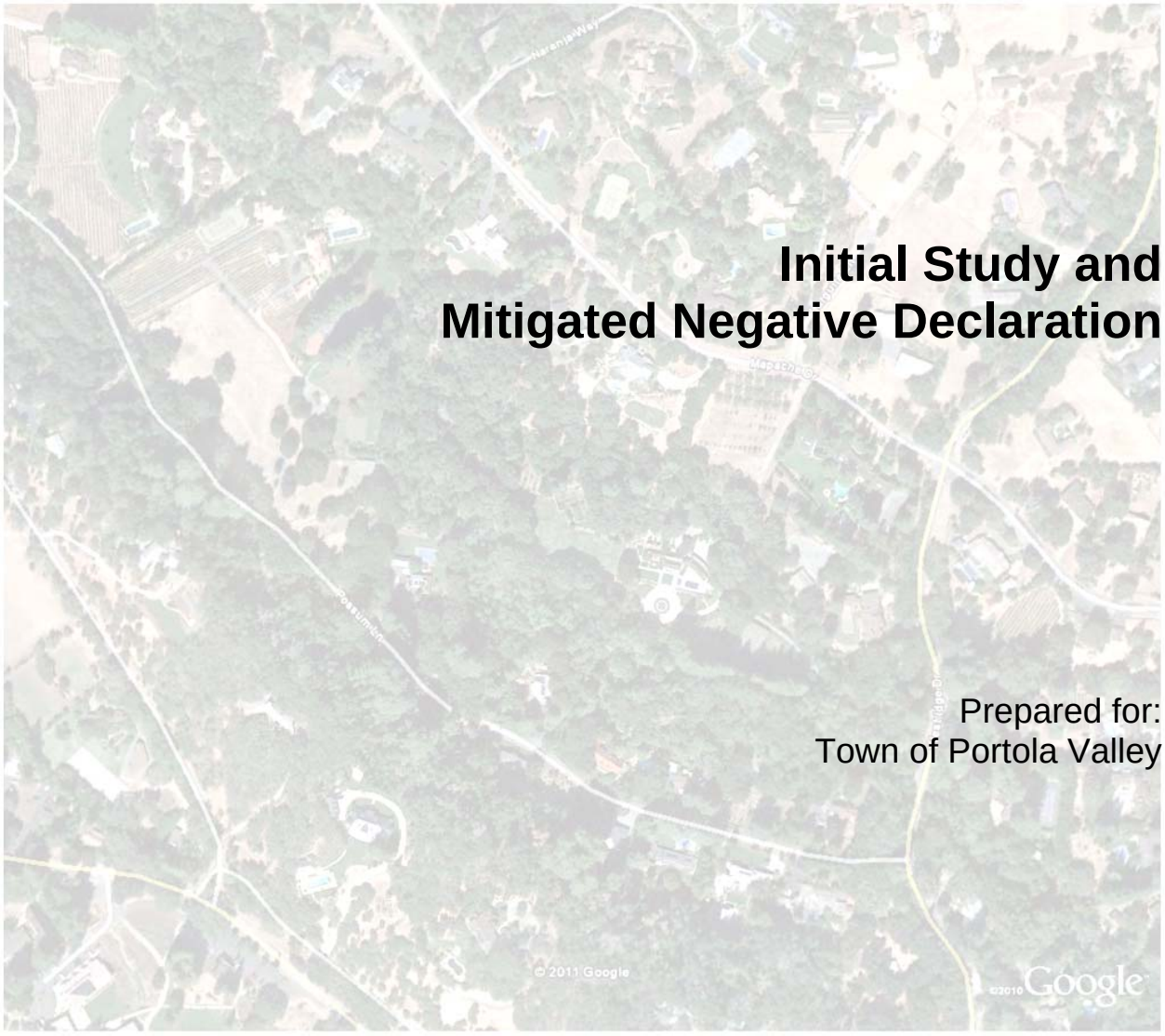
# 1260 Westridge Drive
# Shorenstein Subdivision and
# Planned Unit Development Project
# Portola Valley, CA




## Initial Study and
## Mitigated Negative Declaration

Prepared for:
Town of Portola Valley

May 2011

# 1260 Westridge Drive
# Shorenstein Subdivision and
# Planned Unit Development Project
# Portola Valley, CA

## Initial Study and
## Mitigated Negative Declaration

Prepared for:
Town of Portola Valley
In support of the Applications
by Shorenstein Partners, LLC for
Subdivision and PUD Approval

Prepared by:
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May 2011

# Mitigated Negative Declaration

Pursuant to the California State Public Resources Code and the California Environmental Quality Act (CEQA) Guidelines, the Lead Agency, the Town of Portola Valley, presents a Negative Declaration for the Shorenstein Subdivision and Planned Unit Development Project located in the Town of Portola Valley off of Westridge Drive in San Mateo, California.

## PROJECT OVERVIEW

The project is a 3 lot subdivision of an 11.6 acre parcel at 1260 Westridge Drive in Portola Valley, San Mateo County, California. The parcel currently contains an estate home. The applicant plans to sell the parcel, and the proposed subdivision is intended to provide a future owner with the option to subdivide the parcel and either sell the parcels or use the parcels to develop additional estate uses (guest house or recreational uses).

## FINDINGS

The analysis in this Initial Study had determined that the subdivision and subsequent development of 3 homes on the project site will not result in significant environmental impacts if mitigation is incorporated into the project. All of the mitigation measures from this Initial Study have been incorporated into the PUD Statement for the project.

# SHORENSTEIN SUBDIVISION AND PLANNED UNIT DEVELOPMENT PROJECT INITIAL STUDY & MITIGATED NEGATIVE DECLARATION

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# *1.0 Introduction*

## 1.1 Summary

Shorenstein Company, LLC (the applicant) has applied to the Town of Portola Valley for approval of a tentative map and Planned Unit Development (PUD) for a three lot subdivision of an 11.6 acre parcel at 1260 Westridge Drive, Portola Valley, San Mateo County, California (Assessor's Parcel Number 077-050-200).

The applicant intends to sell the property. The existing development on the single parcel exceeds the Town's lot coverage restrictions and no additional development is allowed on the parcel. The project objective is to provide a buyer with the option to subdivide the property, which would allow additional development on the newly created parcels that would facilitate the site's development as an estate. It could alternatively result in the development of two additional home sites on two lots under separate ownership. Each parcel must have a primary use, such as a dwelling unit. A parcel cannot be used solely for an accessory structure such as a stable, pool or tennis court unless it includes a dwelling unit.

The Applicant intends to obtain approval for the Tentative Map and PUD permit and complete the environmental review process under the California Environmental Quality Act (CEQA) for the subdivision, but does not intend to record the approved subdivision map immediately. The Applicant would leave that decision to the next property owner who may or may not want to record the map. The new owner of the property would have the ability to file the approved subdivision map and develop the two new parcels as allowed under the PUD permit, or to let the map expire and keep the property as a single parcel, in which case the PUD permit would also expire. Demolition or significant remodeling of the existing house is not considered in this Initial Study. Such action would require environmental review if it is proposed in the future.

This Initial Study/Mitigated Negative Declaration analyzes the "worst case" development scenario of construction of two additional homes, and thus provides an assessment of the impacts of the most intensive development of the parcel anticipated at this time. If estate uses are chosen instead of full development, the buildings would be restricted to the same square footage and lot coverage requirements that a residence would be, but would more likely be smaller and have less intensive use, so would pose fewer impacts related to visual resources, noise and traffic than two additional homes would.

Because there are no specific development plans to analyze at this time, this CEQA document cannot anticipate all possible development scenarios. This Initial Study/Mitigated Negative Declaration should be reviewed at the time a specific proposal is submitted to ensure that the environmental analysis has anticipated the potential impacts and has addressed the impact in this analysis. If a potential impact is not addressed in this document, additional CEQA analysis may need to be prepared.

This document has been prepared in accordance with CEQA, Public Resources Code §21000 *et seq*., and the State CEQA Guidelines, California Code of Regulations (CCR) §15000 *et seq*. According to CEQA Guidelines Section 15070, a public agency shall prepare a proposed Negative Declaration or a Mitigated Negative Declaration when:

1. The Initial Study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or

2. The Initial Study identifies potentially significant effects, but:

- Revisions in the project plans made by, or agreed to by the applicant before a proposed Mitigated Negative Declaration and Initial Study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

- There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

This Initial Study determines whether the project will have a significant environmental effect based on Thresholds of Significance identified in the CEQA Guidelines (Appendix G), or in federal, state and local policies, regulations or practices. A project that exceeds a threshold of significance or is not in conformance with adopted policies and regulations may have a significant impact that requires mitigation. A project may have effects that are below the thresholds of significance but still have noticeable effects on adjacent land uses.

In summary, this project could pose significant geotechnical, biological, noise, visual, and cultural resources impacts. However, all of the potential impacts can be mitigated to less than significant levels. The mitigation measures have been incorporated into the PUD statement for the project.

## 1.2 Lead Agency

The Lead Agency is the public agency with principal responsibility for carrying out or approving the project (CEQA Guidelines §15367). The Lead Agency for the project is the Town of Portola Valley. The contact person for the Lead Agency regarding the project is:

Tom Vlasic, Portola Valley Town Planner
Portola Valley Town Hall
765 Portola Road
Portola Valley, CA 94028
Email: vlasic@spangleassociates.com
Phone: 650-324-8600

## 1.3 Document Organization

This Initial Study is organized as follows:

- *Chapter 1.0 Introduction* explains the purpose of this Initial Study and the organization of the document.

- *Chapter 2.0 Project Description* describes the project location, existing site conditions, history and objectives, the proposed subdivision, development options and restrictions, and the permits and approvals needed for the project. The chapter also identifies the Best Management Practices (BMPs) that have been incorporated into the project to reduce environmental effects.

- *Chapter 3.0 Environmental Checklist* includes the CEQA Guidelines Appendix G Checklist to identify the potential environmental impacts of the project, the significance of each impact, a discussion of each checklist response, and the Mandatory Findings of Significance.

- *Chapter 4.0 References* identifies the sources used in the preparation of the Initial Study.

- *Chapter 5.0 Report Preparers* lists the authors of this report.

## 1.4 Definitions

*Planned Unit Development* – A zoning classification that allows flexibility in the design of a subdivision; Planned Unit Development zones generally set an overall density limit for the entire subdivision, allowing flexibility in how the dwelling units are placed (e.g., clustering).

*Preliminary Parcel Map* – A preliminary parcel map is prepared and submitted for review before the filing of a tentative map. The preliminary parcel map shows information including lot lines and lot acreage, existing and proposed streets, trails, paths, conservation easements, areas proposed for public use, water supply and sewage disposal and any information the subdivider deems sufficient to describe the essential features of the property and the proposed contemplated uses and the design of the developments.

*Subdivision Map* – A map showing the proposed division of any improved or unimproved land with an Assessor's Parcel Number for the purpose of sale, lease or financing, whether immediate or future**.** The map must be recorded before a sale can occur.

*Tentative Map* – A map made for the purpose of showing the design and improvement of a proposed subdivision and the existing conditions in and around it. A tentative map requires the applicant to conform to regulations in effect at the time the tentative map is filed. This Initial Study refers to the approved tentative map (prior to recording) as the approved subdivision map.

*Final Map or Parcel Map* – When dividing property into two or more parcels, a Parcel Map or Final Map is required following Tentative Map approval in order to complete the subdivision. A Final Map is required for all subdivisions creating 5 or more parcels; a Parcel Map is required for 4 or fewer parcels. Only after a Parcel Map or Final Map is recorded can the newly created lots be sold. The Shorenstein 3-lot subdivision would have a Parcel Map.

# *2.0 Project Description*

This chapter describes the project location, existing site conditions, project objectives, the proposed subdivision and subsequent development opportunities of each new lot, and the permits and approvals needed for the project. The chapter also identifies the Best Management Practices (BMPs) that have been incorporated into the project that would reduce potentially significant impacts to less than significant levels.

Shorenstein Company, LLC (the applicant) has applied to the Town of Portola Valley (Town) for a subdivision of land and a tentative map approval for a three-lot Planned Unit Development (PUD) subdivision of the 11.6 acre parcel located at 1260 Westridge Drive, Portola Valley, San Mateo County, California (Assessor Parcel Number (APN) 077-050-200).

The current owner of the parcel intends to sell the property and has requested approval of a Tentative Map and PUD permit application to subdivide the single lot into three lots so that the lots could be developed with homes or estate type uses.

The Town will process this project as a Planned Unit Development in order to have flexibility in enforcing the requirements of the Town's codes and regulations and minimizing environmental impacts. The Planned Unit Development allows for flexibility in design (such as clustering) and would minimize impacts associated with necessary infrastructure improvements.

## 2.1 Project Location

The project is located at 1260 Westridge Drive in the Town of Portola Valley, San Mateo County, California (37°23'03" North latitude and 122°13'31" West longitude) (see Figure 1 Regional Location and Figure 2 Project Site and Vicinity). Portola Valley is a rural residential community.

## 2.2 Existing Site Conditions

The project site is an 11.6 acre residential parcel which consists of a long, gently sloping lot that contains existing residential improvements as well as natural and landscaped vegetation (Figure 3 Aerial Photograph of Project Site). The parcel is bordered to the north and east by an unnamed natural drainage and residential lots on Mapache Drive, to the southeast by residences on Westridge Drive, to the southwest by Corte Madera Creek and residential lots on Possum Lane and to the north by the Hidden Valley subdivision (Woodside). Thus the parcel is surrounded on three sides by natural drainages and residential uses (see Figure 3), and on one side by Westridge Drive, an arterial street.

The parcel has considerable tree cover, vegetation screening along most of its boundaries, and has an average slope of 13%. The site contains 256 trees (oak, bay, madrone, redwood, fir and maple) that qualify as "significant" trees under Portola Valley ordinance.

The existing structures are concentrated near the center of the parcel. A gate at Westridge Drive regulates access to the parcel. An approximately 340-foot long driveway extends from the gate to an existing residence where there is a fountain and a circular driveway area in front of the house. The paved driveway splits in two directions within about 200 feet of the entrance gate, and is paved in one direction and graveled in the other. There is a tennis court and lawn area between the house and where the driveway splits and the partial two-story[1]

[1] The front section of the house is two-story and the larger back section is one-story.

residence is surrounded by a pool, patios, and landscaping. A garden, meadow and natural vegetation occur between the house and the northerly tip of the parcel, where the unnamed drainage enters Corte Madera Creek. Ancillary structures near the main house include a guest house, a greenhouse, and sheds. The site perimeter is variously fenced with old chainlink, two strand barbed wire, and solid wood fencing. A dirt path adjacent to the perimeter fencing extends around three sides of the northern portion of the property.

The Town of Portola Valley has an ordinance that requires a 55-foot setback from the top of a creek bank, and strictly controls activities within the setback. Portions of the existing driveway, two water tanks, two sheds and perimeter fencing fall within this setback and are not consistent with setback requirements. The water tanks, however, pre-dated the subdivision ordinance and are a legal, non-conforming use. Additionally, there is a 50-foot front yard set back from Westridge Drive and the existing gate is not in compliance with this setback requirement. Existing development on the property is consistent with the Town's side yard setback requirement (20 feet).

The Westridge Trail, an equestrian and pedestrian trail on Westridge Drive, crosses the driveway entrance outside of the existing entrance gate.

There are two storm drain easements on the property. One is on the south side of the driveway adjacent to the Westridge Road right-of-way and the other is along the unnamed drainage between the house and Mapache Drive.

*General Plan and Zoning Designation*

The parcel has a General Plan designation of Conservation Residential which requires that each lot have an area of 2 to 4 acres per dwelling unit. Conservation Residential is assigned to less steep land close to community and circulation facilities and existing development.

The parcel is zoned Residential-Estate with a 2.5 acre minimum parcel size and a slope-density requirement of 2.5 acres per dwelling unit (R-E/2.5A/SD2.5). The Zoning Ordinance (section 18.50.040 - Slope density (S-D) combining districts) states that for areas with an average slope of 15% or less (this parcel has an average slope of 13%), the gross area acres per dwelling unit is 2 acres and the required minimum parcel area is 2.5 acres.

*Existing Topography*

Topography of the site is highest by Westridge Drive and slopes to the north end of the parcel (Figure 4, Topographic Survey Sheets 1-6). The elevation at Westridge Drive is roughly 443 feet above Mean Sea Level (MSL), the elevation around the tennis court is roughly 435 feet MSL, the elevation at the house is about 431 feet MSL and the elevation at the northern end of the parcel is 414 feet MSL. The average slope of the entire parcel is 13%, but each lot also has its own average slope: Lot A is 14.5%, Lot B is 11.2%, and Lot C is 16.5%.

*Existing Improvements*

The existing improvements at the site include a partial two-story residence, a caretaker's cottage, tennis court, accessory buildings, a carport, driveways, entrance gate, fences, fountains, pool, decking, tennis court, two water tanks, exterior lighting, irrigation, and septic leach field. The total floor area of the existing residence and accessory structures exceeds the allowable floor area limits for this parcel under current Town regulations but would be allowed to

remain under the project proposal as long as the approved subdivision map is not recorded. The total floor area of all structures on site is 10,565 sq.ft.

The square footage of existing development and impervious surfaces is shown in Table 2-1.

**Table 2-1. Square Footage of Existing Development and Impervious Surfaces**

| Existing Development/Improvements | Square Footage |
|---|---|
| **FLOOR AREA** | |
| House | 8,280 |
| Guest House | 950 |
| Carport | 250 |
| Pump House | 35 |
| Utility Room/Shed | 1,050 |
| **Total** | **10,565** |
| | |
| **IMPERVIOUS SURFACE** | |
| Driveway (paved portion) | 11,560 |
| Fountain, Pool | 1,430 |
| Patios | 5,930 |
| Greenhouse | 500 |
| Tennis Court | 7,010 |
| **Total** | **26,430** |

*Notes: The 11,560 sf of the paved driveway includes 3,380 sf on Lot C and 8,180 sf on Lot B.*

Hedges and a row of planted redwood and pine trees line the driveway. The tennis court is approximately 7,010 sq. ft. in area and has a drainage system that directs storm water runoff to the lawn area surrounding the court. A portion of the existing driveway is paved and is counted toward the existing on-site impervious surface while another portion of the driveway is gravel (from the driveway split to the entrance fountain circular drive) and is not counted as an impervious surface.

