 1 (SR 1), SR 1 intersections, and certain other intersections and segment operations in the CVMP area, cannot be mitigated to a less-than-significant level. Therefore, the Project would result in a *significant and unavoidable* environmental impact.

- **Air Quality**—The Proposed Project would exceed Monterey Bay Unified Air Pollution Control District's (MBUAPCD's) air quality standards of daily emissions thresholds for project operations for ROG due to wood-burning fireplaces. However, this impact would be reduced to a less-than-significant level with mitigation identified in Section 3.8, *Air Quality*.

- **Noise**—Construction noise would be significant, but it would be addressed through the construction best management practices included in the mitigation identified in Section 3.9, *Noise*. New residential units would be exposed to levels above residential standards, but the resultant noise level can be addressed through the mitigation identified in Section 3.9, *Noise*. Traffic noise would increase locally, but this increase would not result in significant impacts on existing land uses.

- **Public Services, Utilities and Recreation**—The Proposed Project would increase demand for public services, including police and fire protection, schools, landfills, and wastewater treatment. These service and utility demands would be accommodated by existing infrastructure and providers without resulting in the need for new or expanded offsite facilities. The Proposed Project would require less water for residential use than is currently withdrawn for landscape irrigation on the golf course. As such, the Proposed Project would reduce withdrawals from the Carmel River aquifer, which would benefit both water supply and biological resources. New utility extensions on site would be paid for by the new development itself. Proposed Project impacts would be less-than-significant with the mitigation identified in Section 3.10, *Public Services, Utilities, and Recreation*.

- **Cultural Resources**—The Proposed Project could disturb undiscovered buried cultural and paleontological resources. These potential impacts would be reduced to a less-than-significant level with the mitigation identified in Section 3.11, *Cultural Resources*.

- **Population/Housing**—The Proposed Project would induce population growth by creating housing opportunities in excess of what is currently available. However, this increase would not be substantially above the level of development currently projected by the Association of Monterey Bay Area Governments (AMBAG) for the region. CVMP Policy CV-1.6 limits development of 190 units in the CVMP area from the time of adoption of the 2010 General Plan, of which 24 units are reserved for the Delfino property. Through 2016, 31 units have been permitted or built, leaving 159 units for new development. The Project, if approved, would leave a remaining 29 units for new development, of which 24 units would be reserved for the Delfino property.[2] Thus, the Project would not result in a higher level of housing or population growth in the CVMP area than anticipated in the adopted CVMP. Impacts would be less than significant, and mitigation is not required.

[2] The previously certified Final EIR provided unit cap data that was accurate at the time the EIR was prepared. Since certification, these numbers have changed. The current numbers are provided in this chapter. Refer also to footnote #6 in Chapter 3.12, *Population and Housing*.

- **Greenhouse Gas Emissions and Climate Change**—The Proposed Project would result in increased greenhouse gas (GHG) emissions, during construction and from operation that could contribute to climate change impacts. However, this impact would be less-than-significant with mitigation identified in Section 3.13, *Greenhouse Gas Emissions and Climate Change*.
- **Construction Disruption**—Construction may adversely affect traffic, access, and emergency access, air quality, and noise. While these temporary impacts are potentially significant, implementation of mitigation measures included in Chapter 3, *Environmental Analysis*, would reduce them to levels below significance.
- **Contributions to Cumulative Impacts**—In addition to the direct and indirect impacts described above, the Proposed Project would also contribute to cumulative impacts. Cumulative contributions within most subject areas are addressed through project-level mitigation. However, even with mitigation, contributions of the Proposed Project to cumulative impacts related to traffic and land use cannot be mitigated to a less-than-significant level.

Alternatives Considered but Dismissed from Further Analysis

The following alternatives were considered, but dismissed from further analysis because they were determined to be infeasible, did not meet most of the project objectives, or did not avoid or substantially reduce one or more significant impacts of the Proposed Project.

Care Facilities Prohibition Alternative

One scoping comment suggested that secondary units, care facilities, and day care facilities should be prohibited from the development and affordable units should be limited to one family per unit. The Proposed Project would not have secondary units (unless residents seek approval of accessory dwelling units), but would allow care facilities and day care facilities. Per County code, dwelling units are limited to one family per unit, and thus the units at Rancho Cañada Village would be limited to one family per unit. Thus, this alternative is the same as the Proposed Project but would prohibit care facilities inside the development.

This alternative is potentially feasible as one could technically prohibit care facilities. In general, this alternative would meet most of the project objectives, as the Project does not hinge on having care facilities within the development.

However, this alternative does not avoid or substantially lessen any of the identified significant or cumulative impacts of the Proposed Project. Prohibition of care facilities in the project site is not likely to substantially lower traffic generation and could actually increase it, as residences would need to seek care facilities in other off-site locations; however, this might be offset by traffic resulting from off-site residences seeking to use a care facility in the project site. At any rate, such a prohibition is not likely to reduce traffic substantially, if at all. Small-scale home care facilities would not *per se* result in noticeable significant impacts on neighboring land uses, and would be governed by applicable County regulations and standards.

Flood Control Alternatives

The Project Applicant initially proposed development within the designated floodway along Carmel River. Several Lower Carmel Valley flood control alternatives were considered pursuant to comments made in scoping. A floodwall/levee alternative was developed to examine potential ways to lower site fill importation volumes. These alternatives are considered below.

Floodway Development Alternative

The original application proposed development in the designated floodway of the Carmel River. This application was rejected by the County due to inconsistency with County policies for flood protection. The application was revised to move development out of the floodway for the currently Proposed Project. This alternative is not considered feasible as it violates County flood control policies.

Lower Carmel Valley Flood Control Alternatives

A scoping comment suggested that flood control improvements should be incorporated into the Project consistent with recommendations for flood control for lower Carmel Valley found in several prior assessments aimed at reducing flood damages to properties along the lower Carmel River. The purpose of these studies was to inform broader efforts at flood control by the Monterey County Water Resources Agency (Monterey County Water Resources Agency 2003).

As described in Section 3.2, *Hydrology and Water Quality,* the Project is not estimated to increase flooding upstream or downstream of the project site. Mitigation is identified to address certain local drainage, scour/erosion, and stormwater runoff impacts. Thus, while additional flood control improvements might be feasible that could also benefit other adjacent properties, such improvements are not necessary to address the impacts of this Project, and thus would be in excess of mitigation proportionality and nexus allowed by CEQA. For this reason, alternatives seeking to address preexisting flood risk (as opposed to Project-related flood risks) are beyond the scope of this Project and mitigation for this Project.

Floodwall/Levee Alternative

The Proposed Project intends to provide flood control by raising the elevation of the residential site above the elevation of the 100-year flood elevation. This alternative would not raise the elevation of the residential site but would install a tieback levee that would be above the 100-year flood elevation. The levee/floodwall would be constructed along the southern perimeter of Rancho Cañada Village and would transition into the raised tieback levee. This alternative would still require the same amount of excavation to compensate for the loss of floodplain due to construction of the floodwall/levee but would likely require no fill to be imported from off site for elevating the site, as the golf course excavation would produce ample material (120,000 cubic yards) for levee construction and site leveling. This alternative would likely have a similar effect on flooding and river velocities as the Project would because the floodplain would have a similar cross-section as that for the Proposed Project.

This alternative would be nominally feasible, although with the residential development at a lower elevation, pumping may be necessary to drain the site drainage/runoff that could no longer flow via gravity due to the presence of the floodwall/levee. This alternative would meet most of the Project

goals and objectives as it would allow the residential development and the habitat elements to proceed. Site design would need to be altered to accommodate the floodwall/levee footprint.

Overall, this alternative would result in similar impacts as for the Proposed Project within most impact subject areas. The alternative would require less fill than the Proposed Project because of the lower elevation for the residential area. This would lower or eliminate the need for as much importation of fill as the Proposed Project would need from off site and lower or eliminate the associated air emission impacts, but would not necessarily avoid the need for mitigation for diesel emissions. However, as discussed in Section 3.8, *Air Quality*, these impacts can be mitigated to a less-than-significant level.

Although this alternative would affect the site aesthetics because the levee/floodwall would impact some views from the residential development of the habitat/open space are and the river, this is not considered a significant impact as these residential site views do not exist today (and thus are not part of the baseline), and views can be obtained by a short walk to the habitat/open space areas with ease.

Because the only impact reduced by this alternative (construction emissions) would be readily mitigated through proposed mitigation in this Second Revised Draft EIR, this alternative was not considered further.

Reclaimed Water Reuse Alternative

A scoping comment suggested that the Project should be required to use reclaimed water to irrigate the remaining golf course and all landscaped areas on the project site.

This alternative would lower the potable water use relative to the Proposed Project. However, because the Project overall would decrease use of the Carmel River aquifer, the Project would not result in a significant impact on the Carmel River aquifer. Thus, this alternative would not avoid or substantially lessen a significant adverse impact of the Proposed Project and was not considered further.

Rio Road Extension Alternative

The adopted 1986 CVMP circulation element (Monterey County 1986) included an extension of Rio Road from its existing terminus eastward and northward to link with Carmel Valley Road. This alternative would meet the project objectives.

This alternative is considered technically feasible as land is available to complete the extension and the Proposed Project could be designed to accommodate a through road. However, the Project Applicant does not control the land west of the site and thus securing the land, absent public agency involvement, may be problematic and could imperil the logistical feasibility of this alternative.

The CVTIP Traffic Study (DKS Associates 2007) and the associated Supplemental EIR (Jones & Stokes 2007) identified that the Rio Road Extension is not necessary in order to address cumulative traffic impacts along Carmel Valley Road or other local roadways. Thus, the County has no current plan to complete this extension. Lacking public agency involvement, the Project Applicant would have no choice but to acquire the necessary land through a willing-seller approach were this alternative to be advanced. The Project Applicant has not proposed this alternative, but rather has

proposed access to the west and east of the project site with design of internal development roads to discourage cut-through traffic.

However, this alternative would not avoid or substantially reduce any significant impacts of the Proposed Project. Extension of Rio Road as a through road would likely divert traffic from Carmel Valley Road as motorists may use Rio Road as an alternative route of travel to and from the mouth of Carmel Valley to avoid congestion on SR 1. This could result in increased traffic impacts relative to the Proposed Project at SR 1/Rio Road and Rio Road/Carmel Valley Road. In addition, traffic noise would increase west of the site along Rio Road that might exceed residential standards.

Because this alternative would not avoid or substantially reduce any significant impacts of the Proposed Project and has been determined not to not be necessary as part of the CVTIP circulation program, this alternative was dismissed from further consideration.

Traffic/Transit Improvements Alternative

In scoping, comments suggested the following additions to the Project: (1) a Monterey-Salinas Transit (MST) bus stop inside the project site; (2) a stoplight at Via Nona Marie Road and Rio Road; and (3) relocation of the stoplight at the middle school to the entrance to the Rancho Cañada Village.

As described in Section 3.7, *Transportation and Traffic*, MST provides bus service along Carmel Valley Road in front of the project site. The 24 line provides service between Carmel Valley Village and the Monterey Transit Plaza with 60-minute headways during weekday peak hours. Lines 91, 92, and 94 have bus stops in the Crossroads Carmel and the Barnyard and are designed to service seniors and their specific travel and lifestyle needs. A bus stop is located in the project vicinity, on Carmel Valley Road near the Rio Road/Carmel Valley Road intersection.

Although feasible to place a bus stop inside the development itself, this is not necessary to address any significant impact of the Project that is not otherwise addressed by other mitigation. It is unlikely that, given the proximity to an existing bus stop, the addition of such a bus stop would avoid or substantially reduce any significant impacts of the Proposed Project, as it is unlikely to change the transport modes of the residents of the project site substantially.

The addition of a signal at the currently unsignalized intersection of Rio Road and Via Nona Marie Road is not necessary to address a significant impact at this location. This site has low traffic volumes at present and would continue to have low volumes in the future that would not result in level-of-service impacts. All road extensions would meet County requirements for safety and thus a signal is not necessary for safety purposes at this location.

The Proposed Project already includes signalization of the intersection at Rio Road and Carmel Valley Road. As presented in Section 3.7, *Transportation and Traffic,* the Proposed Project would not have a significant impact on the Rio Road/Carmel Valley Road intersection with the presumed signalization.

Thus, while feasible, these suggestions were not carried forward for further analysis as they do not avoid or substantially reduce significant impacts of the Proposed Project.

Increased Ratio of Affordable Housing Units

The California Legislature's finding in the Housing Crisis Act of 2019 (also known as "SB 330") note that the housing crisis has "[f]orced public employees, health care providers, teachers, and others, including critical safety personnel, into more affordable housing farther from the communities they serve, which will exacerbate future disaster response challenges in high-cost, high-congestion areas and increase risk to life." (SB 330 Finding 6(D).) Additionally, the housing crisis was found to harm the environment by "[i]ncreasing greenhouse gas emissions from longer commutes to affordable homes far from growing job centers" (SB 330 Finding 12(B)). In response to the current affordable housing crisis at the state level and locally, an alternative that would increase the ratio of affordable housing was considered.