There are certain existing improvements associated with the residence that are not in compliance with current Town ordinances. These include the perimeter fencing and two water tanks that are within the 55-foot creek setback, the entrance gate which is within the 50-foot front yard setback, landscape lighting that is pointed upward, the square footage of the existing house and associated buildings, and two sheds that are within the 20-foot setback line from the property boundary on proposed Lot B. Except for the square footage of the existing house and associated buildings and the water tanks, these non-complying conditions could be required to be brought into compliance at the time the approved subdivision map is recorded. If the new owners choose to keep the existing house and the water tanks, they can remain in the existing location as a legal non-conforming use. If the future owners choose to demolish or significantly remodel the existing house, or move or increase the size of the water tanks, they will have to apply to the Town for a permit and follow Town requirements, including compliance with allowable square footage and setbacks.

Water to the existing residence is provided by California Water Service. The existing house uses a septic system.

*Existing FEMA Flood Boundary*

The Flood Emergency Management Agency (FEMA) has mapped a 100-year flood boundary across a significant portion of the parcel. The applicant is currently working with the Town Public Works Director to request a Letter of Map Revision to FEMA based on the site topographic survey. The site survey takes into account site details which the FEMA map did not, and finds that the actual flood boundary is on the north end of Lot A, near the confluence of the unnamed drainage and Corte Madera Creek. If the Letter of Map Revision is accepted, no structures (existing or proposed) will be within the 100-year flood zone.

## 2.3 Project Objective

The Applicant intends to sell the property. The existing development on the single parcel exceeds the Town's lot coverage restrictions and no additional development is allowed on the parcel. The project objective is to provide a buyer with the option to subdivide the property. A subdivision would allow additional development on each of the two new parcels that could facilitate the parcel's development as an estate, or could result in the development of two additional home sites on two lots under separate ownership.

The Applicant intends to obtain approval for the Tentative Map and PUD permit and complete the environmental review process under CEQA for the subdivision, but does not intend to record the approved subdivision map immediately. The Applicant would leave that decision to the next property owner who may or may not want to record the map. The new owner of the property would have the ability to record the approved subdivision map and develop the two new parcels as allowed under the PUD permit, or to let the approved subdivision map expire and keep the property as a single parcel. The tentative map is valid for two years after its initial approval by the Town (called the approved subdivision map in this report), and subject to further Town approval can be extended for up to three more years to a total of five years before it expires. The rights and obligations granted to the current owner by the approved subdivision map would be binding on future owners of the parcel(s).

As noted above, the two new parcels could be developed as new home sites, or could be used for accessory structures to the main house, however, in accordance with Town zoning code section 18.12, each parcel must contain a principal use (such as a single-family residence). The environmental analysis assumes development of two additional homes, and thus provides an assessment of the impacts of the most intensive development (worst case) of the parcel anticipated at this time. If estate uses are chosen they would be restricted to the same square footage and lot coverage requirements that a residence would be, but are more likely to have a smaller footprint and less intensive use and would likely pose fewer impacts related to visual resources, noise and traffic than two additional homes would. These estate uses would still be required to meet the definition of a principal use, thus any accessory structures on Lots A or C will include a dwelling unit.

Demolition or substantial remodeling of the existing house is not proposed as part of this project. If demolition or remodeling of the existing house is proposed in the future that action would be subject to a separate CEQA analysis and would be subject to separate permitting through the Town.

Any development of the site must be consistent with the requirements of the approved subdivision map, PUD permit and Town regulations.

## 2.4 Preliminary Parcel Map

The project proposal calls for subdividing the 11.6 acre parcel into three lots called Lots A, B, and C. Lot A would be at the end of the property farthest from the entrance, Lot B would contain the existing residence, and Lot C would be located at the property entrance on Westridge Drive (See Figure 5 Sheets 1-3 -Preliminary Parcel Map).

In certain locations the existing driveway is located within the currently defined 55-ft top of creekbank setback. The proposed driveway will also be within this setback. The Town Geologist has identified bank instability along Corte Madera Creek that could eventually affect the stability of the driveway. Further geotechnical study done by Murray Engineers (2011a and 2011b; also see Appendix C), indicates that the driveway is outside of the estimated failure zone and driveway stability is not an issue.

**Table 2-2. Lot Information**

| | Lot A | Lot B | Lot C | Combined Total |
|---|---|---|---|---|
| Zoning District | R-E/2.5a/SD-2.5 | R-E/2.5a/SD-2.5 | R-E/2.5a/SD-2.5 | |
| Geologic Zone | Sun | Sun | Sun | na |
| Flood Zone | Zones C and A | Zones C and A | Zones C and A | na |
| Parcel Area (Gross) | 4.38 acres | 3.97 acres | 3.25 acres | 11.60 acres |
| Parcel Area(Net)[1] | 4.38 acres | 3.78 acres | 2.93 acres | 11.09 acres |
| Driveway Easement | 0 sq. ft. | 7,937 sq. ft. | 14,144 sq. ft. | 22,081 sq. ft. |
| Revised Flood Zone Area | 82,715 sq. ft.<br>1.90 acres | 29,676 sq. ft.<br>0.68 acre | 35,819 sq. ft.<br>0.82 acre | 148,210 sq. ft.<br>3.40 acres |
| Average Slope | 14.5% | 11.2% | 16.5% | 13% |
| Adjusted Parcel[2] | 3.11 acres | 3.23 acres | 2.28 acres | 8.62 acres |
| Adjusted Maximum Floor area (AMFA) | 7,682 sq. ft. | 7,715 sq. ft. | 7,290 sq. ft. | 22,687 sq. ft. |
| 85% of AMFA[3] | 6,350 sq. ft. | 6,558 sq. ft. | 6,197 sq. ft. | 19,105 sq. ft. |
| Single story (18 ft) Bonus 5% AMFA | 8,066 sq. ft | 8,101 sq. ft. | 7,655 sq. ft. | 23,822 sq. ft. |
| 85% of bonus 5% AMFA | 6,856 sq. ft. | 6,886 sq. ft. | 6,507 sq. ft. | 20,249 sq. ft. |
| Adjusted Maximum Impervious Area (AMIS) | 13,907 sq. ft. | 14,050 sq. ft. | 12,365 sq. ft. | 40,322 sq. ft. |

*Source: C. Borck, Town of Portola Valley; J Lea, Lea and Braze Engineering*
*Notes:*
*[1:] Net parcel size is the gross parcel size minus driveway easements*
*[2:] Adjusted Parcel is the area of the parcels available for development after excluding easements and slope.*
*[3:] 85% of Adjusted Maximum Floor Area represents the allowable square footage for the main residence based on Town ordinance.*

Under the Town's code:

- Floor Area for residential uses is the total floor area as measured from exterior walls, for all buildings on a parcel.
- Impervious Surfaces are surfaces that will not allow or will greatly reduce the penetration of water into the ground. Impervious surfaces include: concrete; asphalt; bricks; paving

stones; swimming pools; turf stone; plastic sheeting; compacted gravel and rock areas; corrals and similar surfaces.

- The allowed floor area for a parcel is based upon the acreage, average slope, geologic or flood zone areas and zoning district. The 85% calculation for Floor Area regulates the mass of the residence including first floor/second floor and required off street parking (two car attached/detached carport or garage).

The parcel already contains buildings with a floor area of 10,565 sq. ft., and impervious surface area of 29,480, which exceeds the amount allowed for a single parcel. These improvements will mostly be on proposed Lot B; the tennis court, part of the driveway, and the greenhouse will be on proposed Lot C. The applicant has requested that the eventual development of the subdivision be considered as a total aggregate over the three lots, rather than a strict allowance for each lot. There are several potential development scenarios, including a larger than allowable house on one of the lots and smaller structures than would otherwise be allowed on the other lots (various combinations could occur); or development of each lot at the full amount allowed (the existing coverage on Lot B would have to be modified). As noted in the PUD Statement, whenever development of either lots A or C is proposed, the maximum floor area and impervious surface amounts allowed on those lots shall be not more than is allowed under ordinances then in effect, reduced by one-half the excess amounts of floor area and impervious surfaces then on Lot B as compared to the amounts allowable on Lot B under Town ordinances then in effect. If the existing house is replaced or remodeled, it will have to comply with Town ordinances, including a smaller floor area. If the house is damaged, however, it could be repaired and maintain the existing size, according to Town ordinances currently in effect.

*Lot A*

Lot A is the lot farthest away from Westridge Drive. It is bordered on the west by Corte Madera Creek and residential uses (Possum Lane and vicinity and Hidden Valley/Family Farm subdivision), and on the east by an unnamed drainage channel and residential uses fronting Mapache Drive. It abuts Lot B. Lot A is currently undeveloped, and contains natural vegetation, landscaped areas, two water tanks, and an unpaved perimeter road. The proposed parcel would be 4.38 acres in size (gross) and would have an average slope of 14.5%. Development on this parcel would be constrained by the 55-foot setback requirement from the top of creek bank as well as the 50-foot setback requirement from the front property line, which is the common boundary with Lot B (see Figure 5, Sheet 2). No development can occur in these setbacks. In addition, no vegetation clearing is allowed in the 55-foot setback from the top of the creek bank.

The parcel would also be constrained by the proposed revised FEMA 100-year flood boundary (Figure 5, sheet 2). The 100-year flood boundary delineates FEMA Flood Zone A. Areas classified as Zone A are considered to be a Significant Flood Hazard Area (SFHA). Although development that is elevated above the flood height could occur in this area, the building envelope on Lot A is located outside the revised 100-year flood boundary (see Figure 5, sheet 2).

The Applicant has shown a maximum house footprint of 4,500 sq. ft on Lot A, with impervious surfaces covering 13,510 sq. ft (gravel service road of 8,980 sq. ft. plus driveway of 4,530 sq. ft.). The driveway to serve Lot A would be extended from the existing driveway on proposed Lot B and would terminate in a turnaround in front of the house large enough to provide a turning radius for emergency response vehicles, such as a fire truck. The house could have walkways, patios and landscaping not shown on the Preliminary Parcel Map but could not exceed the proposed amount of impervious surface.

Two eighty foot groundwater wells and associated water tanks exist on Lot A within the 55-foot top-of-creekbank setback). The water from the tanks is used for irrigation during the summer. Ownership of the tanks and use of water in the tanks will be determined if and when there are development plans.

*Lot B*

Lot B, lies between Lots A and C, and is bordered by the unnamed drainage and residential uses to the east and by Corte Madera Creek and residential uses to the west. The parcel is landscaped except for the areas along Corte Madera Creek. Elevations on Lot B range from about 435 feet MSL at the boundary with Lot C to about 430 feet MSL at the boundary with Lot A.

Lot B has a 55-foot creekbank setback restriction along the boundary with Corte Madera Creek, a 50-foot front yard setback along the boundary with Lot C, a 20-foot setback from the property line with Lot A, and 20-foot side yard setback along the east side where the unnamed drainage is located.

Lot B would contain the existing residence, fountain, circular driveway, patios and guest house. No changes are proposed to the house, pool, fountain, landscaping or walkways/patio. The portion of an existing shed that extends across a proposed lot line will be removed. Changes to the driveway would occur if the new property owner decides to file the approved subdivision map. The changes to the driveway are described below under Access and Circulation. The existing development on Lot B is summarized in Table 2-3.

**Table 2-3. Lot B Development and Impervious Surfaces**

| Development/Improvements | Square Footage |
|---|---|
| **FLOOR AREA** | |
| House | 8,280 |
| Guest House | 950 |
| Carport | 250 |
| Pump House | 35 |
| Utility Room | 340 |
| Shed (portion to remain) | 480 |
| **Total** | **10,335** |
| | |
| **IMPERVIOUS SURFACE** | |
| Driveway | 8,180 |
| Fountain, Pool | 1,430 |
| Patios | 5,930 |
| **Total** | **15,540** |

*Note: Does not include common driveway.*

Under the PUD subdivision, Lot B would provide a 5-foot private sanitary sewer easement to both Lots A and C so that the sanitary sewer can be extended into the parcels (see Figure 5 Sheet 3). That sewer easement would connect to an existing utility easement on the adjacent vacant lot on Mapache Drive. The sewer connection is described in section 2.9, below.

Although the existing FEMA 100-year flood zone extends across Lot B, the proposed revised FEMA100-year flood boundary is confined to Corte Madera Creek, and no existing structures are in the revised 100-year flood boundary.

*Lot C*

Lot C, located closest to Westridge Drive would be 3.25 acres and have an average slope of 14.5%. Lot C is bounded by Lot B, Westridge Drive, the unnamed drainage and Corte Madera Creek. Residential uses exist on Possum Lane across Corte Madera Creek and on Westridge and Mapache Drives adjacent to the unnamed drainage. The parcel is primarily landscaped except for the area adjacent to Corte Madera Creek which contains natural oak woodland vegetation. Elevations on Lot C range from 445 feet MSL near Westridge Drive to about 435 feet MSL at the boundary with Lot B. The lot would have a 50-foot front yard setback requirement from the property line at Westridge Drive, a 55-foot top of creekbank setback requirement along the boundary with Corte Madera Creek, a 20-foot side yard setback from the eastern property boundary (along the unnamed drainage), and a 20-foot rear yard setback requirement from the common boundary with Lot B (see Figure 5 Sheet 4).

Lot C is currently constrained by the 100-year FEMA flood boundary near Corte Madera Creek (Figure 5 Sheet 4). A short segment of the existing driveway falls within this flood boundary. However, the proposed revised FEMA 100-year flood boundary is confined within the banks of Corte Madera Creek and no structures are located in it.

Lot C would contain the existing tennis court. A proposed house footprint (4,500 sq. ft.) is shown immediately east of the existing court. Town ordinance requires tennis courts to be an accessory use to a residential use. If the subdivision occurs and Lot C is sold, the tennis court would have to be removed if a house is not built within 2 years after the lot is sold.

Figure 5 Sheet 4 shows the conceptual house footprint and driveway. The driveway would be large enough to provide guest parking and a turnaround area.

If the approved subdivision map is recorded, the existing driveway would have to be widened and the existing gate would have to be moved further away from Westridge Drive (see Figure 5 Sheet 4). The first part of the driveway with Lot C would be paved and would be 18 feet wide in a 30-foot ingress/egress easement. The widening of the driveway would require the removal of 9 “significant” trees as defined by the Town, including 5 bays, 2 maples, and 2 oaks. Then after the “Y” split of the driveway, the extension serving Lots B and A would be widened to 16 feet within a 20-foot ingress/egress easement. The driveway entrance at Westridge would also be widened to increase visibility. The existing entry gate would be relocated further into the parcel to meet the Town’s 50-foot setback requirement.

Lot C would have the following development:

**Table 2-4. Lot C Development and Impervious Surfaces**

| Development/Improvements | Square Footage |
|---|---|
| **FLOOR AREA** | |
| House | 4,500 |
| Existing Green House to Remain | 500 |
| **Total** | **5,000** |
| | |
| **IMPERVIOUS SURFACE** | |
| Existing Tennis Court | 7,010 |
| Existing Driveway | 3,380 |

| Development/Improvements | Square Footage |
|---|---|
| New Driveway | 2,820 |
| **Total** | **13,210** |

*Note: Does not include common driveway; tennis court would remain only if a new house is built or both lots B and C are under the same ownership.*

## 2.5 Infrastructure Improvements Required if Approved Subdivision Map is Recorded

If the approved subdivision map is recorded, the following infrastructure improvements would be required. If the approved subdivision map is not recorded, the subdivision would not occur and these infrastructure improvements would not be required. They would be considered by the Town if a future permit application is submitted for demolition/remodel of the existing house and construction of new structures on the parcel.

*Access and Circulation*

1. The driveway entrance at Westridge Drive and the paved apron area of the entrance way will be widened as shown on the Preliminary Parcel Map;

2. The entrance gate and its pillars and lighting will be relocated to conform to 50-foot front yard setback, lighting, and other entrance gate and pillar construction standards applicable under Town regulations;

3. From Westridge Drive to the location shown on the Preliminary Parcel Map where the separate driveway begins to serve Lot C only, the driveway easement willl be at least thirty (30) feet in width, and thereafter at least twenty (20) feet in width to serve Lots B and A.

4. If residential uses are proposed for Lots A and C, separate driveways from the common driveway to Lots A and C, respectively, as shown on the Preliminary Parcel Map, will be constructed in accordance with all applicable Town regulations.

5. If residential uses are proposed for Lots A and C, the new driveways to the houses will include turnarounds designed to Town and Fire Protection District standards, and turnouts will be spaced at least every 350 feet along the common driveway to Fire District regulation standards, as generally depicted on the Preliminary Parcel Map.

6. Paving materials placed on newly constructed areas of the entrance way, the common driveway, and the separate driveways to Lots A and C, respectively, and the landscaping and screening adjacent to such driveway areas, shall be reviewed and approved by the Architectural Site Control Commission (ASCC). The existing loose gravel material on the portions of the driveway serving Lot B only may be retained by the parcel owner, without additional landscaping or screening.

*Zoning and Site Development Standards*

The two new lots created by the subdivision could be developed with structures and site improvements as allowed under the Town's zoning ordinance and development standards, and as further specified in the PUD Permit. The type of development proposed would be up to the new property owner. The Preliminary Parcel Map shows conceptual house footprints and the infrastructure that could be required. Instead of houses, development on these lots could also include structures for an estate use, such as stables, additional guest houses, a pool house, etc.

Those structures would also have to be designed and constructed in conformance with Town development standards.

*Building Setbacks/Envelopes*

Any new construction must meet Town setback requirements in place at the time that future development is proposed. At present, the setbacks include:

- 55-foot top of creek bank (20-foot for fences)
- 50-foot from front property line
- 20-foot from side and rear property line

*Floor Area and Impervious Surface Limits*

Construction of future improvements on Lots A, B and C cannot exceed impervious surface limits under Town regulations in effect at the time for single-family residential lots. For Lots A and C, the construction of future structures will not exceed floor area limits under Town regulations. No permit for construction of new structures on Lots A or C shall be approved unless the total floor area of all structures existing or proposed on Lots A, B and C does not exceed the total floor area of all structures which would be allowed in the aggregate on Lots A, B and C under existing Town regulations assuming all such Lots were then vacant.

For Lot B, the structures now existing on the lot will be permitted to remain and may be repaired and replaced to the extent existing when the approved subdivision map is recorded, even though in the aggregate the floor area exceeds the allowable maximum floor area under existing Town regulations.

*Building Heights*

All building height limits for new construction on Lots A, B and C will conform to Town regulations. The Town measures building height as the vertical distance at any point from the natural ground level which existed prior to grading for any building or from the building pad if excavated below natural ground level, whichever level is lower, to the highest part of the building directly above. The maximum building height is the vertical distance between the lowest point of contact with the finished ground surface to the highest point of the building or its appurtenance. The maximum building height in the Residential-Estate zoning district is 34 feet.

*Gates and Entryways*

The existing gate and entryway into the parcel from Westridge Drive will remain in its existing form until the approved subdivision map is recorded, at which time the curb cut and driveway entrance apron to Westridge Drive would be widened and improved, as shown on the Preliminary Parcel Map (Figure 5, Sheet 4), and the existing entry pillars and gate will be removed and set back the required 50 feet from the Westridge right-of-way, and in accordance with Town regulations in effect at the time.

*Fences and Site Walls*

No new fences or walls are proposed on the Preliminary Parcel Map. The existing perimeter fence is not in compliance with the Town zoning ordinance where it is in the 55-foot setback of Corte Madera Creek. If the subdivision parcel map is recorded, portions of this fence that do not currently provide visual screening for adjacent houses or support biological

resources (e.g, San Francisco dusky-footed woodrat houses) will be required to be removed. If the new property owner does not record the subdivision map, the fence would remain as is, and any application for walls and fences proposed in the future would be reviewed by the Town and approved according to Town regulations in place at the time.

*Exterior Lighting*

Existing landscaping lighting on the parcel which is aimed upward is not consistent with Town lighting requirements. Any exterior lighting not consistent with Town regulations would be brought into compliance with Town standards at the time the subdivision parcel map is recorded.

Outdoor lighting is regulated by zoning ordinance Section 18.42.018 which prohibits the up-lighting of landscaping or structures and any fixtures illuminating landscaping, trees, or structures are subject to ASCC approval. Lighting of entryway features, including pillars and posts are only permitted subject to prior approval by the ASCC. New exterior lighting proposed to be installed will be designed in accordance with Town regulations in effect at the time.

## 2.6 Architectural and Site Development Criteria

All site development applications are subject to Architectural and Site Control Commission (ASCC) approval.

Review and approval of applications before the ASCC is guided by the principles set forth in the Town's Design Guidelines and are based upon conformity with the Town's zoning and site development ordinances. Requirements are summarized below.

*Siting of Buildings*

Buildings and other development constructed on Lots A and C would be sited within the boundaries of the building envelopes show on the Preliminary Parcel Map (Figure 5), or possibly slightly altered building envelopes that are consistent with all Town regulations in effect at the time and approved by the Architectural and Site Development Criteria (ASCC). All buildings would have to be outside any required setbacks such as the 55-foot creek setback or the front, side and rear yard setbacks established by the Town.

*Tennis Court Use on Lot C*

The existing tennis court on the proposed Lot C may remain in that location after the approved subdivision map is recorded for as long as Lots C and B are owned by the same person(s) or entity(ies). However, if separate ownership of Lots C and B occurs after recordation of the map, then the owner of Lot C will have two years after the separate ownership occurs to either: (i) to construct a main building, structure or use on Lot C so that the tennis court is an accessory structure or use which complies with Town regulations, or (ii) remove the tennis court from Lot C.

*Landscape and Planting*

Existing landscaping and plantings will remain in place until the approved subdivision map is recorded. However, when the map is recorded, the entrance way, entrance gate and pillars must be relocated and the existing private driveway must be widened or extended to the proposed Lots A and C. Vegetation may be removed to accommodate this construction. The ASCC will review and approve any landscape and planting plans submitted as part of these

improvements in accordance with Town regulations in effect at the time. The ASCC will also review and approve any landscaping plans submitted at the time building construction plans are submitted for design review. The Applicant will be required to install the landscaping as approved by the ASCC.

*Tree Protection*

The Town's zoning ordinance specifies measures to protect trees, defines "significant" trees, and requires replacement of trees that are removed with native species that are planted as nearby as feasible. The project site contains 256 trees that meet the definition of "significant" in the Town's ordinance.

## 2.7 Geology Provisions

Portola Valley's Site Building Ordinance Chapter 15.12.080 (Site Development Permit Requirements Permit – Application) requires all new developments in the Town prepare soil and geology reports. Section 15.12.080(B)5 requires a soil engineering report which must include data regarding the nature, distribution and strength of existing soils, conclusions and recommendations for grading procedures and design criteria for corrective measures when necessary, and opinions and recommendations covering adequacy of sites to be developed by the proposed grading. Recommendations included in the report and approved by the town engineer and town geologist shall be incorporated in the grading plans or specifications.

An engineering geology report must also be prepared and must contain an adequate description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, and opinions and recommendations covering the adequacy of sites to be developed by the proposed grading. Recommendations included in the report and approved by the town geologist shall be incorporated in the grading plans or specifications. See Appendix C for the Preliminary Engineering Geologic and Geotechnical Study prepared by Murray Engineers, and correspondence from the Town Geologist.

## 2.8 Hydrology Provisions

All construction activities and development must be consistent with San Mateo County and Town of Portola Valley storm water runoff and erosion control policies. Projects that add and/or replace over 10,000 square feet of impervious surface must comply with San Mateo County's Provision C.3 of the San Mateo Countywide Water Pollution Prevention Program's (SMCWPPP) amended NPDES permit. Under C.3 requirements, future development would need to control storm water runoff so that it is not increased above current conditions.

The Portola Valley Site Development Ordinance contains several sections related to drainage and erosion. These include:

- Section 15.12.210 Drainage, which requires that adequate provision be made to prevent surface waters from damaging the cut face of an excavation or any fill. All drainage ways and structures must carry water without producing erosion to the nearest practical street storm drain or natural water course approved by the Town engineer.
- Section 15.12.260 Erosion control and landscaping which requires all cut and fill surfaces to be planted with a ground cover; and.
- Section 6.08.140 Corrals, stables and shelters – Construction. (C) All corrals must have effective drainage facilities as dictated by slope, soil condition, and drainage. Runoff

shall be handled in such a manner so as not to constitute a nuisance and so it will not increase erosion.

The project would disturb more than one acre of soil and create or replace more than 10,000 square feet of impervious surface. The project and future development of the site would therefore be subject to a San Francisco Bay Regional Water Quality Control Board General Construction Permit. The applicant must develop and implement a storm water pollution prevention plan (SWPPP) and would be subject to Provision C.3 of the San Mateo Countywide Water Pollution Prevention Program. The County's NPDES Permit requires:

- Numeric Sizing Criteria for Pollutant Removal Treatment Systems. The project must include source controls, site design measures, and treatment controls to minimize stormwater pollutant discharges. Pollution treatment controls shall be sized to treat the volume of annual runoff required to achieve 80 percent or more capture of average annual runoff (in the Bay Area this is equivalent to having the capacity to repetitively treat storm events of about 1 inch of precipitation).
- Operation and Maintenance of Treatment Measures. Treatment controls often do not work unless adequately maintained. The permit requires an Operations and Maintenance (O&M) Agreement and a maintenance plan.
- Limitation on Increase of Peak Stormwater Runoff Discharge Rates. Urbanization creates impervious surfaces that reduce the landscape's natural ability to absorb water and release it slowly to creeks. These impervious surfaces increase peak flows in creeks and can cause erosion (referred to as hydromodification). Projects must evaluate the potential for this to occur and provide mitigation as necessary.

The grading and drainage plans as shown on the Preliminary Parcel Map for Lots A, B and C, respectively, will be a condition of the approved subdivision map and will be installed after the map is recorded. Storm water runoff from developed areas would be directed to a storm drain system. No development will occur on any of the Lots within the 55-foot setback from either the top of the Corte Madera creek bank, or the high water mark of Corte Madera Creek, whichever measuring point is selected by the owners of the Lots.

## 2.9 Utilities

All utility lines will be placed underground, including telephone and cable television lines to all building sites.

*Water Supply*

The site is served by a 6 or 8 inch California Water Service water main on Westridge Drive. Future development on Lots A and C would connect to the water main through an underground pipe that would be located under the existing and new driveways.

*Sanitary Sewer Service*

The existing residence has a septic system and is not currently connected to the sanitary sewer. If the approved subdivision map is recorded, the parcels will be connected to the sanitary sewer. Sanitary sewer service would be provided by West Bay Sanitary Sewer District, and the Lots will have to be annexed into the district. West Bay Sanitary Sewer District is a member of the South Bayside Sewer Authority. South Bayside Sewer Authority is comprised of member agencies and operates a sewage treatment plant in Redwood City. Each member agency is allocated a certain amount of treatment capacity.

Each Lot will have an underground septic holding tank, grinder and pump so that wastewater can be pumped through a 2.5-inch force main to connect to an existing sanitary sewer on Cervantes (See Figure 6). Onsite the sanitary sewer line from Lots A and C will extend through a private easement on Lot B to an existing utility easement located on an adjacent vacant lot on Mapache Drive that is also owned by the Shorenstein family. The pipe will be bore and jack drilled from Lot B under the unnamed drainage and underground across the vacant parcel to reach Mapache Drive. It will then be extended along an existing 5-ft wide public utility easement in the roadway from Mapache Drive to Cervantes Road. There it will connect to an existing force main per West Bay Sanitary District standards.

Construction will be done in accordance with San Mateo County and Town of Portola Valley storm water runoff requirements for construction sites.

After the approved subdivision map is recorded, and as a condition to issuance of any permits for construction of a residence on either Lots A or C, the parcels will be annexed to the Westbay Sanitary District and the sanitary sewer pipelines will be installed to the satisfaction of the Sanitary District adequate to provide for sewage and waste water disposal for all structures and other improvements on Lots A, B and C.

## 2.10 Construction Schedule and Staging

The applicant has no schedule for construction, and instead intends to market and sell the 11.6 acre parcel with its existing improvements and subject to an approved subdivision map as proposed by this project. When and if construction as contemplated, standard construction procedures and fees will apply, building and other permits will be required, and all vehicles, equipment parking, and material stockpiling associated with any construction on the parcels or subdivision improvements will be on-site.

## 2.11 Codes, Covenants and Restrictions

To the extent deemed necessary by the Town to ensure that the terms and conditions set forth in the PUD Statement are carried out, the Town will have the property owner execute Codes, Covenants & Restrictions (CC&R's) to be recorded against the property and each of the newly created lots, which shall contain all requirements affecting each Lot owner and their individual responsibilities. This document will be prepared to the satisfaction of the Town's attorney, will provide among other things for the maintenance by the Lot owners of the private entrance and private driveway access areas, and will be recorded with the approved subdivision map.

## 2.12 Measures Included in the Project to Avoid Significant Environmental Impacts

In addition to complying with regulations governing development of the project, the project incorporates Best Management Practices and the measures identified in the Initial Study as necessary to prevent significant environmental impacts. Both the Best Management Practices and the Mitigation Measures are listed below.

Per BAAQMD CEQA guidelines, the Applicant would incorporate the following best management practices to further reduce the magnitude of potential construction emissions:

*Construction Best Management Practices*

1) Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) two times per day;

2) Cover all haul trucks transporting soil, sand, or other loose materials off-site;
3) Wash all trucks and equipment, including tires, prior to leaving the site;
4) Use wet power vacuum street sweepers at least once per day to remove all visible mud or dirt track-out adjacent to Westridge Drive (dry power sweeping is prohibited);
5) Vehicle speeds on unpaved roads shall not exceed 15 miles per hour;
6) Pave all roadways, driveways, and sidewalks as soon as possible and lay all building pads as soon as possible after grading unless seeding or soil binders are used;
7) Suspend excavation and grading activities when average wind speeds exceed 20 miles per hour;
8) Minimize idling time to five minutes and post signs reminding workers of this idling restriction at project access points and equipment staging areas.
9) Require a certified mechanic to check and determine that all equipment is running in proper condition prior to construction operations;
10) Properly maintain and tune all construction equipment in accordance with manufacturer's specifications;
11) Post a publicly visible sign with the telephone number and person to contact at the Portola Valley Department of Public Works regarding dust complaints. The Department of Public Works shall respond and take corrective action within 48 hours. The publicly visible sign shall also include the contact phone number for the Bay Area Air Quality Management District to ensure compliance with applicable regulations.

**Impact AES-1:** New structures on Lots A and/or C could change the character of existing views from adjacent homes. In particular, structures on Lot C could be visually intrusive to the upstairs living space at 1240 Westridge Drive. Views from the parcel toward adjoining parcels could change the existing feeling of privacy between the parcel and neighboring parcels. The removal of existing fencing in order to comply with the existing zoning code could result in the removal of existing screening. Some of the screening is provided by a solid wood fence between 1240 and 1260 Westridge, and some is provided by a chain link fence around the remaining perimeter that is overgrown with vegetation.

**Mitigation Measure AES-1:** If the Town receives specific development proposals for structures on Lots A, B or C, the ASCC shall review the proposals and employ the Town's Design Guidelines so that development on these lots would not significantly affect views to and from other neighboring properties. The development proposals shall include landscape plans that the ASCC would approve as part of the overall site plan. If perimeter fencing is to be removed from the top of the creek bank, it shall be replaced with suitable screening vegetation set back from the creek bank. Screening vegetation shall be planted at the time the subdivision is approved in order for it to grow and provide screening as soon as possible. Only native plant species shall be used within the 55-foot creek setback. If the solid wood fence between 1240 and 1260 Westridge is removed, it shall be replaced with suitable screening vegetation which shall be planted and provide screening prior to fence removal.

**Impact AES-2:** Existing up-lighting of landscaping is not in conformance with Town Code (Section 18.42.018, A). Use of this outdoor lighting could be visually intrusive to neighboring properties.

**Mitigation Measure AES-2**: See Mitigation Measure LU-3.

**Impact AES-3:** Headlights from vehicles on Lot A could intrude on neighboring properties.

**Mitigation Measure AES-3**: Visual screening (vegetative or otherwise) shall be provided to ensure headlights do not shine onto adjoining properties on Hidden Valley Lane or Possum Lane.

Per BAAQMD CEQA guidelines, the Applicant would incorporate the following best management practices to further reduce the magnitude of potential construction emissions:

*Construction Best Management Practices*

1) Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) two times per day;
2) Cover all haul trucks transporting soil, sand, or other loose materials off-site;
3) Wash all trucks and equipment, including tires, prior to leaving the site;
4) Use wet power vacuum street sweepers at least once per day to remove all visible mud or dirt track-out adjacent to Westridge Drive (dry power sweeping is prohibited);
5) Vehicle speeds on unpaved roads shall not exceed 15 miles per hour;
6) Pave all roadways, driveways, and sidewalks as soon as possible and lay all building pads as soon as possible after grading unless seeding or soil binders are used;
7) Suspend excavation and grading activities when average wind speeds exceed 20 miles per hour;
8) Minimize idling time to five minutes and post signs reminding workers of this idling restriction at project access points and equipment staging areas.
9) Require a certified mechanic to check and determine that all equipment is running in proper condition prior to construction operations;
10) Properly maintain and tune all construction equipment in accordance with manufacturer's specifications;
11) Post a publicly visible sign with the telephone number and person to contact at the Portola Valley Department of Public Works regarding dust complaints. The Department of Public Works shall respond and take corrective action within 48 hours. The publicly visible sign shall also include the contact phone number for the Bay Area Air Quality Management District to ensure compliance with applicable regulations.

**Impact BIO-1**: Removal of trees as a result of driveway modifications will remove wildlife habitat and could result in a violation of California fish and game code (protecting birds and bats) and the federal Migratory Bird Treaty act.

**Mitigation Measure BIO-1**: To minimize the impacts of tree removal on wildlife and comply with local, state and federal regulations, the project shall:

1. Protect significant trees during construction and replace trees in accordance with the Town's tree ordinance. In addition, replace oak trees that are removed as a result of the project with native oak species at a three-to-one ratio (plant three trees for every one tree removed);
2. Prior to removing the trees, conduct a survey of the trees and surrounding area for active bird nests and of the specific trees for roosting bats. The survey shall be done by a biologist with the necessary expertise, including being able to recognize bird breeding behavior and acoustically measure for bats. If nesting is confirmed or is highly likely, do not remove the trees until nesting is complete (the nesting season is generally February 1- August 31). Roosting bats shall be excluded before the tree is removed, the tree shall be removed at dusk, or other measure recommended by the bat biologist that minimizes bat mortality. If a maternal roost is detected (none have

been observed onsite to date), that roost shall either not be removed or shall be replaced as specified by the bat biologist.

**Impact BIO-2**: Loss of San Francisco dusky-footed woodrats as a result of removal of active San Francisco dusky-footed woodrat houses for driveway or fence modifications.

**Mitigation Measure BIO-2**: To minimize the impacts on woodrats the project shall:

1. Delay fence removal where the existing fence supports an active woodrat house until such time that the woodrat has voluntarily vacated and the house is no longer in active use;
2. Prior to driveway construction, conduct a survey to determine if woodrat houses are located in or adjacent to the area of disturbance. If an active house is located adjacent to the area of disturbance, it shall be protected with a five-foot buffer zone. If an active house is located within the area of disturbance it shall either be avoided or shall be relocated outside of the area of disturbance in consultation with the California Department of Fish and Game. Relocation currently entails carefully deconstructing the house and reconstructing it in a suitable location nearby where it will have at least a five foot buffer from the area of disturbance.

**Impact BIO-3**: Removal of fence post footings could result in the loss of creek bank and riparian vegetation on the creek bank.

**Mitigation Measure BIO-3**: When removing the fence on the top of the creek bank, leave fence post footings in place.

**Impact CUL-1**: A future owner could propose demolition of the existing structure.

**Mitigation Measure CUL-1**: If the property owner intends to demolish or remodel the existing buildings the property owner shall submit plans to the Town and provide a report regarding the historic value of the existing buildings prior to demolition. The Town shall evaluate the plans under a separate CEQA analysis at that time.

**Impact CUL-2**: The project could uncover unrecorded historic or prehistoric archaeological materials.

**Mitigation Measure CUL-2**: The property owner shall contract with a qualified archaeologist to inspect the property site prior to any ground disturbing activities to search for potentially significant historical deposits. In the event that any such deposits are noted, the Town Department of Public Works shall develop a plan for their evaluation. If evaluative testing demonstrates that additional construction related earthmoving would affect materials eligible for inclusion on the California Register of Historic Resources, the Town shall develop a plan for mitigating potential impacts (normally through limited hand excavation to retrieve a sample of materials for analysis) before work is allowed to recommence inside the project area.

**Impact CUL-3:** Construction activities at the project site may uncover previously unknown buried human remains.

**Mitigation Measure CUL-3:** In accordance with Public Resource Code Section 5097.98, should human remains be found on the site no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains shall be disturbed until:

1. The San Mateo County Coroner is contacted to determine that no investigation of the cause of death is required, and
2. If the Coroner determines the remains to be Native American then:
    1) The coroner shall contact the Native American Heritage Commission within 24 hours;
    2) The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased native American;
    3) The most likely descendent may make recommendations 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 Public Resources Code Section 5097.98.