As noted previously, an EIR must evaluate alternatives "which could feasibly attain most of the basic project objectives" and "which are capable of avoiding or substantially lessening any significant effects of the project." While increasing the ratio of affordable units would attain project objectives, it would not measurably reduce environmental effects. Ground disturbance, population generation, vehicle trips, and energy use would be effectively similar for an affordable unit as for a market-rate unit; simply making a unit affordable does not alone in and of itself reduce environmental effects of that unit. The exception may be that increased affordability on the project site could reduce commute lengths by placing more affordable/workforce housing near the mouth of Carmel Valley, where services and infrastructure are available, resulting in shorter employee commutes to the employment centers in Carmel Valley, Pebble Beach, Carmel-by-the-Sea and the greater Monterey Peninsula. However, it is difficult to speculate where the affordable housing demand would specifically be met if not at the project site, and thus to identify the specific impacts of developing more affordable on-site and the specific impacts on traffic conditions in particular. It should also be noted that, even if a higher-affordable project were constructed on-site, new trips would still be added to SR 1 and other locations that operate deficiently. As such, the Proposed Project's significant and unavoidable traffic-related impact would not be reduced to less than significant by increasing on-site affordability.

The Applicant has additionally identified that, while the Project would comply with the County's 20% affordable housing requirement, increased amounts of affordable/workforce housing is not financially feasible. If the Applicant did determine that constructing more affordable units was financially feasible, the Applicant could do so as part of the Proposed Project or any of the Alternatives without the need for Board of Supervisors approval and without such a scenario being considered in this Chapter.

Even though an increased ratio of affordable housing units would achieve all the project objectives, it would not measurably reduce environmental impacts since the development footprint and density would be the same. Housing affordability, then, is more of an economic and social issue than an environmental issue. Furthermore, the Applicant could elect to build more affordable units, if determined financially feasible, without the need for Board of Supervisors approval and without such a scenario being considered in this Chapter. For these reasons, none of the Alternatives considered in this Second Revised Draft EIR identify a higher ratio of affordable units.

Alternatives Analyzed in this Second Revised Draft EIR

Alternatives considered in this Second Revised Draft EIR are discussed below. These alternatives were initially evaluated for their feasibility and their ability to achieve most of the project objectives while avoiding, reducing, or minimizing significant impacts identified for the Proposed Project. All alternatives were determined to be feasible (or potentially feasible) and would meet at least some of the project objectives (though not necessarily all). The ability of these alternatives to lower substantially the significant impacts identified for the Proposed Project is discussed below. All subject areas are analyzed for each alternative determined to be potentially feasible, although at a much more general level than in Chapter 3, *Environmental Analysis*.

Other alternatives considered but dismissed from further evaluation are discussed at the end of this chapter.

The 2013 CVMP allows 175 visitor-serving units to be located west of Via Mallorca, which includes the Rancho Cañada Golf Club site. Neither the Proposed Project nor any of the alternatives would eliminate the ability to build 175 visitor-serving units. Thus, this is a not a differentiator between the alternatives and is not discussed further in this analysis.

Alternative 1—No Project

CEQA requires analysis of the No-Project Alternative. As outlined in Section 15126.6(e)(1) of the State CEQA Guidelines, the purpose of describing and analyzing a no-project alternative is to allow decisionmakers to compare the impacts of approving a project with the impacts of not approving the project. The No-Project Alternative analysis is not the baseline for determining whether the Proposed Project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline.

The No-Project Alternative analysis should discuss the existing conditions at the time of the Notice of Preparation (NOP) is prepared as well as what would be reasonably expected to occur in the foreseeable future if the Project were not approved (State CEQA Guidelines Section 15126.6[6][2]). If disapproval of the Project would result in predictable actions, this no project consequence should be discussed. In certain instances, the No-Project Alternative means "no build;" however, where failure to proceed with the Project would not result in preservation of existing conditions, the analysis should identify the practical result of the Project's non-approval (State CEQA Guidelines Section 15126.6[e][3][B]).

At the time the NOP was published (August 29, 2006) the project site included a public golf course on the western portion of the Rancho Cañada Golf Club, which is the baseline used for the analysis of environmental effects of the Proposed Project. Subsequently, under the existing (2020) conditions operation of the golf course has ceased, and the project site is now being used for cattle grazing. Therefore, for the No-Project Alternative, the baseline is assumed as current (2020) conditions.

Alternative Characteristics

At the time the NOP was prepared for the Project, the project site was a public golf course. Subsequently, under the existing (2020) conditions uses at the site include cattle grazing on the now former golf course. If neither the Proposed Project nor any of the other EIR alternatives are approved, the reasonably foreseeable expected use of the site's five legal parcels, based on current

plans and ordinances, and consistent with available infrastructure and community services, would be the construction of five estate homes in which home occupations such would be permitted.[3]

Feasibility

Construction of five estate homes on the site is technically feasible, in that the developer owns the entire project site, and sufficient land is available to construct the residences. Furthermore, access can still be provided, either directly or indirectly, via Carmel Valley Road. The residential sites would be located in proximity to existing infrastructure that would serve the project site. The water source for the Proposed Project would be useable for this alternative as well.

Ability to Meet Project Objectives

The foreseeable use of creating five estate homes on the site, would meet the objectives of assisting the County with the statewide housing crisis and employment opportunities for the local workforce, although to a lesser extent than the Project. In addition, the five estate homes under this alternative are not anticipated to meet the affordability objective. Far from it: the homes are likely to be very expensive. This alternative would also not implement CVMP Policy CV-1.27, the intent of which is to allow for affordable housing units to be developed within this Special Treatment Area as designated in the CVMP Land Use Map. This alternative would be expected to meet the project objective of integrating open spaces with surrounding native habitats, but without the restoration of resources included as part of the Project. The objectives regarding implementation of drainage control and traffic light would not be met by this alternative.

According to State CEQA Guidelines Section 15126.6(a), alternatives evaluated in an EIR need to attain "most of the basic objectives of the project." According to State CEQA Guidelines Section 15126.6(b), discussion of the alternatives can include analysis of alternatives that "would impede to some degree the attainment of the project objectives, or would be more costly."

Therefore, this alternative could avoid or substantially lessen significant effects of the Proposed Project at the site, but would not fully meet the project purpose or objective.

Direct and Indirect Impact Analysis

- **Geology and Soils**—Alternative 1 would result in construction of five estate homes, which would equate to an estimated 15 residents.[4] Exposure to risks from geology and soils under Alternative 1 would be reduced below that of the Proposed Project, as approximately 378 fewer residents would reside on the property and thus be exposed to geologic hazards and

[3] There are a range of mechanisms by which these five homes could be developed. First, a developer could purchase all or some of the lots and develop them simultaneously; second, the lots could be purchased by separate owners and developed one by one; or third, some combination of these scenarios could occur. If a developer were to purchase all five lots and develop them simultaneously, a discretionary action such as a Development Permit would likely be needed, triggering CEQA compliance. However, if one lot were purchased and developed with a single unit consistent with current zoning, the Project would be ministerial and therefore exempt from CEQA pursuant to Section 15268 of the *State CEQA Guidelines*. In a scenario in which CEQA is not triggered, no mitigation would be applied to the No Project Alternative. However, to be conservative, this analysis assumes that all units would be developed at once and therefore a discretionary action would be required, thus triggering CEQA and necessitating mitigation for potentially significant environmental effects.

[4] Based on the 3.02 persons per household in Monterey County described in Chapter 2, *Project Description* (5 units x by 3.02 persons per household = 15 residents). The Proposed Project assumed 393 residents, therefore 393-15 = 378 fewer residents.

seismic risks. Although impacts would be reduced as compared to the Proposed Project, there is still the potential for people to be exposed to geologic hazards. These impacts, however, would be less than significant with mitigation.

- **Hydrology and Water Quality**—The No Project Alternative would result in construction of five estate homes. Conservatively assuming that each residence would have approximately 10,000 square feet (sf) of impervious coverage (associated with homes and accessory structures), the No Project Alternative would result in a net increase of 50,000 sf (approximately 1.15 acres) of impervious surface. In comparison, the Proposed Project would result in a net increase in approximately 15 acres of impervious surfaces. Thus, the development of five estate homes would result in a 92% decrease in impervious surfaces as compared to the Project. This would reduce new sources of runoff compared to the Proposed Project. Nevertheless, similar to the Project, impacts associated with increased impervious surface and increased surface runoff associated with the construction of five estate homes would be mitigated to less than significant. In addition, the 96% reduction in residents under Alternative 1 (15 residents as opposed to 393 residents) would not require as much potable water from the Carmel River aquifer. Similar to the Project, encroachment on the floodplain, elevation of the site, site drainage design, and stormwater runoff best management practices would be required. Like the Project, these impacts would be less than significant with mitigation, although reduced as compared to the Proposed Project.

- **Biological Resources**—As outlined above, the development of five estate homes on the site would result in a 92% decrease in impervious surface as compared to the Proposed Project. Although Alternative 1 would not avoid or decrease all direct impacts on biological resources, it would reduce impacts as compared to the Proposed Project. Further, construction of five estate homes would not incorporate restoration of biological resources that would be included as part of the Proposed Project. As a result, impacts would be reduced when compared to the Proposed Project and would remain less than significant with mitigation.

- **Aesthetics**—The addition of five estate homes would change the aesthetic character of the site over current conditions, but impacts would be less than significant and reduced when compared to the Proposed Project, given the smaller scale of development and resulting retention of the rural character of the site.

- **Land Use**—Development of this alternative would not divide an established community and construction of five estate homes is allowed under current zoning. Further, the 50% affordable/workforce housing requirement in CV-1.27 would not be required under this alternative since one unit per lot is allowed with a ministerial permit per the current zoning designation, and impacts of one unit per lot was accounted for in the environmental review for the 2010 General Plan. As such, this alternative would eliminate inconsistencies of the Project with the Carmel Valley Master Plan and Monterey County General Plan. Therefore, there would be no direct impacts to land use under the No Project Alternative and impacts would be reduced as compared to the Proposed Project.

- **Hazards and Hazardous Materials**—No new sources of hazards or hazardous materials would result from this alternative. Nevertheless, Alternative 1 would not avoid or decrease all direct impacts related to hazards and hazardous materials, such as storage and handling of hazardous materials as well as containment of spills during construction, the presence of underground utility lines, or operational use of hazardous waste associated with landscaping and household products. Construction of five estate homes would require adherence to the same regulations

as the Proposed Project. Impacts from Alternative 1 would be less than significant with mitigation and reduced as compared to the Proposed Project.

- **Transportation and Traffic**—The Proposed Project would result in 911 average daily trips. Alternative 1 would result in a 96% reduction in residents compared to the Project. Assuming that average daily trips would reduce commensurately, Alternative 1 would generate 36 average daily trips. Although daily trips would be reduced, this alternative is unlikely to change the significant impacts identified under the Proposed Project because many of the study area intersections are currently failing. In addition, contribution of a single trip to SR 1 is considered a significant impact. Although this alternative would substantially reduce trips as compared to the Proposed Project, it would not eliminate all trips to SR 1 or nearby failing intersections. As a result, impacts would be reduced compared to the Project but would remain significant and unavoidable.

- **Air Quality**—As previously mentioned, Alternative 1 would result in a 96% reduction in residents and average vehicle trips generated. This would result in a commensurate reduction in operational air emissions. The Proposed Project would result in a significant but mitigatable impact due to reactive organic gases (ROG). The Proposed Project would result in 213.7 net new pounds per day of ROG over the golf course use (unmitigated). Assuming ROG emissions would reduce commensurately, Alternative 1 would generate approximately 8.5 net new pounds per day of ROG over the golf course use, which would be below MBUAPCD thresholds. All other area, energy, and mobile source emissions associated with operation of the Project were found to be less than significant, as residents and average daily trips would be reduced under Alternative 1, impacts due to all other applicable air quality standards (nitrogen oxides [NO_X], carbon monoxide [CO] and particulate matter less than 10 micrometers [PM_{10}]) would be less than significant. As a result, operational air quality impact would be less than significant, and reduced compared to the Proposed Project. In addition, this alternative would result in a 92% reduction in impervious surface and therefore would require less construction. Therefore, the alternative would result in fewer construction-related air quality impacts. As such, the Alternative 1 would result in less than significant impacts due to construction and reduced as compared to the Proposed Project.

- **Noise**–Due to the 96% reduction in number of residents (125 fewer residences) and average vehicle trips generated (875 fewer trips) under Alternative 1, noise effects along Rio Road to the west of the project site would be reduced. However, the exposure of single-family residences to noise from the batting area and baseball fields, as well as noise generated during construction, would still potentially be significant. Noise impacts from Alternative 1 would be less than significant with mitigation, similar to the Proposed Project.

- **Public Services, Recreation, and Utilities**—The 96% reduction in residents under this alternative would substantially reduce demand on public services, recreation, and utilities, including potable water, emergency services, and schools. Impacts would be reduced under Alternative 1 and would be less than significant, compared to significant but mitigable for the Project.