**Impact CUL-4**: Native American traditional, cultural, and religious heritage values may be adversely affected by project activities.

**Mitigation Measure CUL-4**: Local Native American tribes shall be notified of the project and afforded the opportunity to comment on project plans.

**Impact HAZ-1**: Construction activities could result in leaks or spills of fuel oil, lubricating oil, or other hazardous materials into the environment and/or Corte Madera Creek and/or encounter previously unknown contamination at the site.

**Mitigation Measure HAZ-1**: To reduce the potential for construction-related leaks or spills to enter the environment and the accidental discovery of contaminated materials during site development, construction contractors shall:

1. Site and perform all vehicle storage, refueling and equipment maintenance in a designated area at least at least 100 feet from Corte Madera Creek and all drainage ;
2. Upon discovering any leak or spill, immediately implement appropriate control measures to stop the leak or spill and containment measures to prevent any spreading of the leak or spill.
3. Report any oil or other petroleum product leak, spill, or other discharge that enters Corte Madera Creek or drainage channels to the California Office of Emergency Services and the San Francisco Regional Water Quality Control Board.
4. Upon discovering contaminated soils and/or groundwater, immediately cease all work and report the discovery to the appropriate agency (e.g., Department of Toxic Substances Control or Regional Water Quality Control Board) for approval of measures necessary to proceed with construction (i.e, development of a soil management plan, site work plan, etc.).

**Impact HYD-1:** Runoff from the construction site could impact nearby sensitive resources, including Corte Madera Creek and ultimately San Francisco Bay.

**Mitigation Measure HYD-1:** The applicant shall prepare a comprehensive erosion control plan and SWPPP. Potential construction-phase and post-construction pollutant impacts from development can be controlled through preparation and implementation of an erosion control plan and a SWPPP consistent with recommended design criteria, in accordance with the NPDES permitting requirements enforced by the SMCWPPP and the San Francisco Bay RWQCB. The erosion control plan forms a significant portion of the construction-phase controls required in a SWPPP, which also details the construction-phase housekeeping measures for control of contaminants other than sediment, as well as the treatment measures and BMPs to be implemented for control of pollutants once the project has been constructed. The SWPPP

also sets forth the BMP monitoring and maintenance schedule and identifies the responsible entities during the construction and post-construction phases.

**Impact LU-1:** The existing entrance gate is located 15 feet from the property line and is therefore out of compliance with Municipal Code 18.42.16(A), which states that entry features, including gates, are required to be set back a minimum of one-half the distance of the front yard requirement. The front yard requirement for the parcel is 50 feet.

**Mitigation Measure LU-1:** If the subdivision map is recorded, the entrance gate shall be removed and, if replaced, shall comply with the zoning code then in effect.

**Impact LU-2:** The parcel currently has landscape lighting that is directed upward and is therefore out of compliance with Municipal Code 18.42.018 which states that there shall be no up-lighting of landscaping.

**Mitigation Measure LU-2:** If the subdivision map is recorded, existing lighting on the parcel that is directed upward to illuminate landscaping shall be removed/made to conform with the zoning code then in effect.

**Impact LU-3:** The existing perimeter fence is out of compliance with Municipal Code section 18.43.20(3), which states that no fences (including those along property lines) are allowed in districts with minimum parcel areas of 2 acres or more.

**Mitigation Measure LU-3:** If the subdivision map is recorded, the perimeter fence shall be brought into compliance with the zoning code then in effect. If removal is required, it shall take into account Mitigation Measures BIO-2, BIO-3, and AES-1.

**Impact LU-4:** The existing residence is a legal, non-conforming use that exceeds the square footage allowed for main residences according to the parcel's zoning (Municipal Code 18.48.010). In addition, the existing impervious area exceeds the maximum allowed (Municipal Code 18.48.010).

**Mitigation Measure LU-4:** Whenever development of either lots A or C is proposed, the maximum floor area and impervious surface amounts allowed on those lots shall be no more

**Impact LU-5:** Existing structures on Lot B are located within 20 feet of the property line and are out of compliance with Municipal Code 18.48.010, which requires a 20-foot rear yard setback.

**Mitigation Measure LU-5:** If future development is proposed for Lot B, existing structures within the 20-foot rear setback shall be brought into compliance with the zoning code then in effect.

**Impact LU-6:** The existing perimeter fence and water tanks are out of compliance with Municipal Code 18.59.030, which states that creek setbacks shall be 55 feet from the top of bank for parcels 2.5 acres in size or greater. The water tanks pre-date the subdivision ordinance and are a legal, non-conforming use.

**Mitigation Measure LU-6:** If the subdivision map is recorded, the perimeter fence shall be brought into compliance with the municipal zoning code then in effect. If the fence is removed, removal shall comply with Mitigation Measures BIO-2, BIO-3, and AES-1. If the water tanks are moved or increased in size in the future, they shall be in compliance with the municipal zoning code then in effect.

**Impact NOI-1**: On-site vehicle travel would not exceed Portola Valley standards but may intrude upon adjoining residential land uses.

**Mitigation Measure NOI-1**: To reduce the potential for on-site vehicle travel noise to be intrusive to adjoining residential land uses the Town shall:

1. Prohibit the use of paved cobblestone driveway surfaces;
2. Inspect for aggregate compaction in accordance with Portola Valley Code Section 15.12.310 (ninety-five percent compaction).

**Impact NOI-2**: The use of pile driving equipment during construction may generate groundborne vibration and noise levels that are perceptible to surrounding residences.

**Mitigation Measure NOI-2**: Groundborne vibration and noise levels shall not exceed a peak value of 78 dBV at surrounding residences. This shall be accomplished by:

1. Avoiding the use of impact and vibratory pile driving equipment during construction, if feasible; or
2. If it is not feasible to avoid the use of pile driving equipment during construction, the construction contractor shall submit a project-specific attenuation analysis demonstrating that groundborne vibration levels from pile driving equipment would not exceed 78 dBV.
    1) If the project-specific attenuation analysis shows that groundborne vibration levels from pile-driving equipment may exceed 78 dBV, the construction contractor shall develop and submit to Portola Valley a Vibration Mitigation Plan that demonstrates the measures the contractor would take to reduce vibration levels to less than 78 dBV. Such measures may include the use of barriers, pre-drilling, pile cushioning, use of non-impact drivers, or other measures.
3. In the event of pile-driving, construction contractors shall provide five days advance written notice to surrounding residential land uses of the planned pile driving activities and schedule.

**Impact NOI-3**: Site development and construction could temporarily increase ambient noise levels at surrounding residential land uses.

**Mitigation Measure NOI-3**: The following measures shall apply to site development and construction:

1. Signs will be posted at the entrance to the site and at construction equipment staging areas informing all workers and construction contractors of Portola Valley Noise Control Code requirements. The sign shall also provide a contact name and phone number for the job site and the Portola Valley Department of Public Works.
2. Surrounding residential land uses shall be given at least five days advanced written notice of construction activity scheduling and hours of construction.
3. Stationary equipment such as compressors, generators, and welder machines shall be located as far away from surrounding residential land uses as possible.
4. Impact tools such as jack hammers shall be hydraulically or electrically powered wherever possible to avoided noise associated with compressed air exhaust from pneumatically powered tools. When use of pneumatic tools is not unavoidable, an exhaust muffler shall be used on the compressed air exhaust.
5. Prior to issuance of any grading permit or building permit, whichever occurs first, for the Project, the Applicant shall prepare a Construction Noise Complaint Plan and submit it to the Portola Valley Department of Public Works for approval. The

Construction Noise Complaint Plan shall detail how the Applicant will respond to construction noise complaints, keep the Town apprised of the complaints, and document the resolution of those complaints.

**Impact TRA-1:** Sight lines at the existing driveway pose a traffic safety hazard.

**Mitigation Measure TRA-1**: Additional sight distance shall be achieved by vegetation removal at the site's entrance and providing the required setback from the front property line. This additional sight distance is achieved on the north by removing brush of moderate height and a clump of 8-inch bay trees near the right of way. To the south, there are a few oak saplings (approximately 2-inches in diameter) that should be removed. Enough ivy shall be removed from the fence to improve visibility for drivers. This achieves sight distances of 400 feet and 500 feet, to the north and south, respectively.

**Impact TRA-2:** The entering and exiting of the site by slow moving construction vehicles can pose a hazard for other traffic on Westridge Drive.

**Mitigation Measure TRA-2**: Advance construction signage and flaggers shall be present on Westridge Drive to warn drivers that slow moving vehicles are present, and assist those vehicles when entering and exiting the property. Signage and controls shall also provide for the safety of pedestrians, equestrians and cyclists.

## 2.13 Permits and Approvals Required for the Project

The current application seeks approvals from the Town of Portola Valley, including an approved subdivision map and a PUD permit.

If the approved map is recorded, the owner(s) will be required to install certain infrastructure improvements, which may trigger a building or grading permit.

Any new houses that are proposed by future owners will require permits from the Town.

No work is currently proposed in the unnamed drainage or Corte Madera Creek; if future work is proposed (such as bank stabilization) that work could require permits from the California Department of Fish and Game, the Regional Water Quality Control Board, the US Army Corps of Engineers, and possibly the US Fish and Wildlife Service.

## *3.0 Environmental Checklist*

**Background**

**1. Project title**: Shorenstein Subdivision

**2. Lead agency name and address:** Town of Portola Valley, 765 Portola Road, Portola Valley, CA 94028

**3. Contact person and phone number:** Tom Vlasic, Town Planner , 650-324- 8600

**4. Project location:** 1260 Westridge Road, Portola Valley, CA 94028

**5. Project sponsors name and address:**

**6. General Plan designation:** Conservation Residential

**7. Zoning:** R-E/2.5A/SD2.5

**8. Description of project:** The project proposes to subdivide an 11.6 acre parcel into 3 separate parcels.

**9. Surrounding Land Uses and Setting:** Rural residential setting surrounded by single family homes on lots generally greater than 1 acre.

**10. Other Public Agencies Whose Approval is Required:**

West Bay Sanitary Sewer District, after subdivision map is recorded

**Environmental Factors Potentially Affected**

The environmental factors checked below would be potentially affected by this Project, as indicated by the checklist on the following pages.

| | | |
|---|---|---|
| ☒ **Aesthetics** | ☐ **Agriculture and Forestry Resources** | ☐ **Air Quality** |
| ☒ **Biological Resources** | ☒ **Cultural Resources** | ☐ **Geology /Soils** |
| ☐ **Greenhouse Gas Emissions** | ☒ **Hazards & Hazardous Materials** | ☒ **Hydrology / Water Quality** |
| ☒ **Land Use / Planning** | ☐ **Mineral Resources** | ☒ **Noise** |
| ☐ **Population / Housing** | ☐ **Public Services** | ☐ **Recreation** |
| ☒ **Transportation/Traffic** | ☐ **Utilities / Service Systems** | ☒ **Mandatory Findings of Significance** |

***DETERMINATION:*** (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION would be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there would not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION would be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a potentially significant impacts or potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Thomas Vlasic 5/13/11

Signature Thomas Vlasic Town Planner Date

***EVALUATION OF ENVIRONMENTAL IMPACTS:***

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact". The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, Earlier Analyses, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiring, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

    a) Earlier Analysis Used. Identify and state where they are available for review.
    b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated", describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:
   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.1 AESTHETICS --** Would the project: | | | | |
| a) Have a substantial adverse effect on a scenic vista? | ☐ | ☐ | ☐ | ☒ |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | ☐ | ☐ | ☒ | ☐ |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | ☐ | ☒ | ☐ | ☐ |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | ☐ | ☒ | ☐ | ☐ |

**Environmental Setting**

The proposed 3-lot subdivision is a privately-owned 11.6-acre parcel that is relatively long with substantial tree cover and natural vegetation screening along its perimeter. The project site and its vicinity are relatively flat at about 415 to 445 feet above sea level (North American Datum 1983, USGS Palo Alto Quadrangle, updated 1997), generally sloping east to west, and the average slope of the entire site is about 13 percent. All views to and from the site are blocked from Portola Road, a Town designated scenic road and corridor (about 0.2 mile south of the project site) and the site is not part of a scenic vista. The site is also not highly visible from Westridge Drive.

Corte Madera Creek forms the approximate southern boundary of the parcel, and an unnamed drainage that flows to Corte Madera Creek forms the approximate northern boundary. The proposed project is located in Portola Valley's Residential – Estate, (R-E/2.5A/SD2.5) zoning district (2.5 acre minimum parcel size and 2.5 slope designation overlays) and has a Conservation-Residential land use designation. Entrance to the site is from Westridge Drive. A black metal security gate is located at the entrance, roughly 40 feet from the edge of pavement of Westridge Drive, and 15 feet from the property line.

Hedges currently flank each side of the gated entry (Photo 1). A graveled pedestrian and equestrian trail crosses the entryway (Photos 2 and 3).

Entering proposed Lot C through the main gate, the driveway is flanked on either side by mature vegetation including bay, redwood, and oak trees, low shrubs and ground cover. Beyond the existing vegetation to the left (south) is Corte Madera Creek, though water cannot be seen from the driveway due to the steep drop to the creek bed and intervening vegetation. The small unnamed drainage that borders the northern property boundary supports mature trees including maple, bay, oak, and redwoods. This drainage is to the right of the entrance.

The driveway forks after about 200 feet (Photo 4); left to "Enter" the main driveway and access the front of the existing house on Lot B, and right for the "Tradesman" entrance and the rear of the existing house on Lot B. Views to the tennis court and existing house at this fork are blocked by a mature oleander hedge (Photo 4). Dense hedges flank both sides of the "Tradesman" driveway (Photo 5), whereas the main driveway is wooded.

One side of the main driveway, near the tennis court, is lined with mature redwood trees (Photo 6) which can be up-lit by landscape lighting at night. The other side of the main driveway, near the creek, is lined with bay and oak trees (Photo 7), as well as a short row of mature Monterey pines. The main driveway leads to a black metal archway and circles a fountain in front of the existing house (Photo 8). The existing two-story stucco house with tall black pitched roof is located on the circular driveway opposite the black metal archway. The front of the house has a wide façade flanked by east and west wings that are set back from the front entryway. For the purposes of this report the east wing is on the right and the west wing is on the left in Photo 8. Lawns, pathways and low hedges surround the home.

An opening on the right of the circular drive provides access around the east side to the rear of the house (Photo 9) and the caretaker's cottage. It also connects with the "Tradesman" driveway. Other structures located behind the existing house include a carport, utility room, and shed. A generator and propane tank on separate concrete pads, a greenhouse and raised garden beds are located on the north side of the "Tradesman" driveway, across from the tennis court on Lot C (Photo 10). Bamboo growing along the property line in this location provides some screening between the property and 1240 Westridge Drive (Photo 10). However, breaks in the vegetation allow views between Lot C and 1240 Westridge Drive (Photo 11).

A paved tennis court is located to the east of the main house on what will be the western side of Lot C (Photos 6 and 12). The tennis court is partially surrounded by 12-foot tall black chain link fencing. A 12-foot tall dense hedge blocks the view of the court from the "Tradesman" driveway. The court is visible from the main driveway. The remainder of Lot C is covered by turf lawn (Photos 6 and 12). The possible house footprint on Lot C is adjacent to the tennis court between the tennis court and the entrance gate (the foreground of Photo 12, and the background of Photo 6, where the person is standing).

Lot A will be located west of Lot B, and will be the farthest lot from Westridge Drive. Currently Lot A contains a fenced vegetable garden, orchard trees, expansive lawn (Photo 13), and a dirt path along the creek banks (Photo 14). Lot A also contains areas of woodland, including oaks, madrones, redwoods, eucalyptus and bays. There are two large water tanks and pumping apparatuses on Lot A; these are located within the 55-foot creek bank setback (Photo 15). Chain link fencing at the top of the creek bank is shown in Photo 16.

The perimeter of the site is fenced with a combination of chain link, wood, and barbed wire fences. In some locations, the fences are overgrown with ivy, poison oak, or other vegetation and provide substantial screening of views both on-site and off-site. There is a solid wood fence along the property boundary that screens views between the site and 1240 Westridge Drive (Photos 11 and 31).

**Views to and from Adjoining Parcels**

45 Hidden Valley Lane – Views from this property to the housing footprint for Lot A are mostly obscured by mature vegetation on both sides of Corte Madera Creek (Photo 17). Views to the dirt path at the top of the creek bank (Photo 18) and the water tanks (Photo 19) on Lot A are partly visible. The most prominent view to the housing site on Lot A is from a location on the east side of the 45 Hidden Valley Lane property, just east of the above ground water tanks and

the 5 foot Bay clump mapped on the project plans (Photo 20). Existing vegetation obscures some, but not all of the view to the potential house site on Lot A, located in the foreground and to the west of the existing fenced garden area that can be seen in the background. The existing house on Lot B and the proposed home footprint on Lot C are not visible from 45 Hidden Valley Lane.

50 Possum Lane – Views to the housing footprint for Lot A from 50 Possum Lane are mostly obscured by existing mature riparian vegetation (Photo 21). Views to the existing home on Lot B are mostly obscured by existing mature vegetation, but the east wing of the existing home is visible though the trees (Photo 22). There are no views to Lot A from 50 Possum Lane due to the dense woodland vegetation along Corte Madera Creek.

40 Possum Lane – There are no views from 40 Possum Lane to the proposed home sites on Lots A and C (Photos 23 and 24) and very obscured views of the existing home on Lot B (Photos 25 and 26).

30 Possum Lane and 20 Possum Lane – TRA was not able to access the properties at 30 and 20 Possum Lane to evaluate any views from the properties. However, views to 30 and 20 Possum Lane from the proposed home site on Lot C are obscured by existing vegetation including a row of mature redwood trees that line the driveway (Photo 27. It is likely that residents of these properties are able to view the existing chain link fence at the top of the creek bank.

10 Possum Lane - There are no views to Lots A, B, or C from this property (Photos 28 and 29). However, the existing chain link fence at the top of the bank of Corte Madera Creek is visible (Photo 30).

1240 Westridge Drive – There are no views to potential home sites on Lots A and C from 1240 Westridge Drive at ground level (Photos 31 and 32). There is an approximately six-foot tall solid wood fence that separates the 1240 Westridge Drive property from 1260 Westridge Drive which screens ground level views between these properties. However, there may be views to Lot C from the second story of the home at 1240 Westridge Drive. Also, the sheds and other existing structures on Lots B and C may be partially visible from the vicinity of the barn and paddock at 1240 Westridge.

133 Mapache Drive – There are no views of Lots A, B or C from the living space of the house at 133 Mapache (Photos 33 and 34). The house at 133 Mapache is located on the upslope end of the parcel (approximately 450 feet in elevation).The existing home on Lot B and the fenced garden area and home site on Lot A are visible from the lower yard areas at 133 Mapache (Photo 35). Some of the views between the project site and 133 Mapache are obscured by vegetation that has grown on the chain link fence on the perimeter of 1260 Westridge.

35 Hidden Valley Lane – There are no views of the home sites on Lots A, B, and C from this property (Photo 36). Existing vegetation between the dirt path and the Lot A home site block views from this property. However, there are views from the dirt path at the top of the creek bank on Lot A to 35 Hidden Valley Lane (Photo 37).

**Regulatory Setting**

The Portola Valley Site Development Ordinance and Design Guidelines (1989; revised 2003 and 2006) provide standards that direct the visual character and quality of development

associated with related land uses. The project is a subdivision planned unit development and there are no specific home site architectural plans available for evaluation.

The Town's Design Guidelines provide key design principles that the ASCC will apply when evaluating an application for development of properties within the Town, and are based on regulations established in Chapter 18.64 (Architectural and Site Plan Review) of the Municipal Code. Site development criteria (Chapter 18.64.060) include minimizing grading and disturbance of natural terrain, preserving existing vegetation, designing and locating structures to provide adequate light and air for itself and neighbors, providing screening for privacy and aesthetics, safe and efficient traffic design, safe and non-intrusive night lighting, prevent drainage impacts and soil erosion, and maintaining compatibility with the rural setting.

Principals of the Design Guidelines are stated with respect to site design (grading, vegetation protection, view preservation, and sites on ridgelines/hilltops), architectural design (scale/context, mass/bulk, accessory structures, entryways, lighting and other concepts), and landscape design (planting concepts and plant materials). All site development applications are subject to Architectural and Site Control Commission (ASCC) approval.

The Town's Design Guidelines regarding view preservation include siting structures to preserve off-site views and to avoid visually prominent locations, maximizing open space, protecting view corridors on-site to maintain views of prominent scenic features, prevent the obstruction of views of adjacent property owners by structures or additions, and to consider the future height of trees and shrubs to preserve off-site views of the owner and neighbors.

Outdoor lighting is regulated by zoning ordinance Section 18.42.018 which prohibits the up-lighting of landscaping or structures and any fixtures illuminating landscaping, trees, or structures are subject to ASCC approval. Lighting of entryway features, including pillars and posts are only permitted subject to prior approval by the ASCC.

The Town's Significant Tree Ordinance (Chapter 15.12 of the Municipal Code) prevents the removal of significant trees without a Site Development Permit. Significant trees are defined as any tree listed in the Historic Element of the Portola Valley General Plan or a tree meeting the species and size requirement as listed in the ordinance. As described in the Biology section of this report, up to 10 significant trees may need to be removed; 9 trees for the widening of the main driveway for fire access, and possibly one additional tree if a driveway is extended to Lot A. This would happen if the subdivision map is recorded. These trees are not located so that they provide significant screening between 1260 Westridge and adjacent parcels, and the removal of these trees would not have a significant impact on existing views.

The Town's Creek Setback Ordinance (Chapter 18.59 of the Municipal Code) was enacted to provide creek bank protection measures used on town creeks, discourage practices that pose a risk to property improvements and neighboring properties, and protect the unique scenic qualities and habitat values of the creek environment that sustain wildlife by furnishing habitation, freshwater and migration corridors. The ordinance requires all development to be sited a minimum of 55 feet from the top of the creek bank. This setback is greater than the standard setbacks for front, side, and rear yards for the parcel's specific zoning designation and as such provides a greater visual buffer between future buildings and the property lines. Basic requirements of the Residential- Estate zoning district (Zoning Ordinance Section 18.48.010) include a 50-foot front yard, 20-foot side and rear yards, 28-foot height limit and 34-foot maximum height.

Municipal code section 18.43.20(3) prohibits fences (including those along property lines) in districts with minimum parcel areas of 2 acres or more. Horse fences are excepted.

There is fencing along the perimeter of the entire parcel, and in some areas this fencing provides a visual barrier between the project site and adjoining parcels (See Figure 7 – Fence Locations that Provide Visual Screening and/or Support S.F. Dusky-footed Woodrat Houses).

**Discussion:**

*Would the project:*

**a) Have a substantial adverse effect on a scenic vista?**

**No Impact.** The site is not visible to or from any officially designated scenic vista or scenic corridor. Intervening topography and vegetation block views to and from the site from the nearest scenic corridor on Portola Road, about 0.2 miles (1,000 feet) south of the property. The site is not visible from Westridge Drive.

**b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?**

**Less Than Significant Impact.** The project is not located adjacent to or visible from a state scenic highway. The site's boundaries are generally heavily vegetated due to its proximity to Corte Madera Creek and an associated drainage. Three trees may need to be removed if the subdivision map is recorded and the main driveway is widened, however the trees are not located where they significantly screen views into the site. In addition, ivy on the front fence and a small amount of vegetation will be removed to improve site distance at the driveway entrance. The vegetation does not significantly screen views into the site and its removal will not result in a significant visual impact. No rock outcroppings exist at the site. The existing buildings are not currently proposed to be remodeled or removed.

**c) Substantially degrade the existing visual character or quality of the site and its surroundings?**

**Less Than Significant Impact with Mitigation.** The main driveway location on Lot C between the entrance and the driveway split must be widened to accommodate fire access. This could require the removal of up to nine significant trees, based on size and species (see Biology section). One tree may need to be removed to accommodate installation of the driveway extension to Lot A. These trees are internal to the site and do not provide a significant visual resource or significant screening.

The 55-foot creek setback provides a visual buffer to adjoining properties. Removal of the existing chain link fence at the top of the creek bank will improve the existing visual conditions within the creek corridor except where the fence supports existing vegetation that provides screening (see Figure 7, Fence Locations that Provide Visual Screening and/or Support S.F. Dusky-footed Woodrat Houses).

The wood fence between 1240 and 1260 Westridge Drive is solid and screens the ground level views between these two properties. Removal of this fence could be required at the time the subdivision map is filed in order to bring fencing on the site into compliance with the zoning code, and could result in a significant visual impact. The portion of fence between the existing greenhouse and the utility room provides visual screening of the utility room and shed on Lot B and the concrete generator pad and propane tank on Lot C. The remainder of the fence between the greenhouse to the property line at Westridge Drive screens views of oak woodland vegetation on Lot C. This oak woodland and a dense oleander hedge block ground views from 1240 Westridge to the home site on Lot C.

The Town's Design Guidelines provide key design principles that the ASCC will apply when evaluating this application for development of properties within the Town and are based on regulations established in Chapter 18.64 of the Municipal Code. As stated above, these include minimizing grading and disturbance of natural terrain, preserving existing vegetation, designing and locating structures to provide adequate light and air for itself and neighbors, providing screening for privacy and aesthetics, safe and efficient traffic design, safe and non-intrusive night lighting, preventing drainage impacts and soil erosion, and maintaining compatibility with the rural setting.

The fact that lights or structures may be visible from the new subdivided parcels does not constitute a substantial degradation of the existing visual character or quality of the site and its surroundings. Views to and from adjoining parcels can be affected by future development depending on the type, location, and orientation of a future structures on Lots A and C. As seen in Photos 21, 22, 23, 27 and 36, there are several adjoining properties that have views to one or more of the proposed parcel footprints. Therefore, the following mitigation measure is proposed:

**Impact AES-1:** New structures on Lots A and/or C could change the character of existing views from adjacent homes. In particular, structures on Lot C could be visually intrusive to the upstairs living space at 1240 Westridge Drive. Views from the parcel toward adjoining parcels could change the existing feeling of privacy between the parcel and neighboring parcels. The removal of existing fencing in order to comply with the existing zoning code could result in the removal of existing screening. Some of the screening is provided by a solid wood fence between 1240 and 1260 Westridge, and some is provided by a chain link fence around the remaining perimeter that is overgrown with vegetation.

**Mitigation Measure AES-1:** If the Town receives specific development proposals for structures on Lots A, B or C, the ASCC shall review the proposals and employ the Town's Design Guidelines so that development on these lots would not significantly affect views to and from other neighboring properties. The development proposals shall include landscape plans that the ASCC would approve as part of the overall site plan. If perimeter fencing is to be removed from the top of the creek bank, it shall be replaced with suitable screening vegetation set back from the creek bank. Screening vegetation shall be planted at the time the subdivision is approved in order for it to grow and provide screening as soon as possible. Only native plant species shall be used within the 55-foot creek setback. If the solid wood fence between 1240 and 1260 Westridge is removed, it shall be replaced with suitable screening vegetation which shall be planted and provide screening prior to fence removal.

| | |
|---|---|
| **Effectiveness:** | Employing the Town's Design Guidelines would ensure neighbor's views are preserved. Replacing the existing fence with other suitable screening will mitigate the loss of the fence. |
| **Implementation:** | Condition of the PUD. |
| **Timing:** | The measure will be incorporated into the PUD Permit prior to its approval by the Town Planning Commission. ASCC review will occur at such time that a development application is submitted to the Town. |
| **Monitoring:** | Shown to be a condition of the PUD, enforceable by the Town. |

**d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

**Less Than Significant Impact with Mitigation.** Outdoor lighting is governed by the Portola Valley Zoning Ordinance, Section 18.42.018. As stated above, the up-lighting of landscaping or structures is prohibited and any fixtures illuminating landscaping, trees, or structures are subject to ASCC approval. In addition, lighting of entryway features, including

pillars and posts are only permitted subject to prior approval by the ASCC. Therefore the following mitigation measure is proposed:

**Impact AES-2:** Existing up-lighting of landscaping is not in conformance with Town Code (Section 18.42.018, A). Use of this outdoor lighting could be visually intrusive to neighboring properties.

**Mitigation Measure AES-2**: See Mitigation Measure LU-3.

**Effectiveness:** Eliminating existing sources of up-lighting will bring the property into conformance with Town Code.
**Implementation:** The Town will make the removal of up-lighting on the site one of the conditions of the PUD Permit.
**Timing:** The measure will be incorporated into the PUD Permit prior to its approval by the Town Planning Commission.
**Monitoring:** The Town will review the PUD Permit for inclusion of this measure.

The fact that lights from new structures/developments or cars on driveways may be visible from the new subdivided parcels does not constitute a substantial new source of light or glare. Due to the vegetated nature of the creek much of the views to and from the site are interrupted by existing vegetation. No trees are proposed to be removed by the project. Future development of the site's subdivided parcels is subject to ASCC approval according to the Design Guidelines. Therefore, the impact would be less than significant. However, careful consideration should be given to new driveway locations as they could present a new source of light from vehicle headlights. Residents of 50 and 40 Possum Lane will likely be able to see cars and headlights on the new driveway of Lot A intermittently through existing vegetation. Screening in the form of low (i.e. headlight height) dense vegetation, hedges, or low walls should be incorporated into the project design to avoid light spillage onto adjoining properties from vehicles.

**Impact AES-3:** Headlights from vehicles on Lot A could intrude on neighboring properties.

**Mitigation Measure AES-3**: Visual screening (vegetative or otherwise) shall be provided to ensure headlights do not shine onto adjoining properties on Hidden Valley Lane or Possum Lane.

**Effectiveness:** The measure will prevent intrusive light sources from new driveways.
**Implementation:** The applicant shall insure these measures are included in site development plans that shall be approved by the ASCC.
**Timing:** The screening shall be shown on plans prior to the finalization of the construction contract.
**Monitoring:** The Town shall review future development plans for inclusion of this measure.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.2 AGRICULTURE AND FOREST RESOURCES --** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project: | | | | |
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | ☐ | ☐ | ☐ | ☒ |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | ☐ | ☐ | ☐ | ☒ |
| c) Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4536), or timberland zoned Timberland production (as defined by Government Code section 51104(g))? | ☐ | ☐ | ☐ | ☒ |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |

**Environmental Setting**

The parcel is designated Conservation Residential under the Portola Valley General Plan and is zoned for Residential-Estate uses only. The property is currently used for residential purposes only. According to the California Department of Conservation's Farmland Mapping

and Monitoring Program, the property is identified as Urban and Built-up Land (California Department of Conservation, Division of Land Resource Protection, 2009), and does not contain agricultural or forest resources.

**Discussion:**

*Would the project:*

**a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

**b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

**c) Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4536), or timberland zoned Timberland production (as defined by Government Code section 51104(g))?**

**d) Result in the loss of forest land or conversion of forest land to non-forest use?**

**e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?**

**No Impact (a-e).** There are neither forest lands nor agriculture lands anywhere on the property or in the vicinity of the project site. The project will not convert or cause the conversion of any farmland or forest land to a non-agricultural/non-forest use. No project activities will take place on property designated as Prime Farmland, Unique Farmland, Farmland of Statewide Importance, forest land or property for which there is a Williamson Act contract. Therefore, no adverse impacts to agricultural or forestry resources are anticipated.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.3 AIR QUALITY --** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project: | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | ☐ | ☐ | ☒ | ☐ |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | ☐ | ☐ | ☒ | ☐ |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | ☐ | ☐ | ☒ | ☐ |
| d) Expose sensitive receptors to substantial pollutant concentrations? | ☐ | ☐ | ☒ | ☐ |
| e) Create objectionable odors affecting a substantial number of people? | ☐ | ☐ | ☒ | ☐ |

**Environmental and Regulatory Setting**

Air quality is a function of pollutant emissions and topographic and meteorological influences. The physical features and atmospheric conditions of a landscape interact to affect the movement and dispersion of pollutants and determine its air quality.

The proposed project is located in the San Francisco Bay Area Air Basin (SFBAAB), an area of non-attainment for national and state ozone, state particulate matter ($PM_{10}$), and national and state fine particulate matter ($PM_{2.5}$) air quality standards (U.S. EPA 2010 and BAAQMD 2010a).

The Bay Area Air Quality Management District (BAAQMD or the District) is responsible for maintaining air quality and regulating emissions of criteria and toxic air pollutants within the SFBAAB. The BAAQMD carries out this responsibility by preparing, adopting, and implementing plans, regulations, and rules that are designed to achieve attainment of state and national air quality standards. The BAAQMD currently has 12 regulations containing more than 100 rules that control and limit emissions from sources of air pollutants.

On September 15, 2010 the BAAQMD adopted the *Bay Area 2010 Clean Air Plan (CAP)*. This plan updates the District's *2005 Ozone Strategy*, addresses ozone, PM, toxic air contaminants, and greenhouse gas emissions in a single, integrated document, and contains 55 control strategies that describe specific measures and actions that the District and its partners

will implement to improve air quality, protect public health, and protect our climate. These measures focus on stationary and area sources, mobile sources, transportation control measures, land use, and energy and climate measures (BAAQMD 2010b).

In June 2010, the BAAQMD adopted new CEQA significance thresholds for emissions resulting from short term, construction-related and long term, operations-related activities (BAAQMD, 2010c). The BAAQMD considers projects that exceed the District's CEQA thresholds to have a significant air quality effect. The BAAQMD's *CEQA Air Quality Guidelines* also contain screening criteria to provide lead agencies with a conservative indication of whether a proposed project could result in potentially significant air quality impacts. Consistent with the District's guidance, if a project meets all of the screening criteria then the project would result in a less than significant air quality impact and a detailed air quality assessment is not required for the project. The construction and operational screening criteria for single-family residential land uses is 114 and 325 dwelling units, respectively.

*Existing Emissions Sources*

There is currently one single-family residential unit at 1260 Westridge Drive. The site consists of 11,065 square feet of building area, 28,890 square feet of other impervious surfaces (gravel driveways, patios, etc.), approximately 15,200 square feet of common, paved driveway, and landscaped areas. The existing landscaped areas generate emissions from the operation of gasoline powered equipment such as lawnmowers, leaf blowers, etc. The existing building space generates emissions from fuel combustion for heating purposes. The existing residential land uses are also assumed to generate up to 10 vehicle trips per day to and from the site. There are no permitted emission generating units on-site, however, there is one 120 horsepower (hp), propane-fired emergency generator that is tested once every three months. The closest permitted stationary source of emissions is located off-site approximately 3,200 feet south of the proposed project.

*Proposed Emission Sources*

The tentative map could increase the number of single family residential units at the site from one to three or result in a combination of residential units and accessory structures. The proposed tentative map would result in up to 19,015 square feet of building area, 36,330 square feet of other impervious surfaces (e.g., gravel driveways, patios, etc.), approximately 16,000 square feet of paved, common driveway, and landscaped areas. Landscaped and residential areas would continue to generate emissions from landscaping equipment, residential heating, and vehicle trips. The proposed tentative map is assumed to increase vehicle trips per day from the site by 40 trips per day.

Site development would generate short-term construction emissions. Project construction activities would include on- and off-site trenching for utility pipelines, site grading (including foundations), building construction, and architectural coating. These activities are discussed further under the impact analysis below.

*Sensitive Receptors*

A sensitive receptor is generically defined as a location where human populations, especially children, seniors, and sick persons, are located where there is reasonable expectation of continuous human exposure to air pollutants. These typically include residences, hospitals, and schools.

The site is surrounded by residential land uses and approximately 25 residences are located within 1,000 feet of the property boundary. The Carillion Preschool-Christ Church is located approximately 1,400 feet southwest of the site.

*Would the project:*

**a) Conflict with or obstruct implementation of the applicable air quality plan?**

**Less Than Significant Impact.** The proposed project would not conflict with or obstruct implementation of the BAAQMD's *2010 Clean Air Plan*. The 2010 CAP includes particulate matter and ozone pre-cursor pollutant emissions of reactive organic gases (ROG) and oxides of nitrogen ($NO_X$) generated from construction, natural gas combustion, and mobile source activities throughout the BAAQMD in its emissions inventories and plans for achieving attainment of air quality standards.

**b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

**Less Than Significant Impact.** The proposed project would generate short-term construction and long-term operational emissions, however, these emissions would not violate air quality standards nor contribute to an air quality violation.

*Short-Term Construction Emissions*

The proposed project is below the BAAQMD's single-family land use criteria air pollutant construction screening level size of 114 dwelling units and would not require demolition activities, extensive site preparation, material transport (i.e., greater than 10,000 cubic yards of soil import/export), or the simultaneous occurrence of more than two construction phases (e.g., trenching and grading, paving and building construction). Consistent with the BAAQMD's *CEQA Air Quality Guidelines*, projects that meet these screening criteria would result in a less than significant air quality impact and do not require a construction air quality assessment.

Portola Valley Code §15.12.170 requires all graded surfaces to be wetted or suitably contained to prevent nuisance from dust or spillage on town streets and adjacent properties and equipment, materials, and roadways to be used in a manner or treated so as to prevent excessive dust.