- **Cultural Resources**—Although the No Project Alternative would result in 92% less disturbance area than the Proposed Project, construction of five estate homes would continue to have the potential to disturb cultural and paleontological resources. Mitigation similar to the Proposed Project would also apply to this alternative to reduce impacts to archeological resources to a

less-than-significant level. Therefore, impacts would be less than significant with mitigation incorporated and reduced as compared to the Proposed Project.

- **Population and Housing**—Construction of five estate homes would be well within the level of development currently projected by AMBAG for the region. Thus, Alternative 1 would not induce substantial population growth, would induce population growth by creating housing opportunities in excess of what is currently available, although to and even to a lesser extent than the Project (15 residents as opposed to 393 residents). In addition, whereas the Project would utilize 130 of the 190 units allowed in Carmel Valley pursuant to CVMP Policy CV-1.6, Alternative 1 would leave 125 additional units in the Carmel Valley cap. Although these units could be constructed elsewhere in the Carmel Valley, this alternative would not result in a higher level of housing or population growth than anticipated in the adopted CVMP. Overall, population and housing impacts would be reduced when compared to the Proposed Project, and would remain less than significant.
- **Greenhouse Gas Emissions and Climate Change**—Similar to air quality above, construction of five estate homes would result in a 96% reduction in population and average vehicle trips generated. Therefore, operational GHG impacts would be reduced by 96% and be less than significant, compared to the significant but mitigable impact under the Proposed Project. Further, Alternative 1 would reduce impervious surfaces by 92%, thereby reducing the amount of grading and fill. As a result, construction emissions would be reduced by 92% and best management practices (BMPs) would still be required during construction. Therefore, construction impacts under Alternative 1 would be less than significant with mitigation as well and reduced when compared to the Proposed Project.[5]

Cumulative Impacts

Under the No Project Alternative, 130 residential units would not be developed and either the site would continue to be used for cattle grazing or five estate homes would be constructed. Based on the 2013 CVMP, new residential subdivisions are limited to 190 additional housing units (of which 24 units are reserved for the Delfino property). As of 2016, 31 of those units have been permitted or built elsewhere. If a maximum of five residential units are built at the project site, up to 154 units of the housing demand not met by this alternative could be built elsewhere within the CVMP.

Thus, the No Project Alternative could result in additional housing development pressure elsewhere in the CVMP. Given current water shortages, the timing of such development is unknown and speculative until such time that water supplies to support new development are provided. Construction of five estate homes includes only a smaller potential water transfer, as compared to the Proposed Project, from the Rancho Cañada Golf Club.

[5] This does not necessarily mean, however, that the No Project Alternative represents a better long-term policy outcome for climate than the Proposed Project. California has a large housing need, and new housing will have to be built somewhere, if not on the project site. As the California Supreme Court explained, "[g]iven the reality of growth, some GHG emissions from new housing and commercial developments are inevitable. The critical CEQA question is the cumulative significance of a project's GHG emissions, and from a climate change point of view it does not matter where in the state those emissions are produced." (*Center for Biological Diversity v. California Dept. of Fish and Wildlife* (2015) 62 Cal.4th 204, 220-221.)

Alternative 2—Hotel Alternative

Alternative Characteristics

Alternative 2 would consist of the development of 175 hotel or timeshare units and 20 employee housing units, six-hole reconfiguration of the west golf course, clubhouse and restaurant, tennis clubhouse and four tennis courts, health club spa, meeting rooms, and administrative offices. Access would be provided, either directly or indirectly, via Carmel Valley Road for visitors and employees. Open space would be reduced as compared to the Project, totaling approximately 38 acres (including a 25-acre golf course). A sample site plan of this alternative is provided in **Figure 5-1.**

This alternative would also include raising a portion of the emergency access road west of the site, to a level that has been designed to directly address the large potential flood flow path down Rio Road from the Carmel River. This would avoid a substantial portion of the improvements cited in the County Service Area 50 Final Lower Carmel River Stormwater Management and Flood Control Report (Balance Hydrologics, Inc. 2014b).

This alternative was developed to examine the potential to avoid or lessen traffic related impacts of the Proposed Project, specifically during peak hours.

Feasibility

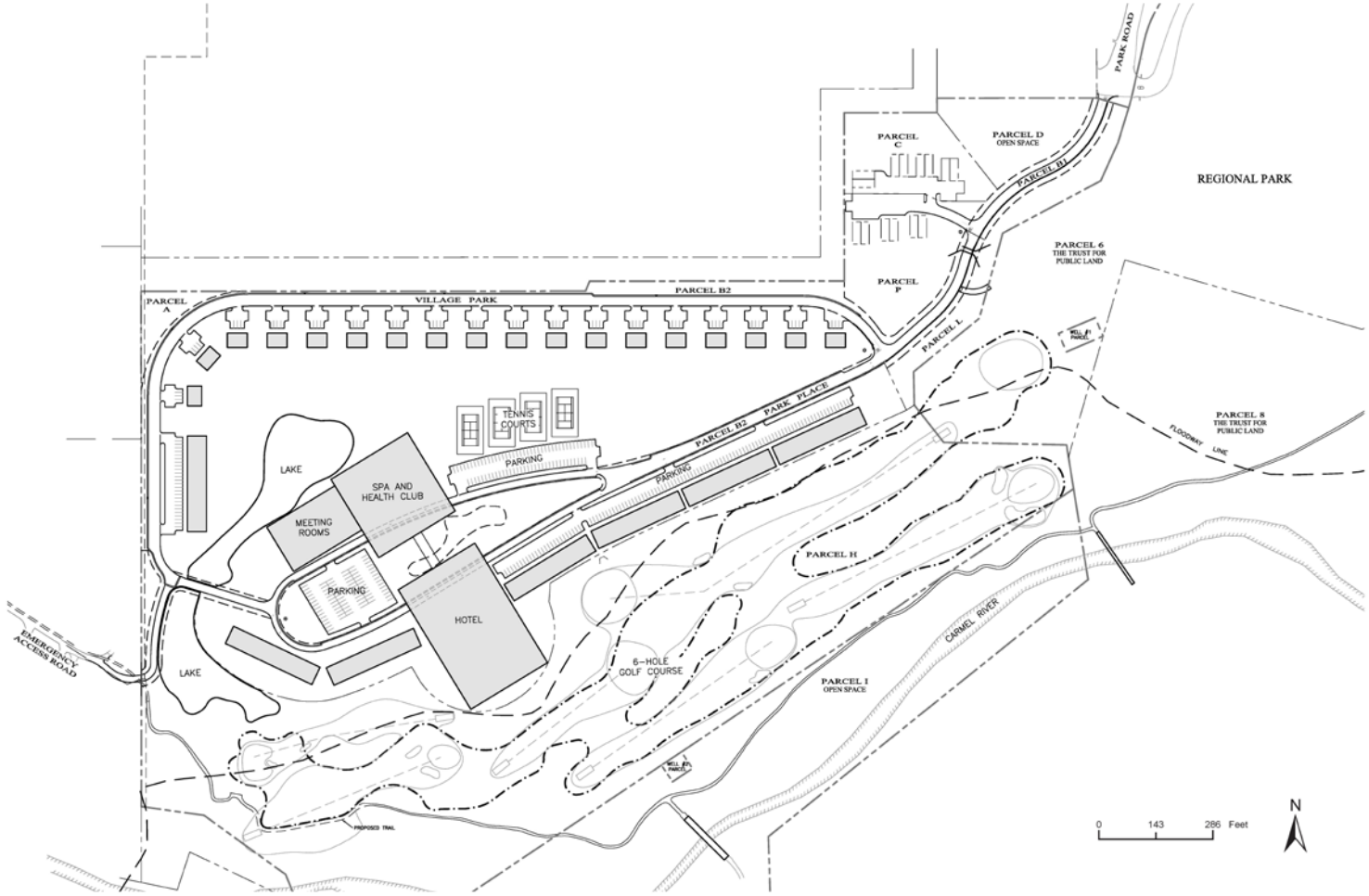
The creation of a hotel is technically feasible, in that the developer owns the entire project site, and land is sufficient to construct such a hotel and ancillary facilities. In addition, the 2013 CVMP allows for developing 175 hotel rooms on the site. Furthermore, access would still be provided, either directly or indirectly, via Carmel Valley Road. The hotel site would be located in proximity to existing infrastructure that would serve the project site. The water source for the Proposed Project would be useable for this alternative as well.

The cost of major infrastructure (site elevation, road connections, park improvements) for Alternative 2 is likely similar to the Proposed Project.

Ability to Meet Project Objectives

Alternative 2 would not assist the County in addressing the statewide housing and affordability crisis. However, the Hotel Alternative would meet the other Project objectives.

Figure 5-1 Alternative 2, Hotel Alternative



Source: L&S Engineering and Surveying, Inc., 2020.

Direct and Indirect Impact Analysis

- **Geology and Soils**—Alternative 2 would result in an estimated 156 employees, 288 hotels guests, and 60 residents, for a total of 504 persons exposed to geologic hazards.[6] Therefore, this alternative would expose 111 additional persons to geology and soils risks (504 persons exposed under Alternative 2 as compared to 393 under the Proposed Project). However, this estimate is conservative as it includes both residents/guests (i.e, overnight accommodations), employees and assumes 82% occupancy. Although additional people may be exposed to risks, this alternative would not increase or exacerbate geology or soil hazards at the site. Impacts from Alternative 2 would be less than significant with mitigation, similar to the Proposed Project; however, the impact would be worse, as more people would potentially be exposed under the Alternative.

- **Hydrology and Water Quality**—Alternative 2 would likely have similar hydrology and water quality impacts as compared to the Proposed Project, as the overall footprint would be similar. In addition, an increase in service population under Alternative 1 (504 persons under Alternative 2 as opposed to 393 residents under the Proposed Project) would require more potable water from the Carmel River aquifer. Similar to the Project, encroachment on the floodplain, elevation of the site, site drainage design, and stormwater runoff best management practices would be required. Because this alternative would result in higher potable water demands, impacts would be greater than for the Proposed Project. However, like the Project, it impacts would be less than significant with mitigation.

- **Biological Resources**—Ponds, trees, and vegetated areas would be disturbed to accommodate Alternative 2, and impacts on these resources would be similar to those for the Proposed Project due to a similar development area. Contiguous open space area is important to accommodate a viable habitat preserve and the development of a hotel and associated facilities would limit the space available for the habitat preserve. However, due to the development layout of this alternative, impacts to biological resources would be similar as compared to the Project and would be mitigated to less than significant.

- **Aesthetics**—Under Alternative 2, hotel development would result in greater impacts to aesthetic resources as, although the development footprint would be similar, the scale of the hotel development would be larger as compared to the Project. Additional mitigation measures would likely be necessary for this alternative to screen views from the roadway. Similar to the Project, it is assumed that impacts would be mitigated to less than significant.

- **Land Use**—Hotel development on this parcel would result in fewer land use effects, as the area is zoned for public and quasi-public uses and visitor accommodation. The 2013 CVMP allows for developing up to 175 hotel rooms on the site. As a result, Alternative 2 would not have the same land use impacts related to consistency with land use designations or zoning as the Proposed Project. Therefore, land use impacts associated with this alternative would be decreased as compared to the Project and would be less than significant.

- **Hazards and Hazardous Materials**—As stated above, this Alternative would result in 504 service population as compared to the Proposed Project, which would result in 393 residents.

[6] The Institute of Transportation Engineers (ITE) manual entitled *Trip Generation, seventh edition, 2012*, Land Use Code 310 for Hotels includes a general assumption that a hotel will employ 0.9 employees per room. Further the ITE assumes an occupancy rate at any given time of 82% with a standard room occupying 2 guests.

As a result, this alternative's exposure of the environment and persons to risks from hazards and hazardous materials would likely be increased from that of the Proposed Project. However, similar to the Project, impacts from Alternative 2 would remain less than significant with mitigation.