Per BAAQMD CEQA guidelines, the Applicant would incorporate the following best management practices to further reduce the magnitude of potential construction emissions:

*Construction Best Management Practices*

1) Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) two times per day;
2) Cover all haul trucks transporting soil, sand, or other loose materials off-site;
3) Wash all trucks and equipment, including tires, prior to leaving the site;
4) Use wet power vacuum street sweepers at least once per day to remove all visible mud or dirt track-out adjacent to Westridge Drive (dry power sweeping is prohibited);
5) Vehicle speeds on unpaved roads shall not exceed 15 miles per hour;
6) Pave all roadways, driveways, and sidewalks as soon as possible and lay all building pads as soon as possible after grading unless seeding or soil binders are used;
7) Suspend excavation and grading activities when average wind speeds exceed 20 miles per hour;

8) Minimize idling time to five minutes and post signs reminding workers of this idling restriction at project access points and equipment staging areas.
9) Require a certified mechanic to check and determine that all equipment is running in proper condition prior to construction operations;
10) Properly maintain and tune all construction equipment in accordance with manufacturer's specifications;
11) Post a publicly visible sign with the telephone number and person to contact at the Portola Valley Department of Public Works regarding dust complaints. The Department of Public Works shall respond and take corrective action within 48 hours. The publicly visible sign shall also include the contact phone number for the Bay Area Air Quality Management District to ensure compliance with applicable regulations.

*Long-Term Operational Emissions*

The proposed project would result increase the number of single family residences at the site from one to three and result in increases in total building space, impervious surfaces, and common, paved driveway space. The additional building and impervious surface space proposed for Lots A and C would be located in areas that are currently landscaped. Thus, project would reduce the total amount of landscaped areas at the site.

The two new single family homes would generate operational emissions from area sources such as natural gas heating and landscaping equipment (e.g., mowers, blowers, etc.) as well as emissions from up to 40 vehicle trips. No new back-up generators are proposed at this time.

The development of two single-family housing units is below the BAAQMD single-family land use criteria air pollutant operational screening level size of 325 dwelling units. Consistent with the BAAQMD's *CEQA Air Quality Guidelines*, projects that are below this screening criteria threshold would not result in emissions that exceed BAAQMD significance thresholds. The project, therefore, would not result in a significant impact to air quality from long-term operational emissions.

**c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

**Less Than Significant Impact.** As discussed in a) and b) above, project would not result in construction or operational emissions that exceed BAAQMD thresholds of significance. In developing its CEQA significance thresholds, the BAAQMD considered the emission levels at which a project's individual emissions would be cumulatively considerable. The BAAQMD considers project's that result in emissions that exceed its CEQA significance thresholds to result in individual impacts that are cumulatively considerable and significant. Since the proposed project would not individually exceed any BAAQMD CEQA significance thresholds the proposed project would result in less than significant cumulative air quality impacts.

**d) Expose sensitive receptors to substantial pollutant concentrations?**

**Less Than Significant Impact.** The proposed project would site two new receptors (homes) in Portola Valley. The proposed project is not located in an impacted community, as identified under the BAAQMD's Community Air Risk Evaluation (CARE) program, which the

BAAQMD initiated in 2004 to identify locations with high levels of risk from toxic air contaminants (TACs).

The closest stationary source of emissions to the project is a small cogeneration system (Facility ID 6288) located at 501 Portola Road, approximately 3,200 feet southwest of the closest project property boundary. The closest surface street to the project is Westridge Drive, which has an estimated average daily traffic volume of 4,081 trips per day (CEHTP 2010). The closest highways to the project are California State Route (SR) 35, SR 84, and Interstate 280, all of which are located more than one mile from the project site. Consistent with the BAAQMD's *Recommended Methods for Screening and Modeling Local Risks and Hazards*, since there are no stationary and roadway sources within 1,000 feet of the project the risk and hazards from $PM_{2.5}$ and carcinogenic and non-carcinogenic toxic air contaminants are considered less than significant (BAAQMD 2010c).

The proposed project could result in approximately 40 vehicle trips per day and would not increase traffic volumes above BAAQMD carbon monoxide screening levels of 44,000 vehicles per hour or 24,000 vehicles per hour where horizontal or vertical mixing is limited due to features such as tunnels, garages, underpasses, canyons, or below grade roadways.

Project-related construction activities would emit $PM_{2.5}$ from equipment exhaust. Nearly all of the project's $PM_{2.5}$ emissions from equipment exhaust (approximately 1.1 lbs per day) would be diesel particulate matter (diesel PM), a TAC. Site grading, trenching, and building construction would occur intermittently during the daytime weekday period for up to nine months. Although project construction would emit criteria and hazardous air pollutants, these emissions would be well below the BAAQMD's construction thresholds of significance. In addition, the short construction period for the project and the distance and vegetation between the construction sites and existing homes would reduce pollutant concentrations at sensitive receptor locations to less than significant levels.

**e) Create objectionable odors affecting a substantial number of people?**

**Less Than Significant Impact.** Short-term odors resulting from project construction would be dissipated by vegetation and trees between the construction sites and surrounding sensitive receptor locations and would not affect a substantial number of people. The proposed project would not create long-term objectionable odors that would affect a substantial number of people.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.4 BIOLOGICAL RESOURCES --** Would the project: | | | | |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | ☐ | ☒ | ☐ | ☐ |
| b) 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 Game or US Fish and Wildlife Service? | ☐ | ☒ | ☐ | ☐ |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | ☐ | ☐ | ☐ | ☒ |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | ☐ | ☐ | ☒ | ☐ |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☒ | ☐ | ☐ |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | ☐ | ☐ | ☐ | ☒ |

**Environmental Setting**

The project site contains oak woodland, riparian, and suburban landscaping habitats. It is bordered on three sides by drainages, including Corte Madera Creek and an unnamed drainage that flows into Corte Madera Creek (Figure 8 Biological Resources). The oak wood

woodland is dominated by coast live oak (*Quercus agrifolia*) and California bay laurel (*Umbellularia californica*), and also contains madrone trees (*Arbutus menziesii*); the landscaping includes mature redwood trees (*Sequoia sempervirens*) and Monterey pine trees (*Pinus radiata*) as well as lawn, meadow and shrubs. The riparian habitat is confined to the banks of Corte Madera Creek and is dominated by oak woodland species. There are no wetlands or serpentine soils on the site. The site contains 256 trees (oak, bay, madrone, redwood, fir and maple) that qualify as "significant" trees under Portola Valley ordinance (see Figure 4 Topographic Survey Sheets 1-6).

Portola Valley provides habitat for several special-status plant and animal species. One is known to occur on the project site (San Francisco dusky-footed woodrat, *Neotoma dipodomys annectens*), and several others were assessed for the likelihood to occur in habitat on the site, as described below. Mitigation Measures are recommended to prevent significant impacts to protected species, including the woodrat, nesting birds, and bats.

Corte Madera Creek is a perennial creek. The project site is on Corte Madera Creek upstream of Searsville Dam and Reservoir. Corte Madera Creek is in the watershed of San Francisquito Creek, which provides habitat for special status species including the federally listed steelhead (*Onchorhynchus mykiss*; threatened), the federally listed California red-legged frog (*Rana aurora draytonii*; threatened), and the western pond turtle (*Actinemys marmorata*; California species of special concern). Because the portion of Corte Madera Creek on the project parcel is upstream of Searsville Dam, the trout populations cannot reach the ocean, thus they are not considered to be anadromous populations and are not regulated by NOAA Fisheries (G. Stern, NOAA Fisheries, pers. comm.). The red-legged frog and western pond turtle are discussed in more detail below.

The site perimeter is variously fenced with old chainlink, two strand barbed wire, and solid wood fencing. Some of this fencing is overgrown with poison oak, English ivy, or other vegetation, and in some locations, particularly on proposed Lot A, the chainlink fence provides a support for the stick houses of the San Francisco dusky footed woodrat. Nearly all of the fencing along Corte Madera Creek is within the 20-foot setback from the top of creek bank defined by Town as the setback for fences in creek zones (see Regulatory Setting, below).

*Special Status Species*

Based on information from the California Natural Diversity Database (CNDDB) and the Portola Valley Sensitive Biological Resources Assessment and Fuel Hazard Assessment (April 2010), there are several special status species that could occur at the project site. These are described below, and potential impacts to these species are discussed in the response to the checklist questions (see "Discussion" below).

**Western pond turtle** (*Actinemys marmorata*; California Species of Concern). Western pond turtle ranges in size from 3.5 to 7 inches and is the only freshwater turtle native to the San Francisco Bay Area. It occurs in ponds, small lakes, marshes, streams and irrigation ditches with abundant vegetation. It is also found in marshes, streams, rivers, reservoirs and occasionally brackish water. The Western pond turtle feeds on aquatic plants (such as pond lilies), beetles, aquatic invertebrates, fishes, frogs and carrion. It uses basking sites such as partially submerged logs, rocks, mats of floating vegetation or open mud banks, as well as underwater retreats to hide from predators and humans. Females deposit their eggs in nests in banks or in the case of foothill streams, in upland areas away from the stream. Nests have been observed in many soil types, from sandy to very hard, and have been found up to 400 meters (1300 feet) from the water. Certain fish species, bullfrogs, garter snakes, wading birds and some mammals prey on hatchlings and juveniles. Western pond turtle is known to occur in low

numbers in San Francisquito Creek and in higher numbers in ponds on Midpeninsula Regional Open Space District lands. There are no sightings of Western pond turtle in Portola Valley in the CNDDB, but suitable habitat exists in the creeks and ponds. The western pond turtle occurs in very low numbers in the San Francisquito Creek watershed. According to studies done by Stanford University, surveys in creeks and streams upstream of Searsville Reservoir have not documented the presence of pond turtles since 2004 (USFWS April 2010).

**California red-legged frog** (*Rana draytonii*; federal Threatened and California Species of Special Concern; CRLF hereafter). The California red-legged frog occurs in grassland, riparian woodland, oak woodland, and coniferous forest but requires quiet freshwater pools, slow-flowing streams, and freshwater marshes with heavily vegetated shores for breeding. These frogs typically stay near the shore hidden in vegetation rather than in open water. Red-legged frogs frequently occupy seasonal bodies of water, and in some areas these habitats may be critical for persistence. It is speculated that CRLF may lie dormant during dry periods of the year or during drought. CRLF are thought to disperse widely during autumn, winter, and spring rains. Juveniles use the wet periods to expand outward from their pond of origin and adults may move between aquatic areas from summering habitat to breeding locations. Frogs disperse through many types of upland vegetation and use a broader range of habitats outside of the breeding season. California red-legged frogs have been observed to make long-distance movements that are straight-line, point to point migrations rather than using corridors for moving in between habitats. Dispersal distances are considered to be dependent on habitat availability and environmental conditions (USFWS 2008). Other important microhabitat features include overhanging vegetation, such as willow boughs that contact the water, overhanging banks formed by tree-root masses and retreat sites at water levels that are close to relatively deep, still water. Adult CRLF are strongly associated with these microhabitats during surface activity (Jennings and Hayes, 1994). The CRLF occurs in very low numbers in the San Francisquito Creek watershed. CRLF are known to occur in Matadero Creek, Deer Creek, San Francisquito Creek, at Lawler Ranch, in Corte Madera Creek (at the end of Bear Gulch Road), and southeast of La Honda in privately owned ponds. They could also occur in Los Trancos Creek and Sausal Creek in Portola Valley.

**Nesting Birds** Nesting birds, including raptors, are protected by California Fish and Game Code section 3503, which reads, “It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.” Passerines and non-passerine landbirds are further protected under the Federal Migratory Bird Treaty Act. As such, the CDFG typically recommends pre-construction surveys for potentially suitable nesting habitat that will be directly (actual removal of trees/vegetation) or indirectly (noise disturbance) impacted by construction-related activities.

**Cooper’s hawk** (*Accipiter coopersii*; California Department of Fish and Game Watch List). The Cooper’s hawk is a medium-sized hawk that lives in forest habitats. It prefers dense canopied evergreen and deciduous forests or riparian zones, and tolerates human activity. Its main prey item is birds. It is expected to occur in Portola Valley.

**Raptors (birds of prey).** Birds of prey are protected by California Fish and Game Code. This includes any raptor, regardless of whether it is a special-status species. Raptors known to breed in San Mateo County include loggerhead shrike, white-tailed kite, northern harrier, sharp-shinned hawk, Cooper’s hawk, red-shouldered hawk, red-tailed hawk, golden eagle, American kestrel, prairie falcon, barn owl, western screech-owl, great horned owl, northern pygmy-owl, and northern saw-whet owl (Sequoia Audubon Society, April 2006). Portola Valley contains suitable breeding habitat for raptors in mixed evergreen forest, oak woodland, oak savannah, redwood forest, urban forest/grassland, aquatic and creeks/riparian vegetation types. The project site contains suitable nesting, forage and roosting habitat for several raptor species.

**San Francisco dusky-footed woodrat** (*Neotoma fuscipes annectens*; California Species of Special Concern). The San Francisco dusky-footed woodrat (SFDW) is one of eleven subspecies of the dusky-footed woodrat that live throughout California and the arid west. The range of the SFDW includes the coastal belt of San Francisco as far north as the Golden Gate, as far east as Walnut Creek in Contra Costa County and Niles Canyon in Alameda County, and south at least until the UC Santa Cruz campus (Hooper 1944). Although the dusky-footed woodrat is generally considered common throughout its range, its complex social structure makes this species sensitive to disturbance (Santa Cruz Mountains Bioregional Council, 2004).

The SFDW, a nocturnal mammal, occurs in a variety of brushy and wooded areas that provide cover from aerial and ground predators. Suitable SFDW habitat within the Santa Cruz Mountains includes forests that contain Douglas-fir, manzanita, tan oak, coast redwood, and willow species (Bankie, 2005). They are typically not found within open habitats such as grassland, but will traverse through such habitat for mating or range expansion even at the expense of temporary vulnerability to predators (Kelly, 1990).

The SFDW eats primarily woody plants, including leaves, flowers, nuts and berries. Specific food sources used throughout the Santa Cruz Mountains include coast live oak, coffeeberry, blackberry, gooseberry, poison oak, and honeysuckle. It is an opportunistic feeder, and has been observed to use non-native species as a food source, although these species are in the same genus as native plants known to be used by SFDW (TRA staff observation).

The SFDW builds stick structures (houses) for nesting that can be five feet long and four feet in height. SFDW is typically found living in colonies of 3 to 25 houses. These elaborate dwellings help protect the SFDW from seasonal temperature extremes and predators. Various chambers can be found within the houses, each serving a different purpose including food storage, nesting, and latrine. Other wildlife such as amphibians, reptiles and invertebrates also live in active SFDW houses without harm to or from SFDW. It is common for one SFDW to use several houses. However, some female SFDWs will occupy the same house for their entire lifespan, at which time one of her female offspring take over the house. Consequently, some SFDW houses are actively used for as long as 30 years (SCMBC, 2004). Male and female woodrats do not share nests; however, a female will share the nest with her litter for several months. A male woodrat territory typically overlaps 1 to 5 female woodrat territories but no other male territories. However, female territories will overlap with each other. Territory size varies greatly but male territories are typically larger than female territories. Male territories range from 0.3 to 0.6 acres and female territories range from 0.1 to 0.5 acre.

All vegetation types in Portola Valley provide suitable habitat for SFDW, and the species is relatively common. At least one colony occurs on the 11.6 acre parcel at 1260 Westridge, which provides enough habitat to support several colonies.

**Bats**. For the eleven bat species that are expected to occur in Portola Valley, roost habitats include tree cavities, caves, buildings, leaves of large trees/shrubs, rock piles, tree bark, and mines. Most occur year round. Breeding occurs in the winter and young are generally born May to July. In some cases the roosts are obvious by sight or smell; in other cases an acoustic survey is necessary. Two of the bat species are California Species of Special Concern, including the red bat (*Lasiurus blossevillii) and the pallid bat (Antrozus pallidus)*. All bat species are also protected under CDFG code.

**Ringtail** (*Bassariscus astutus*; California Fully Protected). Ringtails occur across the arid west usually at elevations from sea level to 4,600 feet. They are solitary, nocturnal and secretive, and are known to occur in rocky areas in chaparral, oak woodland, riparian woodland,

and conifer forests, with a home range up to 336 acres. Ringtail is similar to a raccoon in appearance, but smaller, and has a fox-like face and cat-like body. Its tail is generally longer than its body. They are excellent climbers. Ringtails eat small animals (rodents, birds, reptiles, and amphibians), carrion, and nuts and berries. Ringtails establish permanent dens in rock outcrops or tree hollows. Litter size ranges from two to four, and there is one litter per year. The CNDDB has no reported sightings of ringtail in the local area, but Portola Valley contains suitable habitat for this species and is within its known range.

**Special Status Plant Species**. Four plant species of concern feasibly occur in Portola Valley (TRA, 2010). The project site contains suitable habitat for one of those, Western leatherwood (*Dirca occidentalis*; California Native Plant Society List 1B). Western leatherwood is a shrub that occurs on cooler slopes in oak or riparian woodland. It is deciduous and blooms in fall or winter. Western leatherwood was not found to occur on the parcel during site surveys in February and March, however, areas below the top of the creek bank were not surveyed.

**Regulatory Setting**

Federal, state and local laws and regulations governing biological resources are discussed below. Violation of these laws and regulations would constitute a significant biological impact.

Biological resources in California are protected under federal and state laws. The laws that pertain to the biological resources found in Portola Valley include the:

- U.S. Endangered Species Act (protecting species listed by the federal government as threatened or endangered);
- U.S. Clean Water Act (protecting water quality and wetland habitat).
- U.S. Migratory Bird Treaty Act (protecting most U.S. birds);
- U.S. Bald and Golden Eagle Protection Act (protecting these eagles);
- California Environmental Quality Act (mitigating the environmental effects of human-initiated development);
- California Endangered Species Act (protecting species listed by the state as rare, threatened, or endangered under Fish and Game Code 2050 et seq);
- California Department of Fish and Game Code (Sections 1600-1607 that protect stream bed, bank and channel; 3500-3516 that protect nesting birds and fully-protected birds; 4700 and 5050 that protect fully-protected mammals, reptiles and amphibians).
- Town of Portola Valley Municipal Code

The laws that are most pertinent to the proposed project are the Migratory Bird Treaty Act, California Department of Fish and Game Code, and Town code described as follows.

*Migratory Bird Treaty Act (MBTA)*

The Migratory Bird Treaty Act implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the Act provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not.

In short, under the MBTA it is illegal to remove vegetation containing nests that are in active use, since this could result in killing a bird or destroying an egg. This would also be a violation of CDFG code.