- **Transportation and Traffic**—Average daily trips associated with Alternative 2 would increase from 911 average daily trips to an estimated 1,241 average daily trips.[7] As a result, Alternative 2 would generate 36% more trips along Rio Road, Carmel Valley Road, and state routes. Although average daily trips would increase, trips associated with Alternative 2 would be less concentrated in the peak hours, since hotel visitors would not be commuting to work during the AM and PM peak hours, as is typical for residential projects. As such, peak hour trips associated with this alternative may decrease when compared to the Proposed Project, despite the overall increase in average daily trips. Nevertheless, this alternative would not change the significance determination of significant and unavoidable, as this alternative would still add trips to already failing intersections and roadway segments. Therefore, impacts may be slightly reduced due to less concentrated trips during the peak hours, impacts and would remain significant and unavoidable.
- **Air Quality**—This alternative would require similar grading and filling as the Project; therefore, construction impacts would be similar. Operational air quality impacts would be greater than those of the Proposed Project due to the greater number of persons associated with the Project (504 service population under Alternative 2 as opposed to 393 residents under the Proposed Project) and vehicle trips (911 average daily trips under Proposed Project and 1,241 average daily trips under Alternative 2). Since service population and average daily trips would increase under this alternative as compared to the Proposed Project, it is assumed that air quality impacts from implementation of Alternative 2 would also increase. However, air quality impacts would still be mitigated to less than significant.
- **Noise**—This alternative would result in similar construction noise as compared to the Project. Operational noise impacts would increase with Alternative 2 due to increased vehicle trips (911 average daily trips under Proposed Project and 1,241 average daily trips under Alternative 2). However similar to the Project it is assumed that impacts related to increased noise levels from implementation of this alternative would be mitigated to less than significant.
- **Public Services, Recreation, and Utilities**—Similar to the Proposed Project, Alternative 2 would require the extension of existing transmission lines for sewer, electricity, and telecommunications. Because this alternative would include less housing (20 units as opposed to 130 under the Proposed Project, an 84% reduction in residents), effects on service providers, schools, and recreation would be less than those for the Proposed Project. However, impacts related to water supply would be greater as Alternative 2 would result in 504 persons using water resources as opposed to 393 residents under the Proposed Project. However, these impacts associated with water use would still be less than the baseline use of a golf course. As a result, water use impacts would be greater than the Proposed Project and it is assumed that this alternative's impacts to water supply and demand would be mitigated to less than significant. All other impacts related public services, recreation and utilities would be less than significant and reduced when compared to the Proposed Project.

[7] Calculated using ITE Land Use Code 210, Single Family Detached Housing and ITE Land Use Code 310, Hotel, and removing the golf course trips, consistent with Section 3.7, *Transportation and Traffic.*

- **Cultural Resources**—This alternative would likely require similar excavation and ground disturbing activities as the Proposed Project. Therefore, cultural resource impacts would be similar and like the Project would be mitigated to less than significant.
- **Population and Housing**—Alternative 2 would have reduced population and housing impacts compared to those for the Proposed Project. The only housing proposed under this alternative is 20 employee units, which would result in 60 residents as opposed to 393 residents under the Proposed Project, an 85% reduction. Whereas the Project would utilize 130 of the 190 units allowed in Carmel Valley pursuant to CVMP Policy CV-1.6, Alternative 2 would leave 110 additional units in the Carmel Valley cap. Although these units could be constructed elsewhere in the Carmel Valley, this alternative would not result in a higher level of housing or population growth than anticipated in the adopted CVMP. In addition, employment in the area under this alternative would increase by 156 employees; however, impacts due to job creation would be less than significant as it is likely these employees would be hired locally. Therefore, the increase in population or housing under this alternative would not be significant.
- **Greenhouse Gas Emissions and Climate Change**—Similar to Air Quality above, this alternative would require similar grading and filling as the Project; therefore, construction impacts would be similar. Operational GHG emissions and climate change impacts would be greater than those of the Proposed Project due to the greater number of persons associated with the Project (504 service population under Alternative 2 as opposed to 393 residents under the Proposed Project) and vehicle trips (911 average daily trips under Proposed Project and 1,241 average daily trips under Alternative 2). However, similar to the Project, this impact would be less than significant with mitigation.

Cumulative Impacts

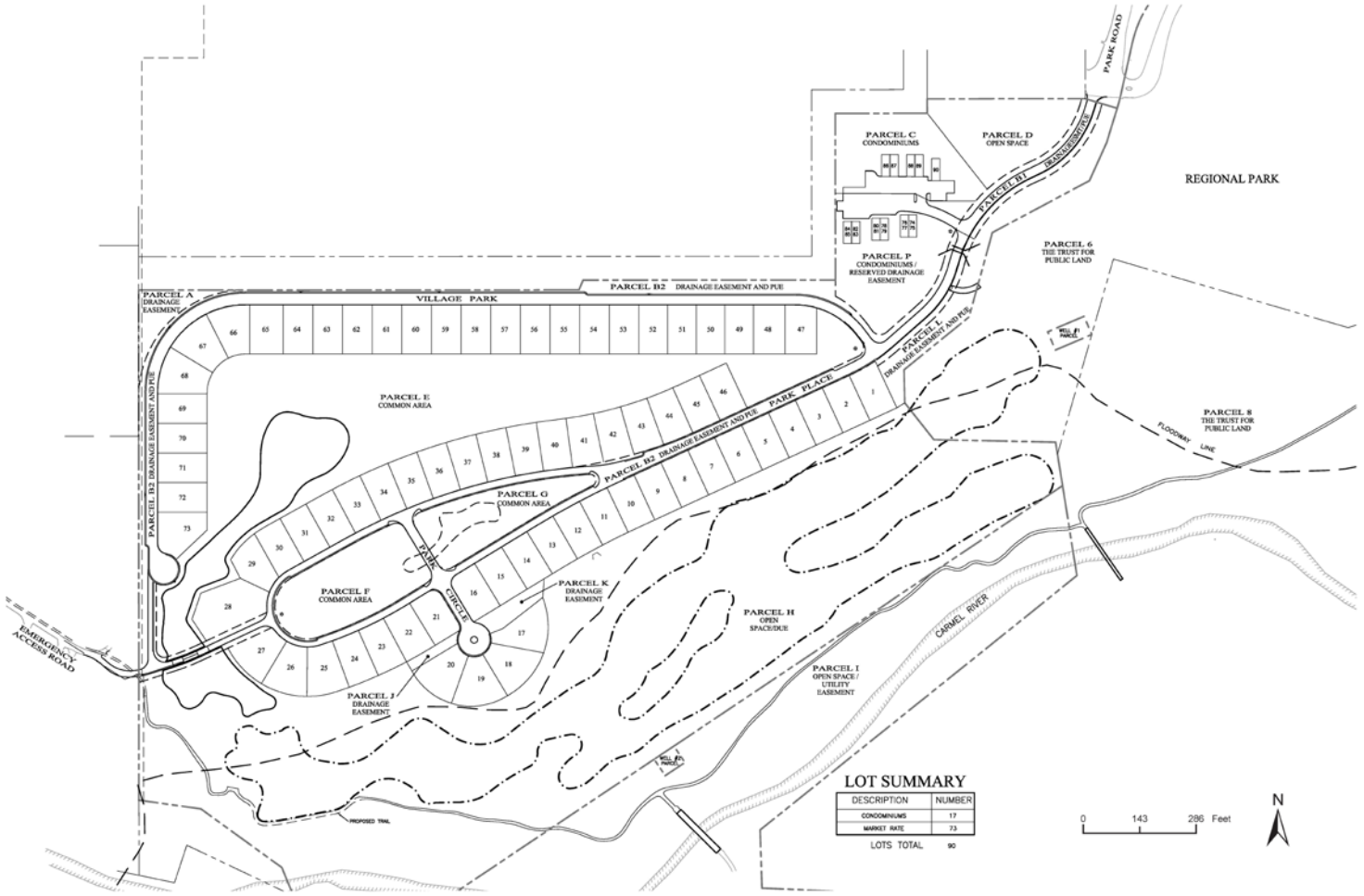
In addition to the direct and indirect impacts described above, Alternative 2 would also contribute to cumulative impacts. Cumulative contributions within most subject areas are addressed through project-level mitigation. Under this alternative, a hotel would be located on the site. As such, cumulative impacts would be greater for some issue areas as compared to the Proposed Project. Alternative 2 would not construct new residences, with the exception of 20 employee units. Therefore, residential development in the CVMP area would be in a more dispersed pattern that would require more land, more vehicular travel, and likely more extensive infrastructure (in particular concerning water supply) than would the Proposed Project. Therefore, even with mitigation, contributions to cumulative impacts related to traffic and land use cannot be mitigated to a less-than-significant level for Alternative 2.

Alternative 3—90-Unit Low Density Alternative

Alternative Characteristics

Alternative 3 would include 73 market rate residential units and 17 affordable units on the same residential site for a total of 90-units. The gross density would be considered low density in Carmel Valley, although specific densities within the Village could be medium density in certain locations. Open space would be similar to the Proposed Project, though the proposed habitat preserve would be reduced from 39.2 acres to 25 acres. A sample site plan of this alternative is provided in **Figure 5-2.**

Figure 5-2 Alternative 3, 90-Unit Low Density Alternative



Source: L&S Engineering and Surveying, Inc., 2020.

This alternative would also include raising a portion of the emergency access road west of the project site, to a level that has been designed to directly address the large potential flood flow path down Rio Road from the Carmel River. This would avoid a substantial portion of the improvements cited in the County Service Area 50 Final Lower Carmel River Stormwater Management and Flood Control Report (Balance Hydrologics, Inc. 2014b).

This alternative was developed to examine the potential to avoid or lessen traffic related impacts, including the emissions of air pollutants and GHG emissions.

Feasibility

Alternative 3 is technically feasible, as the project site is available, utility connections and road connections are available, and water supply exists, as for the Proposed Project.

This alternative includes a greater number of market-rate units, with only 18 affordable units as compared to the Proposed Project. The cost of major infrastructure (site elevation, road connections, park improvements) is likely similar to the Proposed Project, but the cost of certain infrastructure within (streets, utilities, etc.) would be slightly less due to the reduced number of utility hookups. Given that the market-rate units are the primary economic driver, and the subsidized affordable units are reduced substantially with a corresponding decline in certain infrastructure costs, this alternative is considered potentially feasible at this time.

Ability to Meet Project Objectives

Alternative 3 would meet all of the Project's objectives, but not to the same extent as the Proposed Project. This alternative would result in a reduction in local employment opportunities and affordable housing units as compared to the Project. However, Alternative 3 would provide the same habitat and open space conservation, regional drainage control solutions, and facilitate construction of a traffic light on Carmel Valley Road, similar to the Proposed Project. By providing fewer housing units than the Proposed Project, Alternative 3 would be less effective than the Project in meeting the objective of assisting the County in addressing the statewide housing crisis. Thus, Alternative 3 would meet all of the Project objectives, but not to the same extent as the Proposed Project.

Direct and Indirect Impact Analysis

- **Geology and Soils**— Exposure to risks from geology and soils under Alternative 3 would be reduced compared to the Proposed Project. This is due to the smaller development footprint as well as the reduction in population (121 fewer residents, or a 31% reduction compared to the Proposed Project),[8] would reside on the property and thus be exposed to geologic hazards and seismic risks. Although impacts would be reduced as compared to the Proposed Project, there is still the potential for people to be exposed to geologic hazards and the same mitigation measures would apply to Alternative 3. Similar to the Project, impacts would be mitigated to less than significant.
- **Hydrology and Water Quality**— Because this alternative would result in a smaller development footprint, it would reduce the amount of new impervious surface areas and associated stormwater runoff compared to the Proposed Project. The 31% reduction in

[8] Based on the 3.02 persons per household in Monterey County described in Chapter 2, *Project Description*. The Proposed Project assumed 393 residents, therefore 393-272 = 121 fewer residents.

residents would not require as much potable water from the Carmel River aquifer. While impacts associated with Alternative 3 would be reduced when compared to the Proposed Project, impacts would remain significant but mitigable.

- **Biological Resources**— The development footprint for Alternative 3 would be reduced when compared to the Proposed Project, thereby reducing impacts to biological resources. In addition to reducing ground-disturbance related impacts, this alternative would result in a 31% reduction in residents and a commensurate reduction in water demand. This decreased water demand would result in an indirect benefit for biological resources associated with the Carmel River. Impacts would be reduced when compared to the Proposed Project, but would remain less than significant with mitigation.
- **Aesthetics**— Reduced acreage would be developed under Alternative 3, which would be more compatible with the rural character of the Carmel Valley. Although the lower density would reduce visual impacts on the character of the project site, these impacts would still be considered less than significant with mitigation, similar to the Proposed Project. Visual effects on scenic vistas would also be reduced and would be less than significant with mitigation, similar to the Proposed Project.
- **Land Use**—This alternative would be developed on the same site within a reduced development footprint. Similar to the Proposed Project, impacts associated with dividing an established community would less than significant. In addition, any residential development on this parcel would result in similar land use effects, as the area is zoned only for public and quasi-public uses and visitor accommodation. As such, Alternative 3 (90-Unit Low Density) would not lessen or avoid land use impacts related to consistency with land use designations or zoning. As a low-density development, the level of compatibility with adjacent land uses would in general be higher, but the Proposed Project, while inconsistent with land use designations/zoning, was not considered to result in significant impacts related to land use compatibility. Also, as a low-density development, this alternative would be more consistent with the general rural character of the 2013 CVMP, but again, the Proposed Project was not considered inconsistent with the 2013 CVMP rural character due to its location, setting, and design. Similar to the Project, this alternative would not be consistent with the 50% affordable/workforce housing requirement in CV-1.27. This policy inconsistency would result in longer commutes by workers to the area and contribute to the physical environmental effect that is longer commute times and exacerbated traffic congestion, resulting in significant and unavoidable impacts.
- **Hazards and Hazardous Materials**— No new sources of hazards or hazardous materials would result from this alternative as compared to the Proposed Project. Nevertheless, Alternative 3 would not avoid or decrease all direct impacts related to hazards and hazardous materials, such as storage and handling of hazardous materials as well as containment of spills during construction, the presence of underground utility lines, or operational use of hazardous waste associated with landscaping and household products. Construction of Alternative 3 would require adherence to the same regulations as the Proposed Project. Impacts from Alternative 3 would be less than significant with mitigation, although reduced since the development footprint would be reduced as compared to the Proposed Project.
- **Transportation and Traffic**— The Proposed Project would result in 911 average daily trips. Alternative 3 would result in a 31% reduction in residents compared to the Project. Assuming that average daily trips would reduce commensurately, Alternative 3 would generate 628 average daily trips. Although daily trips would be reduced, this alternative is unlikely to change

the significant impacts identified for the Proposed Project because many of the study area intersections are currently failing. In addition, contribution of a single trip to SR 1 is considered a significant impact. Although this alternative would substantially reduce trips as compared to the Proposed Project, it would not eliminate all trips to SR 1 or nearby failing intersections. As a result, impacts would be reduced compared to the Project but would remain significant and unavoidable.

- **Air Quality**—Alternative 3 would result in a 31% reduction in residents and a commensurate reduction in vehicle trips. The Proposed Project would result in a significant but mitigatable impact due to ROG. The Proposed Project would result in 213.7 net new pounds per day of ROG over the golf course use (unmitigated). Assuming ROG emissions would reduce commensurately, Alternative 3 would generate approximately 147.4 net new pounds per day of ROG over the golf course use, which would still be above MBUAPCD thresholds. All other area, energy, and mobile source emissions associated with operation of the Project were found to be less than significant. Because the number of residents and average daily trips would be reduced under Alternative 3, impacts due to all other applicable air quality standards (NO_X , CO and PM_{10}) would be considered less than significant. As a result, operational air quality impact would be less than significant with mitigation incorporated, and reduced compared to the Proposed Project. This alternative would also require less construction, and the amount of grading and fill requirements would be reduced compared to the Proposed Project. As such, Alternative 3 would result in fewer construction-related air emissions, although this impact would remain less than significant, as it is for the Proposed Project.

- **Noise**—Due to the 31% reduction in residents and commensurate reduction in vehicle trips as compared to the Proposed Project, noise effects along Rio Road to the west of the project site would also be slightly lessened. However, the exposure of single-family residences to noise from the batting area and baseball fields as well as noise generated during construction would still potentially be significant. Therefore, noise impacts would be reduced but would remain less than significant with mitigation, similar to the Proposed Project.

- **Public Services, Recreation, and Utilitie**s—The 31% reduction in residents (or 121 fewer residents than the Proposed Project) under this alternative would reduce demands on public services, recreation, and utilities, including potable water, emergency services, and schools. However, significant impacts due to water supply and demand identified under the Proposed Project would still be applicable to Alternative 3, although these impacts associated with water use would still be less than the baseline use of a golf course. Therefore, impacts would be reduced under Alternative 3, but would remain less than significant with mitigation incorporated, as they are for the Proposed Project. All other impacts related public services, recreation and utilities would be less than significant and reduced when compared to the Proposed Project.

- **Cultural Resources**— This alternative would require less overall ground disturbance than the Proposed Project. Due to a smaller development footprint, the potential for uncovering previously undiscovered resources during construction would be reduced. However, similar to the Proposed Project, the potential for unanticipated discoveries would remain and impacts would be less than significant with mitigation.

- **Population and Housing**—Similar to the Proposed Project, construction of 90 units would induce population growth by creating housing opportunities in excess of what is currently available. However, this increase would not be substantially above the level of development

currently projected by AMBAG. Further, impacts would be less than the Project (272 residents as opposed to 393 residents). Whereas the Project would utilize 130 of the 190 units allowed in Carmel Valley pursuant to CVMP Policy CV-1.6, Alternative 3 would leave 40 additional units in the Carmel Valley cap. Although these units could be constructed elsewhere in the Carmel Valley, this alternative would not result in a higher level of housing or population growth than anticipated in the adopted CVMP. Therefore, the increase in population or housing under this alternative would not be significant. Effects on population or housing would be less under Alternative 3 as compared to the Proposed Project.

- **Greenhouse Gas Emissions and Climate Change**— Reduced residential development would result in a 31% reduction in population and vehicle trips, which would result in lower GHG emissions. A 31% reduction in GHG emission under this alternative would result in net annual emissions of 1,096 CO_2e. The service population would be reduced under this alternative to 272 people. A 31% reduction in GHG emissions would result in 4.03 metric tons per service population of CO_2e, which would be below the 4.5 service population threshold. Therefore, operational impacts would be less than significant compared to significant but mitigable for the Proposed Project. Construction emissions would be reduced as there would be a smaller development footprint; however, as with the Proposed Project, BMPs would still be required during construction and therefore impacts would remain less than significant with mitigation, as they are for the Project.[9]

Cumulative Impacts

In addition to the direct and indirect impacts described above, Alternative 3 would also contribute to cumulative impacts. Cumulative contributions within most subject areas are addressed through project-level mitigation. Under this alternative, 90 units of low density development would be constructed on the site. As such, the alternative's incremental contribution to cumulative impacts would be less for most issue areas as compared to the Proposed Project. But, because this alternative would leave more units available for development elsewhere within the CVMP, overall cumulative impacts from probable future projects would be similar, assuming that all such units will get developed somewhere. Therefore, residential development in the CVMP area for the remaining 69 units would be in a more dispersed pattern that would require more land, more vehicular travel, and likely more extensive infrastructure (in particular concerning water supply) than would this alternative. Therefore, even with mitigation, contributions to cumulative impacts related to traffic and land use cannot be mitigated to a less-than-significant level for Alternative 3.

Alternative 4—40-Unit Low Density Alternative

Alternative Characteristics

Alternative 4 would include 32 market rate residential units and eight affordable units (gross density of 1 unit/acre) for a total of 40 residential units. This gross density would be considered low

[9] The fact that direct GHG emissions would be lower does not imply that Alternative 3 represents a better long-term policy outcome for climate than the Proposed Project. California has a large housing need, and new housing will have to be built somewhere, if not on the project site. As the California Supreme Court explained, "[g]iven the reality of growth, some GHG emissions from new housing and commercial developments are inevitable. The critical CEQA question is the cumulative significance of a project's GHG emissions, and from a climate change point of view it does not matter where in the state those emissions are produced." (Center for Biological Diversity v. California Dept. of Fish and Wildlife (2015) 62 Cal.4th 204, 220-221.)

density (1 unit/acre) in Carmel Valley, although specific densities within the Village could be medium density in certain locations. The open space area would be similar to the Proposed Project, but with a smaller habitat preserve. A sample site plan of this alternative is provided in **Figure 5-3.**

This alternative would also include raising a portion of the emergency access road west of the project site, to a level that has been designed to directly address the large potential flood flow path down Rio Road from the Carmel River. This would avoid a substantial portion of the improvements cited in the County Service Area 50 - Final Lower Carmel River Stormwater Management and Flood Control Report (Balance Hydrologics, Inc. 2014b).

This alternative was developed to examine the potential to avoid or lessen traffic related impacts, including the emissions of air pollutants and GHGs.

Feasibility

Alternative 4 is technically feasible as the project site is available, utility connections and road connections are available, and water supply exists as for the Proposed Project.

The cost of major infrastructure (site elevation, road connections, park improvements) are likely similar to that for the Proposed Project, but the cost of certain infrastructure within the residential development (streets, utilities, etc.) would be slightly less due to the reduced number of utility hookups.

For the purposes of this Second Revised Draft EIR, this alternative is considered potentially feasible.

Ability to Meet Project Objectives

Alternative 4 would meet all of the Project's objectives, but not as well as the Proposed Project as this alternative would reduce the local employment opportunities and affordable housing units. By providing fewer housing units than the Proposed Project, Alternative 3 would be less effective than the Proposed Project in meeting the objective of assisting the County in addressing the statewide housing crisis. However, this alternative would provide the same habitat and open space conservation, regional drainage control solutions, and facilitate construction of a traffic light on Carmel Valley Road, similar to the Proposed Project.

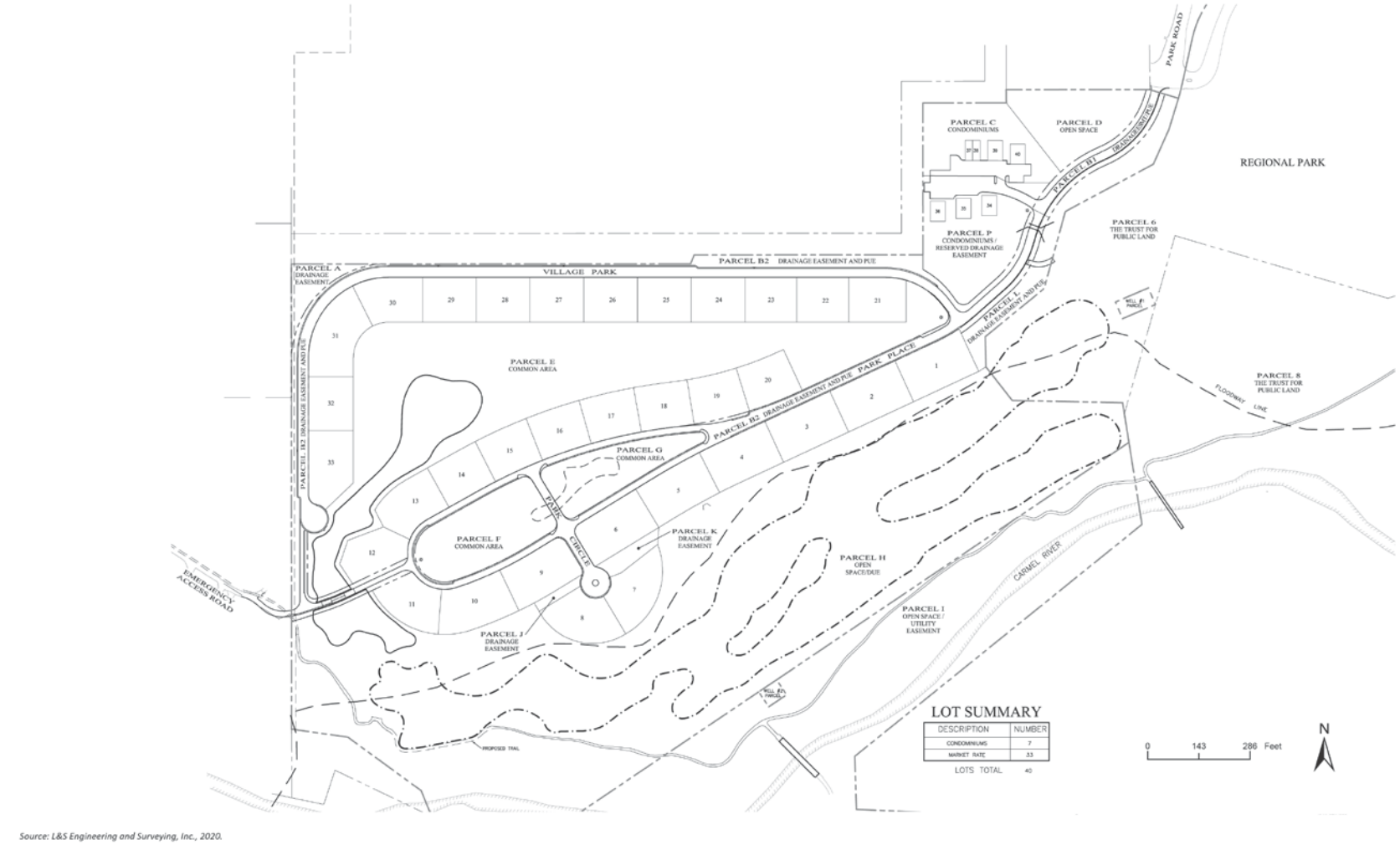
Thus, Alternative 4 would meet all of the goals and objectives, but not to the same level as the Proposed Project.

Direct and Indirect Impact Analysis

- **Geology and Soils**— Exposure to risks from geology and soils under Alternative 4 would be reduced to that of the Proposed Project due to a smaller development footprint and 272 fewer persons associated with the Project.[10] Although impacts would be reduced as compared to the Proposed Project, there is still the potential for people residing on the property to be exposed to geologic hazards and seismic risks. The same mitigation measures would apply to Alternative 4 and for to the Project and impacts would be mitigated to less than significant.

[10]Based on the 3.02 persons per household in Monterey County described in Chapter 2, *Project Description*. 40 units multiplied by 3.02 person per household = 121 residents associated with Alternative 4. The Proposed Project assumed 393 residents, therefore 393-121 = 272 fewer residents.

Figure 5-3 Alternative 4, 40-Unit Low Density Alternative



Source: L&S Engineering and Surveying, Inc., 2020.