*California Fish and Game Code*

CDFG is authorized under the California Fish and Game Code, Sections 1600-1607 to develop mitigation measures and enter into Streambed Alteration Agreements with applicants who propose projects that would obstruct the flow of, or alter the bed, channel, or bank of a river or stream in which there is a fish or wildlife resource, including intermittent and ephemeral streams.

Sections 3500-3516, 4700, 5050 and 5515 address Fully Protected species. Prior to the passage of CESA, the classification of Fully Protected was the State's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Subsequently, many Fully Protected species have been listed under the state and/or federal Endangered Species Acts. The only exceptions are golden eagle, white-tailed kite, trumpeter swan, northern elephant seal, and ringtail. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock. State Fully Protected species that may occur in Portola Valley include the San Francisco garter snake, white-tailed kite, and ringtail. No Fully Protected species are expected to be affected by the project.

Nesting birds, including raptors, are protected by the California Fish and Game Code section 3503, which reads, "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto." In addition, under Fish and Game Code section 3503.5, "it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto". Passerines and non-passerine landbirds are further protected under the Federal Migratory Bird Treaty Act. As such, the CDFG typically recommends surveys for nesting birds that could potentially be directly (actual removal of trees/vegetation) or indirectly (noise disturbance) impacted by project-related activities. Disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFG.

Some species that are otherwise not protected by the ESA or CESA and do not have a special CDFG or Fish and Game Code designation (e.g., fully protected) may still, under CEQA, be determined to be significantly impacted by a project. Considered nongame mammals, bats are protected by CDFG Code 4150, which reads "all mammals occurring naturally in California which are not game mammals, fully protected mammals, or fur-bearing mammals, are nongame mammals. Nongame mammals or parts thereof may not be taken or possessed except as provided in this code or in accordance with regulations adopted by the commission."

The CEQA planning process provides the main protection for bat roosts and maternity colonies. If a project were to destroy or disturb a roosting site for a bat maternity colony it could significantly impact the local and/or regional population of the species. Although loss of an individual bat would likely be considered an insignificant impact, loss of a roost site where multiple individuals are present would be considered significant, particularly for those listed as California species of special concern. This is because roost sites may be limited in availability and often have very specific habitat and/or microclimate conditions. When a roost site is lost,

individuals may not be able to find an alternate roost in sufficient time for protection from the elements before expiring.

*Town of Portola Valley Zoning Ordinance*

Chapter 15.12 Site Development and Tree Protection

> "A. The following protections are the minimum required and the approving authority may require additional protection measures:
>
> > 1. A fence shall be built around the dripline of the tree(s) prior to any work, and no construction activities shall be carried on within the dripline. Construction activities shall include but not be limited to storage of materials, dumping of waste materials and parking of vehicles,
> > 2. Permits for construction within a dripline of any significant trees shall include: provisions for hand trenching within the dripline; construction of approved tree wells to protect against fill; prohibition of cuts or fills within four feet of a tree base; and review of any cutting or trimming,
> > 3. Damage to significant trees shall be cared for by a licensed tree specialist familiar with local native trees and town regulations regarding same, with notice to the planning coordinator,
> > 4. Posting of a bond or deposit to insure protection of significant trees during construction;
>
> B. Use of measures to effect erosion control, soil and water retention and limitation of adverse environmental effects relating to shade, noise buffers, protection from wind, air pollution and historic features;
>
> C. Replacement of trees removed with other trees on the native plant list, as near as possible to the original location, unless practical reasons preclude this option."

| | (C) | (D) |
|---|---|---|
| Coast Live Oak (Quercus agrifolia) | 36" | 11.5" |
| Black Oak (Quercus kelloggii) | 36" | 11.5" |
| Valley Oak (Quercus lobata) | 36" | 11.5" |
| Blue Oak (Quercus douglasii) | 16" | 5" |
| Coast Redwood (Sequoia sempervirens) | 54" | 17.2" |
| Douglas Fir (Pseudotsuga menziesii) | 54" | 17.2" |
| California Bay Laurel (Umbellularia californica) (If multiple trunks, measurements pertain to largest trunk) | 36" | 11.5" |
| Big Leaf Maple (Acer macrophyllum) | 24" | 7.6" |
| Madrone (Arbutus menziesii) | 24" | 7.6" |

"Significant tree" means: a tree listed in the historic element of the general plan; or a tree native to the Portola Valley area which is listed below, having a trunk or multiple trunks with a total circumference (C) or diameter (D) greater than the size indicated, measured fifty-four inches above means natural grade.

Chapter 18.43 Fences

> "Along riparian corridors, fences shall be set back a minimum of twenty feet from the top of a creek bank. The top of the creek bank shall be determined on a case-by-case basis by Town Planning staff or the ASCC based on physical inspection of site conditions."

Chapter 18.59.10 Purposes of Creek Setbacks

> "A. The overall purpose of this chapter is to improve the quality of creek bank protection measures used on town creeks, discourage practices that pose a risk to property improvements and neighboring properties, and protect the unique scenic qualities and habitat values of the creek environment that sustain wildlife by furnishing habitation, freshwater and migration corridors. It is envisioned that this chapter will benefit creekside property owners, residents of the town and region, and the overall environmental quality of the creeks and adjacent habitats. The measures are intended to help ensure that, over time, changes within creek setbacks will help restore the creeks and creeksides to a healthy natural environment.
>
> B. The specific purposes of the setbacks are:
>
> 1. To keep new buildings out of range of potential creekbank failure and flooding.
> 2. To provide for the review of modifications or replacements of existing structures and impervious surface areas within creek setbacks in order to prevent further encroachment, and to encourage decreasing existing encroachments when modifications or replacements take place."

Chapter 18.59.100 - Vegetation

> "Removal of existing non-native vegetation in creek setbacks is encouraged, and new creek stabilizing vegetation is to be selected from the town's list of riparian vegetation, or vegetation shown to be a native species of this watershed. Owners are encouraged to select from the town's list of riparian vegetation, or vegetation shown to be native species of this watershed, for all plantings in the creek setback area."

**Discussion:**

*Would the project:*

**a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

**Less Than Significant Impact with Mitigation.** The project site contains occupied habitat for San Francisco dusky-footed woodrat (see Figure 8, Biological Resources), suitable habitat for nesting birds, including raptors, protected by California Fish and Game code and the Migratory Bird Treaty Act, and suitable roost sites for bat species protected by California Fish and Game code. Project activities that result in the removal of trees, shrubs, or the perimeter fencing that physically supports woodrat houses could result in a violation of California Fish and Game code and a significant biological impact.

The conceptual building footprints are located within existing lawn areas and will not result in significant biological impacts. If the subdivision map is recorded, the entrance gate will

be moved so that it is at least 50 feet from the front property line, and the existing driveway will be widened to meet fire access requirements. Nine "significant" trees, as defined by Town ordinance, are within the driveway easement ( 2 coast live oaks, 2 big-leaf maples, and 5 bay laurel trees), but are outside of the proposed pavement area. It is possible that one oak (28-inch) and two bay laurel trees (12-inch, 14-inch) that are near the pavement edge will have to be removed when the entrance driveway is widened. Some vegetation at the intersection with Westridge Drive will be removed in order to improve sight distance for drivers, but this would not affect any "significant" trees. The extension of a driveway from Lot B to Lot A could result in the removal of an additional bay tree. Per Town ordinance, these trees will be replaced with native tree species in the same vicinity at a one-to-one ratio. The California Department of Fish and Game recommends replacing oaks at a three-to-one ratio in order to mitigate the loss of habitat provided by these trees; a higher ratio increases the chance that the trees will grow to maturity and provide wildlife habitat.

**Table 3.4-1 Significant Trees Potentially Removed for Infrastructure Improvements**

| Location | Species | Size (diameter in inches) |
|---|---|---|
| Common driveway | Bay laurel | 12 |
| Common driveway | Bay laurel | 14 |
| Common driveway | Coast live oak | 28 |
| Driveway to Lot A | Bay laurel | 12 |

The Town will require the perimeter fencing be brought into compliance with the 20-foot top-of-bank setback when the subdivision map is recorded. In some places the existing chain link fence supports San Francisco dusky-footed woodrat houses that are in active use. In other areas the fence is overgrown with vegetation and provides visual screening (see section 3.1 Aesthetics). Loss of the vegetation on the fence would not result in a significant biological impact; in fact removal of ivy in the creek zone would have a beneficial biological impact by removing an invasive non-native plant species. In some places removal of fence post footings along the top of the creek bank could result in damage to the creek bank, and removal of the fence where it supports existing woodrat houses would have a significant impact on San Francisco dusky-footed woodrat. The sections of the fence that support screening vegetation and/or woodrat houses are shown on Figure 3.1-1.

Several special status species are not expected to be impacted by the project. Western pond turtle could occur in Corte Madera Creek, however, the creek banks adjacent to the project are nearly vertical and western pond turtles are not expected to occur on the project site and be impacted by the project. The project will not adversely impact western pond turtle. California red-legged frog could occur in Corte Madera Creek adjacent to the project site, but because of the steep creek banks and lack of habitat on the parcel, it is not expected to occur in the driveway or building footprint areas at 1260 Westridge. It is unlikely that the secretive ringtail occurs at 1260 Westridge and the project will not impact this species. Western leatherwood was not found to occur on the parcel, and no changes to the creek banks are proposed as part of the project.

The project could result in adverse impacts on special status species and could conflict with local policies protecting biological resources, such as significant trees, special status species and riparian vegetation. Measures are recommended to avoid sensitive resources, and with these measures the project will not have a significant biological impact. The project will not affect wetlands (none are present), will not interfere with wildlife movement, and is not in an area covered by a Habitat Conservation Plan or Natural Communities Conservation Plan.

**Impact BIO-1**: Removal of trees as a result of driveway modifications will remove wildlife habitat and could result in a violation of California fish and game code (protecting birds and bats) and the federal Migratory Bird Treaty act.

**Mitigation Measure BIO-1**: To minimize the impacts of tree removal on wildlife and comply with local, state and federal regulations, the project shall:

1. Protect significant trees during construction and replace trees in accordance with the Town's tree ordinance. In addition, replace oak trees that are removed as a result of the project with native oak species at a three-to-one ratio (plant three trees for every one tree removed);
2. Prior to removing the trees, conduct a survey of the trees and surrounding area for active bird nests and of the specific trees for roosting bats. The survey shall be done by a biologist with the necessary expertise, including being able to recognize bird breeding behavior and acoustically measure for bats. If nesting is confirmed or is highly likely, do not remove the trees until nesting is complete (the nesting season is generally February 1- August 31). Roosting bats shall be excluded before the tree is removed, the tree shall be removed at dusk, or other measure recommended by the bat biologist that minimizes bat mortality. If a maternal roost is detected (none have been observed onsite to date), that roost shall either not be removed or shall be replaced as specified by the bat biologist.

**Effectiveness:** These measures will replace habitat removed by the project, minimize impacts on bird and bat species, and assure compliance with local, state and federal regulations.
**Implementation:** Condition of PUD and incorporated into site plans and future construction contracts.
**Timing:** Within two weeks prior to tree removal. Tree protection to be in place prior to construction and maintained during construction.
**Monitoring:** A report of the results of the nesting/roosting surveys shall be provided to Portola Valley. The Town shall review all appropriate engineering and site plan documents for inclusion of tree protection and replacement measures.

Implementation of Mitigation Measure BIO-1 would reduce Impact BIO-1 to a less than significant level.

**Impact BIO-2**: Loss of San Francisco dusky-footed woodrats as a result of removal of active San Francisco dusky-footed woodrat houses for driveway or fence modifications.

**Mitigation Measure BIO-2**: To minimize the impacts on woodrats the project shall:

1. Delay fence removal where the existing fence supports an active woodrat house until such time that the woodrat has voluntarily vacated and the house is no longer in active use;
2. Prior to driveway construction, conduct a survey to determine if woodrat houses are located in or adjacent to the area of disturbance. If an active house is located adjacent to the area of disturbance, it shall be protected with a five-foot buffer zone. If an active house is located within the area of disturbance it shall either be avoided or shall be relocated outside of the area of disturbance in consultation with the California Department of Fish and Game. Relocation currently entails carefully deconstructing the house and reconstructing it in a suitable location nearby where it will have at least a five foot buffer from the area of disturbance.

**Effectiveness:** These measures will minimize loss of San Francisco dusky-footed woodrat and assure compliance with local, state and federal regulations.
**Implementation:** Condition of PUD and incorporated into site plans and future construction contracts.
**Timing:** During final construction design.
**Monitoring:** A report of the results of the woodrat survey shall be provided to Portola Valley. The Town shall review all appropriate engineering and site plan documents for inclusion of these measures. If woodrat houses are relocated, a report of the consultation with the California Department of Fish and Game and the methods and results of the activity shall be provided to the Town of Portola Valley.

Implementation of Mitigation Measure BIO-2 would reduce Impact BIO-2 to a less than significant level.

**b) 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 Game or US Fish and Wildlife Service?**

**Less Than Significant Impact with Mitigation.** The project parcel is adjacent to Corte Madera Creek and an unnamed drainage. The project does not propose any construction in the creek that would impact riparian habitat. No other sensitive natural communities occur on the project site. In order to be in compliance with Town fencing regulations, existing fencing must be moved out of the twenty-foot setback from the top of the creek bank of Corte Madera Creek. Removal of the footings for the fence posts could result in the removal of riparian vegetation. It is recommended that these be left in place. Any replacement fence must comply with Town fencing regulations and cannot be placed in the 20-foot setback from the top-of-bank of the creek, thus new fencing would not impact riparian vegetation.

**Impact BIO-3**: Removal of fence post footings could result in the loss of creek bank and riparian vegetation on the creek bank.

**Mitigation Measure BIO-3**: When removing the fence on the top of the creek bank, leave fence post footings in place.

**Effectiveness:** Would minimize soil disturbance on the top of the creek bank where footings are located.
**Implementation:** Condition of PUD and incorporated into site plans and future construction contracts.
**Timing:** During final construction design.
**Monitoring:** The Town shall review all appropriate engineering and site plan documents for inclusion of this measure.

Implementation of Mitigation Measure BIO-3 would reduce Impact BIO-3 to a less than significant level.

**c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

**No Impact.** The project site does not contain wetlands, and no project activities are proposed in Corte Madera Creek or the unnamed drainage, which are Waters of the US

protected by the Clean Water Act. If the parcel is connected to the sanitary sewer, the line is proposed to be drilled underground through an existing utility easement starting from a pit on the already developed portion of Lot B, and there would not be any above ground impacts. The line would extend under a narrow portion of the unnamed drainage where it flows behind the existing residence.

**d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

**Less Than Significant Impact.** The perimeter is currently fenced, however there are gaps in the fence that allow wildlife movement, and portions of the fence will be removed. New fencing will comply with Town requirements, including a minimum 20-foot setback from the top of bank, leaving a corridor available for wildlife movement around the site. No project activities are proposed in Corte Madera Creek or the unnamed drainage, thus any wildlife migration occurring there would not be impacted.

**e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

**Less Than Significant Impact with Mitigation.** As noted under a) above, the project could result in the removal of significant trees as defined by Town ordinance. The project will comply with Town ordinance, and additional tree mitigation is included in Mitigation Measure BIO-1.

**f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

**No Impact.** There are no existing or planned HCP/NCCPs that include this parcel.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.5 CULTURAL RESOURCES --** Would the project: | | | | |
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | ☐ | ☒ | ☐ | ☐ |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | ☐ | ☒ | ☐ | ☐ |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | ☐ | ☐ | ☐ | ☒ |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | ☐ | ☒ | ☐ | ☐ |

**Environmental Setting**

According to the Portola Valley General Plan Historic Element, the town's earliest inhabitants were the Ohlone Indians who hunted and gathered their food from their surrounding environment. Permanent settlement began in 1833 when Maximo Martino and Jose Domingo Peralta received the first Mexican land grant in what is now the Rancho el Corte de Madera. The area's economy was largely influenced by the logging of the valley's redwoods until the turn of the century. After the turn of the century Portola Valley became a summer retreat and vacation destination for wealthy San Franciscans who bought land in large estates. In the 1920s and 1930s many vacation cottages were built in the area. Structures and other remnants of these early settlements are spread throughout the valley and there is no central historic area.

A literature review was performed for project by the California Historical Resources Information System (CHRIS), and reported in a letter dated February 14, 2011(Appendix E). The literature review cited a previous study (#S-3171) by Chavez (1981) that covered a portion of the proposed project area and identified no cultural resources. The study was a regional overview and did not involve a field survey. The CHRIS report concluded that the project area has the possibility of containing unrecorded archaeological sites, and recommended that contact be made with the local Native American tribe(s) regarding the project and that the existing home on the site be evaluated for its historical value.

The applicant does not propose to alter any buildings on the property. If a future owner chooses to demolish or remodel the existing house, that owner must apply to the Town for a permit, and the Town will require a historic evaluation and CEQA analysis prior to issuing a permit for demolition or remodeling.

The conceptual building footprints are located on relatively flat ground, one on an existing lawn, and one in an existing meadow. The footprints are located away from the creek zone. Depending on the design, these buildings may not require significant excavation, however, because of the location near Corte Madera Creek, which is in the San Francisquito

Creek watershed that was heavily used by the Ohlone, is it feasible that cultural resources are present.

**Discussion**

*Would the project:*

**a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?**

**Less Than Significant Impact with Mitigation.** The project does not proposed removal or alteration of any portion of the existing residence, and thus has no impact on historic resources. However, it has not been determined if the residence has historic value. If demolition or remodeling of the residence is proposed by a future owner, the historical value of the residence will be addressed as part of future discretionary approvals by the Town. The following measure is included to insure the property owner is aware of this condition.

**Impact CUL-1**: A future owner could propose demolition of the existing structure.

**Mitigation Measure CUL-1**: If the property owner intends to demolish or remodel the existing buildings the property owner shall submit plans to the Town and provide a report regarding the historic value of the existing buildings prior to demolition. The Town shall evaluate the plans under a separate CEQA analysis at that time.

| | |
|---|---|
| **Effectiveness:** | This measure would avoid the loss of a significant historic resource if one exists. |
| **Implementation:** | The Town shall include this measure in the PUD permit. A future applicant is responsible for future submittals to the town. |
| **Timing**: | At such time as a future owner requests permits to demolish or remodel the existing buildings. |
| **Monitoring:** | The Town's CEQA analysis will provide evidence that this measure was implemented. |

Implementation of Mitigation Measure CUL-1 would reduce impact CUL-1 to a less than significant level.