- **Hydrology and Water Quality**— Because this alternative would result in a smaller development footprint, it would reduce the amount of new impervious surface areas and associated stormwater runoff compared to the Proposed Project. The 69% reduction in on-site residents would not require as much potable water from the Carmel River aquifer. While impacts associated with Alternative 4 would be reduced when compared to the Proposed Project, impacts would remain significant but mitigable.
- **Biological Resources**— The development footprint for Alternative 4 would be reduced as compared to the Proposed Project, thereby reducing impacts to biological resources. Although Alternative 4 would not avoid or reduce all direct impacts on biological resources, it would reduce impacts as compared to the Proposed Project. The decreased water requirement for the 69% reduction in residents would further result in an indirect benefit for biological resources associated with the Carmel River. Impact would be reduced when compared to the Proposed Project; however, impacts from Alternative 4 would remain less than significant with mitigation.
- **Aesthetics**—A reduced amount of acreage as compared to the Project would be developed under Alternative 4, which would be more compatible with the rural character of the Carmel Valley. Although the lower density would reduce visual impacts on the character of the project site, these impacts would still be considered less than significant with mitigation, similar to the Proposed Project. Visual effects on scenic vistas would also be reduced and would be less than significant with mitigation, similar to the Proposed Project.
- **Land Use**— This alternative would be developed on the same site within a reduced development footprint. Similar to the Proposed Project, impacts associated with dividing an established community would the similar to the Proposed Project, less than significant. In addition, any residential development on this parcel would result in similar land use effects, as the area is zoned only for public and quasi-public uses and visitor accommodation. As such, Alternative 4 would not lessen or avoid land use impacts related to consistency with land use designations or zoning. As a low-density development, the level of compatibility with adjacent land uses would in general be higher, but the Proposed Project, while inconsistent with land use designations/zoning, was not considered to result in significant impacts related to land use compatibility. Also, as a low-density development, this alternative would be more consistent with the general rural character of the 2013 CVMP, but again, the Proposed Project was not considered inconsistent with the 2013 CVMP rural character due to its location, setting, and design. Similar to the Project, this alternative would not be consistent with the 50% affordable/workforce housing requirement in CV-1.27. This policy inconsistency would result in longer commutes by workers to the area and contribute to the physical environmental effect that is longer commute times and exacerbated traffic congestion, resulting in significant and unavoidable impacts.
- **Hazards and Hazardous Materials**— No new sources of hazards or hazardous materials would result from this alternative as compared to the Proposed Project. Nevertheless, Alternative 4 would not avoid or decrease all direct impacts related to hazards and hazardous materials, such as storage and handling of hazardous materials as well as containment of spills during construction, the presence of underground utility lines, or operational use of hazardous waste associated with landscaping and household products. Construction of Alternative 4 would require adherence to the same regulations as the Proposed Project. Impacts from Alternative 4

would be less than significant with mitigation although reduced since the development footprint would be reduced as compared to the Proposed Project.

- **Transportation and Traffic**—The Proposed Project would result in 911 average daily trips. Alternative 4 would result in a 69%reduction in residents compared to the Project. Assuming that average daily trips would reduce commensurately, Alternative 4 would generate 282 average daily trips. Although average daily trips would be reduced, this alternative is unlikely to change the significance impacts identified for the Proposed Project since any contribution to a trip on SR 1 is considered a significant impact and many of the intersections and roadways in the area are already failing, meaning any contribution no matter how small to these intersections and roadways would result in significant impacts. As a result, impacts would be reduced compared to the Project but would remain significant and unavoidable.
- **Air Quality**— Alternative 4 would result in a 69% reduction in population and vehicle trips generated. The Proposed Project would result in a significant but mitigatable impact due to ROG. The Proposed Project would result in 213.7 net new pounds per day of ROG over the golf course use (unmitigated). Assuming ROG emissions would reduce commensurately, Alternative 4 would generate approximately 66.2 net new pounds per day of ROG over the golf course use, which would be below MBUAPCD thresholds. All other area, energy, and mobile source emissions associated with operation of the Project were found to be less than significant. Because the number of residents and average daily trips would be reduced under Alternative 4, impacts due to all other applicable air quality standards (NO_X, CO and PM_{10}) would be less than significant. As a result, operational air quality impact would be less than significant, and reduced compared to the Proposed Project. This alternative would require less construction, and the amount of grading and fill requirements would be reduced to that for the Proposed Project. As such, the Alternative 4 would result in less than significant impacts although reduced as compared to the Proposed Project.
- **Noise**— Due to the 69% reduction in residents and vehicle trips generated, noise effects along Rio Road to the west of the project site would also be slightly lessened. However, the exposure of single-family residences to noise from the batting area and baseball fields as well as noise generated during construction would still potentially be significant. Therefore, noise impacts would be reduced but would remain less than significant with mitigation, similar to the Proposed Project.
- **Public Services, Recreation, and Utilitie**s— The 69% reduction in residents (or 272 fewer residents than the Proposed Project) would reduce demands on public services, recreation, and utilities, including potable water, emergency services, and schools. However, significant impacts due to water supply and demand identified under the Proposed Project would still be applicable to Alternative 4, although these impacts associated with water use would still be less than the baseline use of a golf course. Therefore, impacts would be reduced under Alternative 4, but would remain less than significant with mitigation incorporated, as they are for the Proposed Project. All other impacts related public services, recreation and utilities would be less than significant and reduced when compared to the Proposed Project.
- **Cultural Resources**— Alternative 4 would have similar effects as the Proposed Project, if undiscovered resources were encountered during construction. However, impacts would be less due a smaller development footprint. Similar to the Proposed Project, impacts would be less than significant with mitigation.

- **Population and Housing**— Similar to the Proposed Project, construction of 40 units would induce population growth by creating housing opportunities in excess of what is currently available. However, this increase would not be substantially above the level of development currently projected by AMBAG. Further, impacts would be less than the Project (121 residents as opposed to 393 residents). Whereas the Project would utilize 130 of the 190 units allowed in Carmel Valley pursuant to CVMP Policy CV-1.6, Alternative 4 would leave 90 additional units in the Carmel Valley cap. Although these units could be constructed elsewhere in the Carmel Valley, this alternative would not result in a higher level of housing or population growth than anticipated in the adopted CVMP. Therefore, the increase in population or housing under this alternative would not be significant. Effects on population or housing would be less under Alternative 4 as compared to the Proposed Project.
- **Greenhouse Gas Emissions and Climate Change**— Reduced residential development would result in a 69% reduction in population and vehicle trips generated, which would result in lower GHG emissions. A 69% reduction in GHG emissions under this alternative would result in net annual emissions of 270 CO_2e. The service population would be reduced under this alternative to 121 people. A 69% reduction in GHG emissions would result in a 2.23 metric tons per service population of CO_2e, which would be below the 4.5 service population threshold. Therefore, operational GHG emissions would be less than significant and reduced as compared to the Proposed Project. Further, construction emissions would be reduced as there would be a smaller development footprint; however, as with the Proposed Project, BMPs would still be required during construction and therefore impacts would be reduced but still require mitigation when compared to the Proposed Project, and would be less than significant with mitigation. Similar to the Proposed Project, impacts would be less than significant with mitigation.[11]

Cumulative Impacts

In addition to the direct and indirect impacts described above, Alternative 4 would also contribute to cumulative impacts. Cumulative contributions within most subject areas are addressed through project-level mitigation. Under this alternative, 40 units of low density development would be constructed on the site. As such, the alternative's incremental cumulative impacts would be less for most issue areas as compared to the Proposed Project. But, because this alternative would leave more units available for development elsewhere within the CVMP, overall cumulative impacts from probable future projects would be similar, assuming that all such units will get developed somewhere. Therefore, residential development in the CVMP area for the remaining 150 units would be in a more dispersed pattern that would require more land, more vehicular travel, and likely more extensive infrastructure (in particular concerning water supply) than would this alternative. Therefore, even with mitigation, contributions to cumulative impacts related to traffic and land use cannot be mitigated to a less-than-significant level for Alternative 4.

[11] The fact that direct GHG emissions would be lower does not imply that Alternative 4 represents a better long-term policy outcome for climate than the Proposed Project. California has a large housing need, and new housing will have to be built somewhere, if not on the project site. As the California Supreme Court explained, "[g]iven the reality of growth, some GHG emissions from new housing and commercial developments are inevitable. The critical CEQA question is the cumulative significance of a project's GHG emissions, and from a climate change point of view it does not matter where in the state those emissions are produced." (Center for Biological Diversity v. California Dept. of Fish and Wildlife (2015) 62 Cal.4th 204, 220-221.).

Alternative 5—Energy Efficient Clustered Residential Alternative

Alternative Characteristics

Alternative 5 includes 130 residential units, with clustering of 25-condominium units to allow for use of solar infrastructure. The configuration of these condominium units would include a "solar village" comprising of 18-condominiums on the front parcel and seven condominium units (two tri-plexes and a half plex) on the west side of the project site. Similar to the Proposed Project, the 130-units under this alternative would also be of moderate and market rate housing. The open space area would be similar to the Proposed Project, but with a smaller habitat preserve. A sample site plan of this alternative is provided in **Figure 5-4.**

This alternative would also include raising a portion of the emergency access road west of the site, to a level that has been designed to directly address the large potential flood flow path down Rio Road from the Carmel River. This would avoid a substantial portion of the improvements cited in the County Service Area 50 Final Lower Carmel River Stormwater Management and Flood Control Report (Balance Hydrologics, Inc. 2014b).

This alternative reflects a reasonable evolution of the 130-unit Proposed Project (formulated in 2016) in that it implements requirements in the 2019 Building Energy Efficiency Standards of the California Building Code, Title 24, Part 6, including installation of solar photovoltaic systems for all new single family homes and multi-family homes up to three stories in height. The clustered design of this alternative would allow for more efficiency in developing the solar infrastructure, as fewer solar panel systems could be installed to power all condominium units.

Alternative 5 was developed to examine the potential to lessen GHG related impacts.

Feasibility

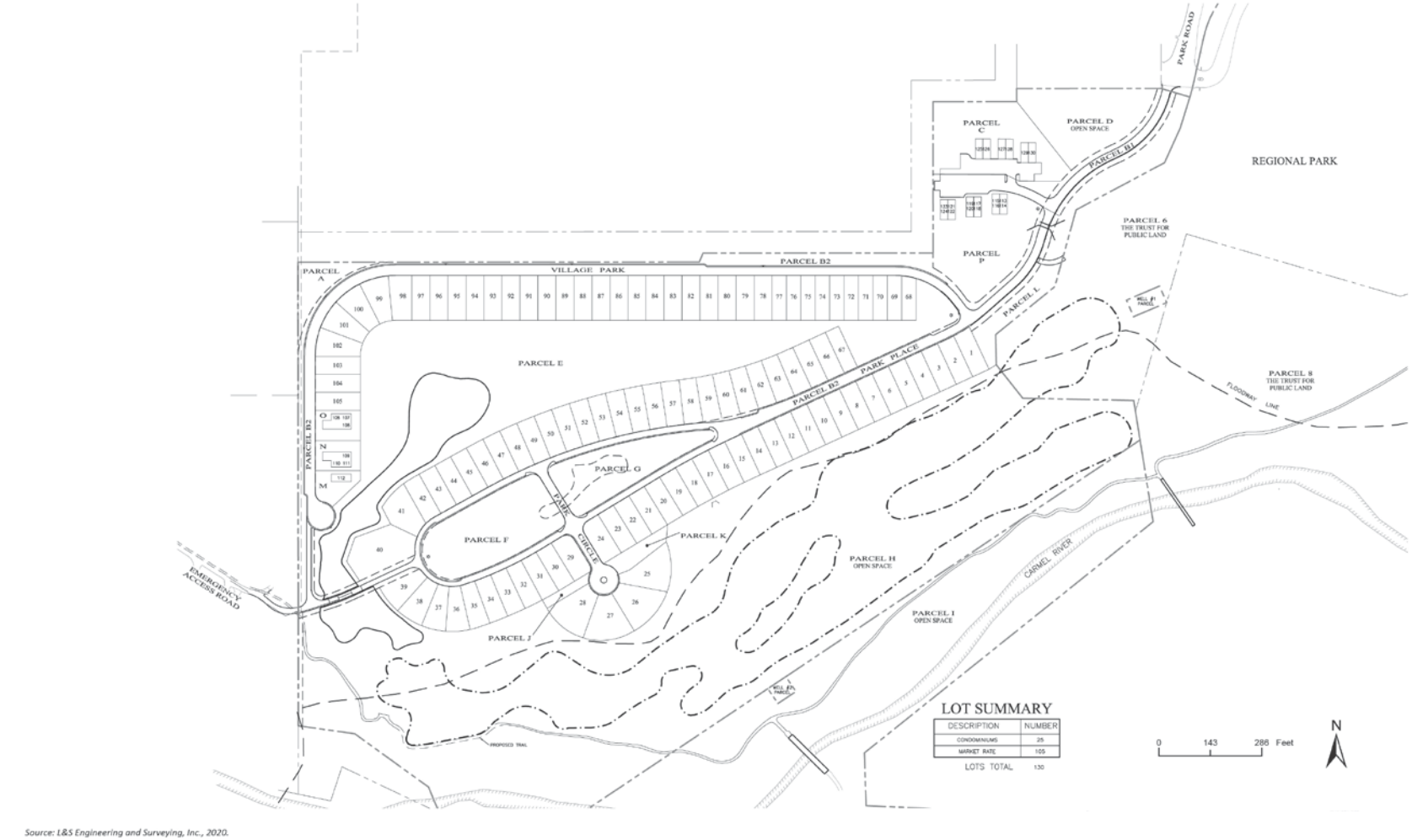
Alternative 5 is technically feasible as the project site is available, utility connections and road connections are available, and water supply exists as for the Proposed Project.

The cost of major infrastructure (site elevation, road connections, park improvements) are the same as that for the Proposed Project, though the costs of utility hookups would be somewhat lower due to the clustering of units.

Ability to Meet Project Objectives

Alternative 5 would meet all of the objectives of the Project, as it is infill development that integrates smart growth principles and integrates open space. This alternative would also assist the County in addressing the statewide housing crisis through the provision of 130 moderate and market rate housing units and would provide employment opportunities similar to the Project. Alternative 5 also includes construction of regional drainage control and traffic signalization like the Project.

Figure 5-4 Alternative 5, Energy Efficient Clustered Alternative



Source: L&S Engineering and Surveying, Inc., 2020.

Direct and Indirect Impact Analysis

- **Geology and Soils**—Given the same level of buildout, persons residing on the property would have the potential to be exposed to geologic hazards and seismic risks. Geology and soils impacts associated with would be similar to that of the Proposed Project.
- **Hydrology and Water Quality**—Under Alternative 5, the amount of new impervious surface areas and amount of stormwater runoff would be similar as compared to the Proposed Project. Therefore, hydrology and water quality impact associated with this alternative would be the same as the Project and less than significant with mitigation incorporated.
- **Biological Resources**—Although the development footprint would be different under Alternative 5, the overall development acreage would be similar to the Proposed Project. Therefore, impacts would be similar to those of the Proposed Project and less than significant with mitigation.
- **Aesthetics**—Although a similar acreage would be developed under this alternative, clustering the condominium units would preserve more open space and thus be more compatible with the rural character of the Carmel Valley. This alternative would lessen visual impacts on the character of the project site than the Proposed Project; however, these visual impacts would still be considered less than significant with mitigation. Visual effects on scenic vistas would also be reduced compared to the Proposed Project and be considered less than significant with mitigation.
- **Land Use**— This alternative would be developed on the same site within a similar yet denser development footprint. Similar to the Proposed Project, impacts associated with dividing an established community would the similar to the Proposed Project, less than significant. Any residential development on this parcel would result in similar land use effects, as the area is zoned only for public and quasi-public uses and visitor accommodation. As such, Alternative 5 would not lessen or avoid land use impacts related to consistency with land use designations or zoning. Similar to the Proposed Project, while inconsistent with land use designations/zoning, this alternative would not result in significant impacts related to land use compatibility. Also, as a clustered development, this alternative would be more consistent with the general rural character of the 2013 CVMP, but again, the Proposed Project was not considered inconsistent with the 2013 CVMP rural character due to its location, setting, and design. However, similar to the Project, this alternative would not be consistent with the 50% affordable/workforce housing requirement in CV-1.27. This policy inconsistency would result in longer commutes by workers to the area and contribute to the physical environmental effect that is longer commute times and exasperated traffic congestion, resulting in significant and unavoidable impacts.
- **Hazards and Hazardous Materials**—No additional environmental and worker exposure to risk from hazards and hazardous materials would result under this alternative as compared to the Proposed Project. Alternative 5 would have impacts similar to those for the Proposed Project, less than significant with mitigation incorporated.
- **Transportation and Traffic**—This alternative would generate the same number trips along Rio Road, Carmel Valley Road, and state routes as compared to the Proposed Project. This alternative would not change the significance of impacts identified under the Proposed Project, as most of the project impacts are contributions of traffic to already failing intersections and

roadway segments. As a result, impacts would be similar to the Proposed Project and significant and unavoidable.

- **Air Quality**—Alternative 5 would result in similar construction related emissions, and the number of trips generated would be identical to that of the Proposed Project. Opportunities for non-vehicular travel would be the same as for the Proposed Project. However, the addition of solar infrastructure would reduce operational impacts to air quality as compared to the Proposed Project. However, it should be noted that current regulations require the use of solar infrastructure for new residential projects. As such, the Proposed Project would similarly be required to install solar panels and air quality impacts would be similar to those for the Proposed Project, less than significant with mitigation incorporated.
- **Noise**—Due to the same number of residents and associated trips under this alternative, noise effects along Rio Road to the west of the project site would also be the same or similar. The exposure of single-family residences to noise from the batting area and baseball fields as well as noise generated during construction would still potentially be significant. As such, noise impacts associated with Alternative 5 would be the same or similar to those for the Proposed Project, less than significant with mitigation incorporated.
- **Public Services, Recreation, and Utilitie**s—Population associated with Alternative 5 would be the same as for the Proposed Project and would result in similar site demands on public services, recreation, and utilities, including potable water, emergency services, and schools. Impact would be similar to the Proposed Project, less than significant with mitigation incorporated.
- **Cultural Resources**—This alternative would have similar effects as the Proposed Project would, if undiscovered resources were encountered during construction, impacts would be less than significant with mitigation incorporated.
- **Population and Housing**—Population and housing impacts associated with Alternative 5 would be less than significant and the same as the Proposed Project.
- **Greenhouse Gas Emissions and Climate Change**— Although the number of residential units for this alternative would be the same as the Proposed Project, the inclusion of a solar infrastructure would result in a reduction of GHG emissions. However, it should be noted that current regulations require the use of solar infrastructure for new residential projects. As such, the Proposed Project would similarly be required to install solar panels and impacts to GHG would be similar for this alternative as compared to the Proposed Project, less than significant with mitigation incorporated.

Cumulative Impacts

In addition to the direct and indirect impacts described above, Alternative 5 would also contribute to cumulative impacts. Cumulative contributions within most subject areas are addressed through project-level mitigation. Under this alternative, 130 units would be constructed with a clustering of 25-condominium units to facilitate the efficient use of solar infrastructure. As such, cumulative impacts would be the same for all issue areas as compared to the Proposed Project. Therefore, even with mitigation, contributions to cumulative impacts related to traffic and land use cannot be mitigated to a less-than-significant level for Alternative 5.

Alternative 6—160-Unit Medium Density Residential

Alternative Characteristics

Like Alternative 5, this alternative would include 130-unit residential subdivision consisting of 105 market rate homes, with clustering of 25 condominium units to allow for the use of solar infrastructure. Similar to the Proposed Project, the 130-units under this alternative would also be of moderate and market rate housing. However, under Alternative 6, it is assumed that the owners of as many as 30 homes would ultimately obtain permission from the County to build accessory dwelling units (ADUs), consistent with recent changes to California law. Therefore, this alternative assumes the construction of 160 residential units, 30 of which would be ADUs. For the purpose of this analysis, it is assumed that ADUs would be stand-alone units (not an attached or junior ADU) and would be rented to a third party. While ADUs are typically considered affordable by design, given the Project location in an expensive real estate market, it is assumed that the 30 ADUs would not qualify as affordable.

It bears emphasis that, under this alternative, the Board of Supervisors would not approve 160 units on 160 future legal parcels. Rather, for this alternative to come to fruition, the Board would have to approve either the Proposed Project or Alternative 5, both of which would result in 130 parcels for single family dwellings, and then, after those dwellings are built, 30 owners of individual lots would have to seek ministerial approvals from the County for the construction of ADUs. Under state law, the applications for the ADUs would not be individually subject to CEQA. This alternative, then, is included in order to lay out the environmental impacts that would occur if the County approved Alternative 5 and then 30 owners of individual lots availed themselves of their rights under state law to seek approval to build 30 ADUs. Thus, this alternative does not represent a separate policy option for the Board of Supervisors, but rather assumes subsequent actions by third parties.

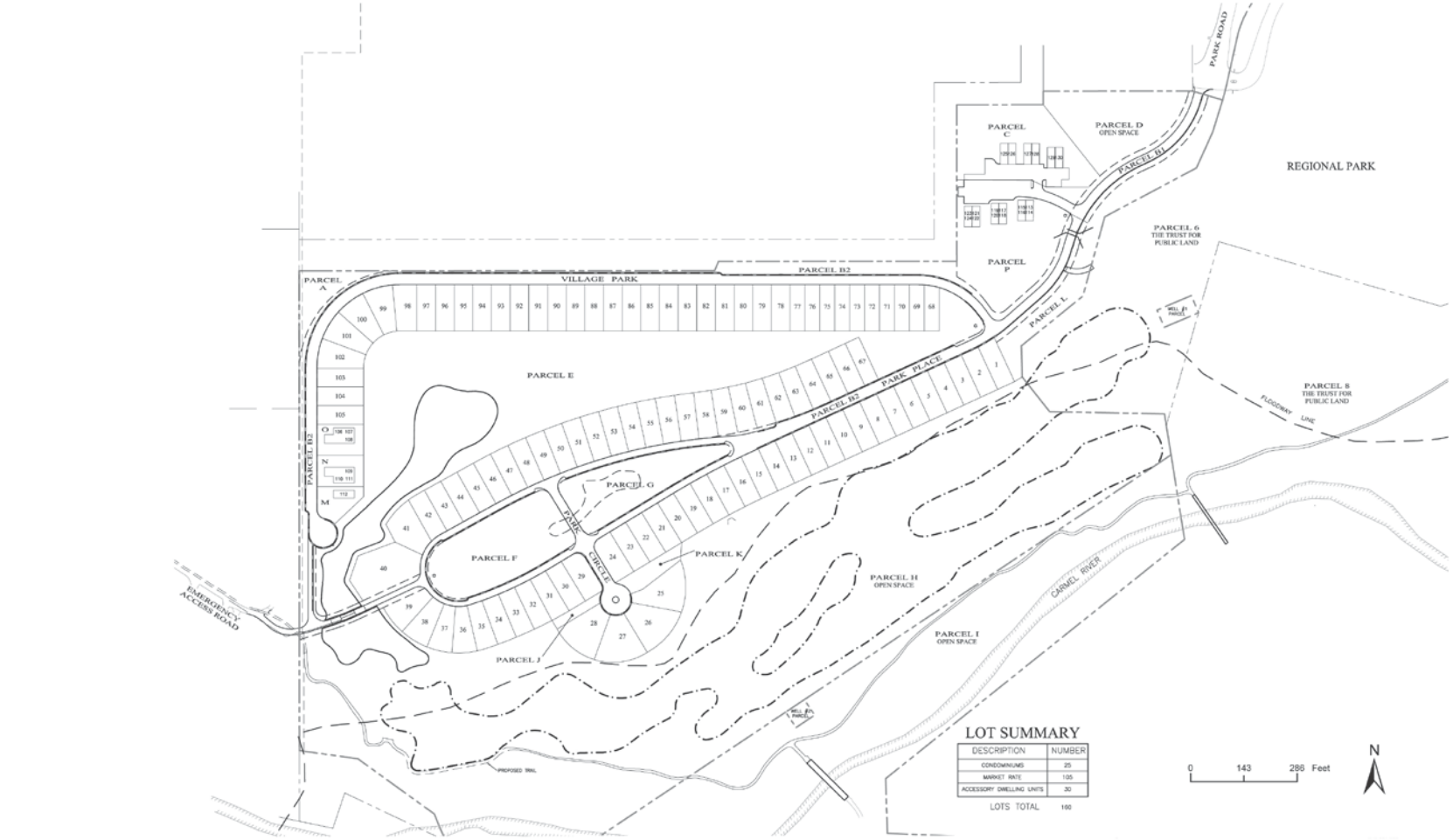
The open space area would be similar to the Proposed Project, but with a smaller habitat preserve. A sample site plan of this alternative is provided in **Figure 5-5.**

This alternative would also include raising a portion of the emergency access road west of the site, to a level that has been designed to directly address the large potential flood flow path down Rio Road from the Carmel River. This would avoid a substantial portion of the improvements cited in the County Service Area 50 Final Lower Carmel River Stormwater Management and Flood Control Report (Balance Hydrologics, Inc. 2014b). This alternative was developed to examine the impact of recent changes to California law related to accessory dwelling units.

Feasibility

Alternative 6 is technically feasible as the project site is available, utility connections and road connections are available, and water supply exists as for the Proposed Project. The cost of major infrastructure (site elevation, road connections, park improvements) would be the same as that for the Proposed Project.

Figure 5-5 Alternative 6, 160-Unit Medium Density Residential Alternative



Source: L&S Engineering and Surveying, Inc., 2020.

Ability to Meet Project Objectives

Alternative 6 would meet all the objectives of the Proposed Project, as it is infill development that integrates smart growth principles and integrates open space. Alternative 6 also includes construction of regional drainage control and traffic signalization similar to the Project. This alternative would also provide employment opportunities for the local workforce. Further, it would meet the objective in assisting the County in addressing the statewide housing through the provision of 160 moderate and market rate housing units to a greater extent than the Proposed Project.

Direct and Indirect Impact Analysis

- **Geology and Soils**—Impacts associated with geology and soils under this alternative would be slightly greater, due to a larger development footprint and 23% increase in persons exposed to geologic hazards as compared to the Proposed Project (484 as opposed to 393 residents).[12] Similar to the Project, impacts from Alternative 6 would be less than significant with mitigation.
- **Hydrology and Water Quality**—Under Alternative 6, the amount of new impervious surface areas and amount of stormwater runoff would increase as compared to the Proposed Project, given the development of 30 additional stand-alone structures. In addition, the 23% increase in residents would require more potable water from the Carmel River aquifer. As a result, impacts associated with Alternative 6 would be greater than the Proposed Project, and impacts would be significant but mitigable.
- **Biological Resources**—The development footprint for Alternative 6 would be increased when compared to the Proposed Project, given the development of 30 additional stand-alone structures. As such, this alternative would increase impacts to biological resources. In addition to increasing ground-disturbance related impacts, this alternative would result in a 23% increase in on-site population and a commensurate increase in water demand. Impacts would increase when compared to the Proposed Project, and be significant but mitigable.
- **Aesthetics**—Although a similar acreage would be developed under this alternative, the additional 30 ADUs would result in a denser development than the Proposed Project. Although Alternative 6 would result in slightly greater visual impacts on the character of the project site, these impacts would be considered less than significant with mitigation. Visual effects on scenic vistas would also be similar to the Proposed Project and less than significant with mitigation.
- **Land Use**— This alternative would be developed on the same site within a similar yet denser development footprint. Similar to the Proposed Project, impacts associated with dividing an established community would the similar to the Proposed Project, less than significant. Any residential development on this parcel would result in similar land use effects, as the area is zoned only for public and quasi-public uses and visitor accommodation. As such, Alternative 6 would not lessen or avoid land use impacts related to consistency with land use designations or zoning. Similar to the Proposed Project, while inconsistent with land use designations/zoning, this alternative would not result in significant impacts related to land use compatibility. Also, as a clustered development, this alternative would be more consistent with the general rural character of the 2013 CVMP, but again, the Proposed Project was not considered inconsistent

[12] Based on the 3.02 persons per household in Monterey County described in Chapter 2, *Project Description*. 160 units multiplied by 3.02 person per household = 484 residents associated with Alternative 6. The proposed Project assumed 393 residents, therefore 484-393 = 91 more residents.

with the 2013 CVMP rural character due to its location, setting, and design. However, similar to the Project, this alternative would not be consistent with the 50% affordable/workforce housing requirement in CV-127. This policy inconsistency would result in longer commutes by workers to the area and contribute to the physical environmental effect that is longer commute times and exasperated traffic congestion, resulting in significant and unavoidable impacts.

- **Hazards and Hazardous Materials**—Due to a 23% increase in residents under Alternative 6, additional environmental and worker exposure to risk from hazards and hazardous materials as compared to the Proposed Project would result. However, similar to the Proposed Project these impacts would be mitigated by measures included in Section 3.6, *Hazards and Hazardous Materials*.

- **Transportation and Traffic**—The Proposed Project would result in 911 average daily trips. Alternative 6 would result in a 23% increase in residents. Assuming that average daily trips would reduce commensurately, Alternative 6 would generate 1,121 average daily trips. More trips along Rio Road, Carmel Valley Road and state routes would also lead to an increase in LOS impacts. As a result, impacts would be increased as compared to the Project and would remain significant and unavoidable.

- **Air Quality**— Alternative 6 would result in a 23% increase in population and vehicle trips generated. Opportunities for non-vehicular travel would be the same as for the Proposed Project. In addition, this alternative would result in slightly greater construction related emissions, due to the addition of 30 ADUs and a denser development footprint. As such, air quality impacts would be slightly greater than the Proposed Project, and similarly less than significant with mitigation.

- **Noise**—Due to the 23% increase in number of residents and associated trips under this alternative, noise effects along Rio Road to the west of the project site would also be slightly greater. In addition, exposure of single-family residences to noise from the batting area and baseball fields as well as noise generated during construction would still potentially be significant. As such, noise impacts for Alternative 6 would be slightly greater than those for the Proposed Project and would remain less than significant with mitigation, as for the Proposed Project.

- **Public Services, Recreation, and Utilitie**s— The 23% increase in residents (or 91 more residents than the Proposed Project) under this alternative would increase demands on public services, recreation, and utilities, including potable water, emergency services, and schools. Significant impacts due to water supply and demand identified under the Proposed Project would still be applicable to Alternative 6, although these impacts associated with water use would still be less than the baseline use of a golf course. Therefore, impacts would be increased under Alternative 6 but would remain less than significant with mitigation incorporated, as they are for the Proposed Project. All other impacts related public services, recreation and utilities would be increased compared to the Proposed Project, but would remain less than significant.

- **Cultural Resources**—This alternative would be located on the same site but would result in a denser development footprint than the Proposed Project, due to the increase in units. Therefore, this alternative would have increased potential to encounter undiscovered resources during construction as compared to the Proposed Project. Impacts would be greater than the Proposed Project but could still be mitigated to less than significant.

- **Population and Housing**—Similar to the Proposed Project, construction of 160 units would induce population growth by creating housing opportunities in excess of what is currently available. However, this increase would not be substantially above the level of development currently projected by AMBAG. Population and housing impacts associated with Alternative 6 would increase by 23%. Although this alternative would result 30 more units, the additional 30 ADUs developed under this alternative would not count toward the Carmel Valley unit cap outlined in CVMP Policy CV-1.6. As such, this alternative would utilize 130 of the 190 units allowed in Carmel Valley pursuant to CVMP Policy CV-1.6, as would the Proposed Project. As such, this alternative would not result in a higher level of housing or population growth than anticipated in the adopted CVMP. Therefore, the increase in population or housing under this alternative would not be significant. Effects on population or housing would be greater under Alternative 6 as compared to the Proposed Project, but would remain less than significant.
- **Greenhouse Gas Emissions and Climate Change**— Although increased residential development would result in a 23% increase in population and associated vehicle trips generated, which would increase GHG emissions, the inclusion of a solar infrastructure would help offset some GHG emissions. However, it should be noted that current regulations require the use of solar infrastructure for new residential projects. As such, the Proposed Project would similarly be required to install solar panels. Because this alternative would generate more operational emissions, impacts to GHG would be slightly greater, but mitigated to less than significant for this alternative as compared to the Proposed Project.

Cumulative Impacts

In addition to the direct and indirect impacts described above, Alternative 6 would also contribute to cumulative impacts. Cumulative contributions within most subject areas are addressed through project-level mitigation. Similar to Alternative 5, Alternative 6 includes development of a 130-unit residential subdivision with clustering of 25 condominium units to allow for the use of solar infrastructure. However, under Alternative 6, it is assumed that the owners of as many as 30 homes would ultimately obtain permission from the County to build ADUs. As such, cumulative impacts would be greater for most issue areas as compared to the Proposed Project. Therefore, even with mitigation, contributions to cumulative impacts related to traffic and land use cannot be mitigated to a less-than-significant level for Alternative 6.

Environmentally Superior Alternative

All the environmental impacts of the Proposed Project with a comparison to Alternatives 1 through Alternative 6 are presented in **Table 5-1**, which shows whether each alternative's environmental impact is greater, lesser, or similar to the Proposed Project for each issue area. Based on this comparison, Alternative 1 (No Project/five estate homes) would reduce all environmental impacts, compared to the Proposed Project and Alternatives 2 through 6. This is because the No Project Alternative would greatly reduce the physical environmental effects of development on the site. It would also avoid inconsistency with the 2013 CVMP land use designations and zone, and it would greatly reduce the indirect effects related to traffic generation. However, it would not implement affordable housing policies intended for the Special Treatment Area location.

If the environmentally superior alternative is the No Project alternative, CEQA requires the EIR shall also identify an environmentally superior alternative among the other alternatives (*CEQA Guidelines*

Section 15126.6(e)(2)). Therefore, the rest of this discussion focuses on the Proposed Project and Alternatives 2 through 6.

As described above and summarized in **Table 5-1**, of the action alternatives, the 40-Unit Low Density Alternative (Alternative 4) would be the environmentally superior alternative because it would result in lower impacts for all issues areas, except for land use where impacts would be similar to the Proposed Project.

Therefore, in accordance with CEQA Guidelines Section 15126.6(e), Alternative 4 is identified as the "environmentally superior alternative." Alternative 4 would also meet all project objectives, but not to the same extent as the Proposed Project.

Table 5-1 Impact Comparison of Alternatives

Issue Area	Project Impact	Alternative 1: No Project	Alternative 2: Hotel Alternative	Alternative 3: 90-Unit Low Density Alternative	Alternative 4: 40-Unit Low Density Alternative	Alternative 5: Energy Efficient Clustered Residential Alternative	Alternative 6: 160-Unit Medium Density Residential Alternative
Geology and Soils	Less than Significant with Mitigation Incorporated	< (Less than Significant with Mitigation Incorporated)	> (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	= (Less than Significant with Mitigation Incorporated)	> (Less than Significant with Mitigation Incorporated)
Hydrology and Water Quality	Less than Significant with Mitigation Incorporated	< (Less than Significant with Mitigation Incorporated)	> (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	= (Less than Significant with Mitigation Incorporated)	> (Less than Significant with Mitigation Incorporated)
Biological Resources	Less than Significant with Mitigation Incorporated	< (Less than Significant with Mitigation Incorporated)	= (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	= (Less than Significant with Mitigation Incorporated)	= (Less than Significant with Mitigation Incorporated)
Aesthetics	Less than Significant with Mitigation Incorporated	< (Less than Significant)	> (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	> (Less than Significant with Mitigation Incorporated)
Land Use	Significant and Unavoidable	< (No Impact)	< (Less than Significant)	= (Significant and Unavoidable)	= (Significant and Unavoidable)	= (Significant and Unavoidable)	= (Significant and Unavoidable)
Hazards and Hazardous Materials	Less than Significant with Mitigation Incorporated	< (Less than Significant with Mitigation Incorporated)	> (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	= (Less than Significant with Mitigation Incorporated)	> Less than Significant with Mitigation Incorporated

Issue Area	Project Impact	Alternative 1: No Project	Alternative 2: Hotel Alternative	Alternative 3: 90-Unit Low Density Alternative	Alternative 4: 40-Unit Low Density Alternative	Alternative 5: Energy Efficient Clustered Residential Alternative	Alternative 6: 160-Unit Medium Density Residential Alternative
Transportation and Traffic	Significant and Unavoidable	< (Significant and Unavoidable)	< (Significant and Unavoidable)	< (Significant and Unavoidable)	< (Significant and Unavoidable)	= (Significant and Unavoidable)	> (Significant and Unavoidable)
Air Quality	Less than Significant with Mitigation Incorporated	< (Less than Significant)	> (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	< (Less than Significant)	= (Less than Significant with Mitigation Incorporated)	> (Less than Significant with Mitigation Incorporated)
Noise	Less Than Significant with Mitigation Incorporated	< (Less than Significant with Mitigation Incorporated)	> (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	= (Less than Significant with Mitigation Incorporated)	> (Less than Significant with Mitigation Incorporated)
Public Services, Recreation, and Utilities	Less Than Significant with Mitigation Incorporated	< (Less than Significant)	> for water supply impacts (Less than Significant with Mitigation Incorporated) < for all other impacts (Less than Significant)	< (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	= (Less than Significant with Mitigation Incorporated)	> (Less than Significant with Mitigation Incorporated)
Cultural Resources	Less than Significant with Mitigation Incorporated	< (Less than Significant with Mitigation Incorporated)	= (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	= (Less than Significant with Mitigation Incorporated)	> (Less than Significant with Mitigation Incorporated)

Issue Area	Project Impact	Alternative 1: No Project	Alternative 2: Hotel Alternative	Alternative 3: 90-Unit Low Density Alternative	Alternative 4: 40-Unit Low Density Alternative	Alternative 5: Energy Efficient Clustered Residential Alternative	Alternative 6: 160-Unit Medium Density Residential Alternative
Population and Housing	Less than Significant	< (Less than Significant)	< (Less than Significant)	< (Less than Significant)	< (Less than Significant)	= (Less than Significant)	> (Less than Significant)
Greenhouse Gas Emissions and Climate Change	Less than Significant with Mitigation Incorporated	< for operational emissions (Less than Significant) < for construction emissions (Less than Significant with Mitigation Incorporated)	> (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	< (Less than Significant with Mitigation Incorporated)	= (Less than Significant with Mitigation Incorporated)	> (Less than Significant with Mitigation Incorporated)

< Impact would be lower (better) than that of the Proposed Project

> Impact would be greater (worse) than that of the Proposed Project

= Impact would be the same as the Proposed Project

1

Chapter 6
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