**b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?**

**Less Than Significant Impact with Mitigation.** The cultural resources literature review for the project states that there is a possibility that unrecorded archaeological site(s) may be located in the project area. Further archival research and field study for the project area were recommended. It also states that the local Native American tribe(s) should be contacted regarding traditional cultural and religious heritage values. Therefore, the following mitigation measures are recommended.

**Impact CUL-2**: The project could uncover unrecorded historic or prehistoric archaeological materials.

**Mitigation Measure CUL-2**: The property owner shall contract with a qualified archaeologist to inspect the property site prior to any ground disturbing activities to search for potentially significant historical deposits. In the event that any such deposits are noted, the Town Department of Public Works shall develop a plan for their evaluation. If evaluative testing

demonstrates that additional construction related earthmoving would affect materials eligible for inclusion on the California Register of Historic Resources, the Town shall develop a plan for mitigating potential impacts (normally through limited hand excavation to retrieve a sample of materials for analysis) before work is allowed to recommence inside the project area.

**Effectiveness:** This measure would avoid impacts to historic or prehistoric archeological materials.
**Implementation:** The property owner shall incorporate this measure into all appropriate bid contract, and engineering and site plan (e.g. building, grading, improvement plans) documents.
**Timing**: Prior to site preparation activities.
**Monitoring:** The Town shall review all appropriate bid, contract, and engineering and site plan (e.g. building, grading, improvement plans) documents for inclusion of this measure.

Implementation of Mitigation Measure CUL-2 would reduce impact CUL-2 to a less than significant level.

**c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

**No Impact.** Paleontological resources are the fossilized evidence of past life found in the geologic record. Despite the tremendous volume of sedimentary rock deposits preserved worldwide, and the enormous number of organisms that have lived through time, preservation of plant or animal remains as fossils is an extremely rare occurrence. The skeleton of a sea-going mammal called a Paleoparadoxia was found while excavating in Ladera Sandstone Formation during the construction of the Stanford Linear Accelerator in 1964 (Lund and Gullard 2003). However, the project site is underlain by alluvial materials, and the chance of encountering paleontological materials is considered very low due to the lack of any known resources within the Town. Therefore, the project would not be expected to result in any adverse effects on these resources.

**d) Disturb any human remains, including those interred outside of formal cemeteries?**

**Less Than Significant Impact with Mitigation.** The cultural resources literature search did not note the existence of any known burials in the project area. However, there still remains a possibility that previously unknown buried human remains may be uncovered by project construction activities. Therefore, the following mitigation measure is proposed:

**Impact CUL-3:** Construction activities at the project site may uncover previously unknown buried human remains.

**Mitigation Measure CUL-3:** In accordance with Public Resource Code Section 5097.98, should human remains be found on the site no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains shall be disturbed until:

1. The San Mateo County Coroner is contacted to determine that no investigation of the cause of death is required, and
2. If the Coroner determines the remains to be Native American then:
    1) The coroner shall contact the Native American Heritage Commission within 24 hours;

2) The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased native American;
3) The most likely descendent may make recommendations 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 Public Resources Code Section 5097.98.

**Effectiveness:** This measure would avoid impacts to buried human remains.
**Implementation:** This measure shall be included on all building, grading and improvement plans.
**Timing**: During construction.
**Monitoring:** The Town shall review all appropriate contract, and engineering and site plan (e.g. building, grading, improvement plans) documents for inclusion of this measure.

Implementation of Mitigation Measure CUL-3 would reduce Impact CUL-3 to a less than significant level.

**Impact CUL-4**: Native American traditional, cultural, and religious heritage values may be adversely affected by project activities.

**Mitigation Measure CUL-4**: Local Native American tribes shall be notified of the project and afforded the opportunity to comment on project plans.

**Effectiveness:** Providing notification to the Local Native American tribes will allow them the opportunity to comment on the project to avoid affecting traditional cultural or religious heritage values.
**Implementation:** This measure shall be included on all appropriate bid, contract, engineering and site plans.
**Timing:** During preparation of project plans.
**Monitoring:** The Town shall review all appropriate bid, contract, and engineering and site plan (e.g. landscaping plans) documents for inclusion of this measure.

Implementation of Mitigation Measure CUL-4 would reduce Impact CUL-4 to a less than significant level.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.6 GEOLOGY AND SOILS --** Would the project: | | | | |
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | ☐ | ☐ | ☐ | ☒ |
| ii) Strong seismic ground shaking? | ☐ | ☐ | ☒ | ☐ |
| iii) Seismic-related ground failure, including liquefaction? | ☐ | ☐ | ☒ | ☐ |
| iv) Landslides? | ☐ | ☐ | ☒ | ☐ |
| b) Result in substantial soil erosion or the loss of topsoil? | ☐ | ☐ | ☒ | ☐ |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | ☐ | ☐ | ☒ | ☐ |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | ☐ | ☐ | ☒ | ☐ |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | ☐ | ☐ | ☒ | ☐ |

**Environmental Setting**

**Regional Geologic Setting**

The proposed project is located in the San Francisco Bay Region on the edge of the Coast Range Geomorphic Province in the eastern foothills of the Santa Cruz Mountains. The

local topography is dominated by a series of west- to southwest-trending spur ridges separated by broad swales. The site is situated within a local alluvial valley on the northeast side of Corte Madera Creek.

Three major active earthquake faults transect the San Francisco Bay Area trending northwest to southeast. The San Andreas Fault occurs roughly 1,100 feet southwest of the project site. The fault generally trends on a north-south axis with the Pacific Ocean tectonic plate to the west slowly moving north against the North American plate on the eastern side.

The San Gregorio Fault is located about 11 miles west of the site. The Hayward and Calaveras Faults occur on the east side of San Francisco Bay roughly 19 miles and 23 miles northeast of the project site. In addition, according to the Town's geologic map, an unnamed fault trace is mapped approximately 3,800 feet northeast of the existing (Lot B) building site.

*Soils and Seismicity*

The Town's Geologic Map shows the parcel located on Qal – Alluvial deposits which is generally described as poorly to moderately consolidated stream-laid deposits of gravel, sand, silt, and clay. The alluvium in this area is presumably underlain at depth by bedrock of the Santa Clara formation (Murray 2011). The Town's Geologic Movement map shows the parcel in an area designated SUN which is unconsolidated granular material (alluvium, slope wash, and thick soils) on ground level and gentle slopes; subject to settlement and soil creep, liquefaction possible at valley floor sites during earthquakes. The map also indicates there are no known faults or landslides on the parcel.

Significant earthquakes have occurred in this area and strong to violent ground-shaking in the project area can be expected as a result of a major earthquake on one of the active faults in the region. The U.S. Geological Survey (USGS) has estimated that there is a 63% chance that a magnitude 6.7 or greater earthquake will occur in the San Francisco Bay Area before 2032 (Working Group on California Earthquake Probabilities 2008). The probability of a 6.7 magnitude or greater earthquake occurring along individual faults was estimated to be 21% along the San Andreas Fault, 10% along the San Gregorio Fault, 27% along the Hayward-Rodgers Creek Fault, and 11% along the Calaveras Fault (Working Group on California Earthquake Probabilities 2008).

*Liquefaction and Lateral Spreading*

Liquefaction is the temporary transformation of loose, saturated granular sediments from a solid state to a liquefied state as a result of seismic ground shaking. In the process, the soil undergoes temporary loss of strength, which commonly causes ground displacement or ground failure to occur. Since saturated soils are a necessary condition for liquefaction, soil layers in areas where the groundwater table is near the surface have higher liquefaction potential than those in which the water table is located at greater depths. The San Mateo County Hazards Mitigations maps indicate that the lowland areas of the Town have a moderate to high potential for liquefaction. Regional liquefaction hazard mapping indicates that a seismic event on the Peninsula portion of the nearby active San Andreas Fault or an event on the entire San Andreas Fault could result in moderate to high liquefaction hazard portions of the Town. Recent mapping shows moderate to very high liquefaction susceptibility adjacent to Corte Madera Creek. Based on the Seismic Hazard Map completed for the Palo Alto Quadrangle, the project site occurs in an area with a potential for permanent ground displacements from liquefaction such that mitigation as defined in Public Resources Code Section 2593(c) would be required (California Department of Conservation 2006).

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other "free" face, such as an excavation boundary. Lateral spreading can result from either the slump of low cohesion and unconsolidated material or more commonly by liquefaction of either the soil layer or a subsurface layer underlying soil material on a slope, resulting in gravitationally-driven movement. Earthquake shaking leading to liquefaction of saturated soil can result in lateral spreading where the soil undergoes a temporary loss of strength. The project site could be highly susceptible to liquefaction hazards, indicating that lateral movement to an open face is possible.

**Regulatory Setting**

*Alquist-Priolo Earthquake Fault Zoning Act*

The Alquist-Priolo Earthquake Fault Zoning Act regulates development in California near known active faults due to hazards associated with surface fault ruptures. The Earthquake Fault Zones indicate areas with potential surface fault-rupture hazards, and specific geological investigations are required prior to development (Department of Conservation 1974). No Alquist-Priolo fault zones occur on the project site.

*Seismic Hazard Mapping Act*

The Seismic Hazard Mapping Act was passed in 1990 following the Loma Prieta earthquake to reduce threats to public health and safety and to minimize property damage caused by earthquakes. The act directs the U.S. Department of Conservation to identify and map areas prone to the earthquake hazards of liquefaction, earthquake-induced landslides, and amplified ground shaking. The act requires site-specific geotechnical investigations to identify potential seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy within the Zones of Required Investigation. As discussed above, the project site occurs in an area with a potential for permanent ground displacements from liquefaction such that mitigation as defined in Public Resources Code Section 2593(c) would be required (California Department of Conservation 2006).

*California Building Code*

Portola Valley enforces the 2007 California Building Codes (CBC) and requires all development within the Town to comply with the most current CBC standards. The CBC covers grading and other geotechnical issues, building specifications, and non-building structures. The CBC requires that a foundation and soil investigations report be prepared by a registered design professional for seismic design categories C, D, E, and F as defined by the CBC. The site-specific soil engineering and engineering geology reports shall provide measures to reduce potentially significant seismic hazards such as surface fault ruptures, ground shaking, liquefaction, and seismically-induced slope failures and settlement, regardless of the proposed grading on slopes. The reports would be reviewed by Town staff prior to approval of final project plans.

The CBC requires that any required geotechnical report(s)(i.e. engineering geology and soil engineering reports) be prepared by a registered professional to evaluate geologic and seismic hazards on proposed developments, as discussed above. The site-specific geotechnical report(s) shall provide measures to reduce potentially significant geologic hazards, such as expansive and corrosive soils, differential settlement, and slope stability. The engineering geology and soil engineering reports would be reviewed by Town staff prior to approval of final project plans.

*Portola Valley*

Portola Valley's Site Building Ordinance Chapter 15.12.080 (Site Development Permit Requirements Permit – Application) requires all new developments in the Town prepare soil and geology reports. The requirement is as follows:

15.12.080(B)5. Soil engineering report and, unless waived by the town geologist, an engineering geology report as provided for below. Where appropriate, final soil engineering and engineering geology reports shall be provided pursuant to the provisions of Section 15.12.140 (B).

a. Soil engineering report: The soil engineering report shall include data regarding the nature, distribution and strength of existing soils, conclusions and recommendations for grading procedures and design criteria for corrective measures when necessary, and opinions and recommendations covering adequacy of sites to be developed by the proposed grading. Recommendations included in the report and approved by the town engineer and town geologist shall be incorporated in the grading plans or specifications.

b. Engineering geology report: The engineering geology report shall include an adequate description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, and opinions and recommendations covering the adequacy of sites to be developed by the proposed grading. Recommendations included in the report and approved by the town geologist shall be incorporated in the grading plans or specifications.

The Town Geologist completed a geologic and geotechnical peer review of the project on February 24, 2011 (see Appendix C). This review included a site inspection and review of the Applicant's Preliminary Parcel Map, including grading and drainage plans, and other pertinent technical documents from the Town Geologist's office. The review identified that the subdivision is constrained by potentially expansive surficial soil materials, the potential for liquefaction of alluvial soil materials, creek embankment failures, and the potential for very strong to violent seismic ground shaking activity. The Town Geologist concluded that these constraints and hazards could be mitigated through geotechnical engineering design recommendations and standard industry construction techniques. The Town Geologist recommended that the Applicant's geotechnical consultant provide further creek setback and creek bank instability evaluations.

Therefore a preliminary engineering geologic and geotechnical study (PEG&GS) was prepared by Murray Engineers, Inc. (2011a) which involved a review of available geologic maps, project plans, creek alignment and creek bank scour zone maps, numerous site visits and preliminary mapping of portions of the site. A feasibility level subsurface investigation as well as limited laboratory testing to preliminarily assess subsurface conditions was also conducted. Supplemental information was also provided by Murray Engineers (2011b) which clarifies some of the findings. The PEG&GS concluded that "construction of the new, single-family residences on Lots A and C, along with the common driveway along the southwest property boundary, is feasible from both a geotechnical and engineering geologic perspective" (Murray Engineers, 2011b).

As stated in the PEG&GS, the recommendations contained in the report should be treated as informational only. Design-level engineering and geologic and geotechnical investigations should be used to further evaluate site-specific subsurface conditions in the area of proposed improvements and to provide detailed recommendations for the design and construction of proposed residences and associated improvements.

**Discussion:**

*Would the project:*

**a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**

**i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

**No Impact.** The project site is not located within a State of California designated Alquist –Priolo Earthquake Fault Zone (California Department of Conservation 1974). Earthquake fault zones are regulatory zones that encompass surface traces of active faults that have a potential for future surface fault rupture. The closest active faults to the site are the San Andreas Fault, located approximately 1,200 feet to the southwest (California Department of Conservation 1974), the San Gregorio Fault (11 miles west of the site) and the Hayward and Calaveras Faults (19 and 23 miles northeast of the site) (TRA 2000). Potential for fault rupture at the site is very low (Murray 2011a).

**ii) Strong seismic ground shaking?**

**Less Than Significant Impact.** The project site is located in the San Francisco Bay Area which is considered one of the most seismically active regions in the United States. Significant earthquakes have occurred in this area and strong to violent ground-shaking in the project area can be expected as a result of a major earthquake on one of the faults in the region. A permit is required for all new site development within the Town. As part of the permit application, the preparation of a site-specific soil engineering report and an engineering geology report are required. Preparation of the reports and inclusion of the reports' recommendations into the project plans reduces the seismic hazard risks of the project site to acceptable levels. Therefore the impact is considered less than significant.

**iii) Seismic-related ground failure, including liquefaction?**

**Less Than Significant Impact.** The project site is located in a seismic hazard zone for liquefaction according to the official Seismic Hazard Zone maps for the Palo Alto quadrangle (California Department of Conservation 2006). The preliminary parcel map identifies several driveway areas that are located within creek setback zones that could be affected by liquefaction of alluvial soil materials. The PEG&GS prepared by Murray Engineers Inc. (April 2011a) indicates that based on the depth of groundwater and the type of deposits encountered below 8 feet, the potential for liquefaction is considered low. As stated above, the Portola Valley Site Development Ordinance requires that site specific (design-level) soil engineering and engineering geology reports be prepared as part of a site development application and that all recommendations need to be incorporated into project plans. Preparation of these reports would lead to the development of site-specific design measures for future structures that would prevent and/or reduce the risks from ground failure and liquefaction at the project site to acceptable levels. Therefore the impact is considered less than significant.

**iv) Landslides?**

**Less Than Significant Impact.** The project site is flat with site elevations ranging from 445 feet on the eastern side of the property to 415 feet on the western side of the property. The

project site is not located in a seismically induced landslide hazard zone according to the seismic hazard zone maps for the Palo Alto quadrangle (California Department of Conservation 2006). The PEG&GS determined the building sites have a very low potential for landslides.

In the creek, shallow sloughing, erosion, and future undercutting of portions of the creek are the most probable form of slope failure. Supplemental information provided by Murray Engineers indicated that a hypothetical failure plane geometry of 2:1 projected from the base of the creek to the top of slope is considered a conservative setback requirement for the proposed driveway (Murray 2011b). The steepest creek bank slopes are located a minimum of 24 feet away from the currently proposed driveway improvements and are outside of this conservative setback. The formation of this wedge-type failure plane is not considered probable based on the historical performance of the creek bank slopes. In addition, local creek geometry, favorable soil conditions adjacent to the creek and the existing intertwined root systems of the numerous large diameter trees located between the proposed driveway and the top of creek banks, further suggest the potential for significant landsliding or creek erosion impacting the proposed driveway improvements is low (Murray 2011a, 2011b). Therefore, the impact is considered less than significant.

**b) Result in substantial soil erosion or the loss of topsoil?**

**Less Than Significant Impact.** The Town's General Plan states that in general, surficial deposits of alluvium and slope wash as well as landslide deposits can be expected to be most susceptible to erosion (Health and Safety Element Section 4131). The site contains alluvial deposits, but is also relatively flat. Several existing policies are in place to control erosion including Health and Safety element Section 4149 (Policies Concerning Erosion and Sedimentation) and Section 15.12.260 of the Portola Valley Code (Erosion control and landscaping) as stated above. These plans and polices require the preservation of natural slopes and existing vegetation, the planting of ground cover, and the re-use of topsoil. The implementation of Portola Valley plans and policies would reduce the potential for soil erosion and topsoil loss to a less than significant impact.

**c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**

**d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?**

**e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

**Less Than Significant Impact (c-e).** Laboratory testing in the PEG&GS revealed that surficial alluvial soils appear to be potentially expansive. Conventional slab-on-grade foundations underlain by a substantial thickness of aggregate base rock were recommended. The potential for ground lurching and lateral spreading of creek banks impacting driveway improvements and proposed building sites is considered low as there is abundant tree growth and vegetation cover surrounding the top of the creek bank area and the generally competent cohesive nature of near surface soils found in borings at the site (Murray 2011a). The potential for differential compaction was also determined to be low as surficial soil was found to be generally firm to hard and medium dense (Murray 2011a). However, a slight potential for differential compaction was noted in the soft to firm alluvial materials found in the upper 2 to 4 feet within the proposed building sites.

As stated above, the Portola Valley Site Development Ordinance requires that site specific soil engineering and engineering geology reports be prepared as part of a site development application. The preparation of these reports would lead to the development of site-specific design measures for future structures that prevent and/or reduce the risks from unstable and/or expansive soils to acceptable levels and ensure that site soils are engineered to support any proposed structures, including septic tanks. These measures would be incorporated into the project plans and, therefore, this impact is considered less than significant.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.7 GREENHOUSE GAS EMISSIONS --** Would the project: | | | | |
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | ☐ | ☐ | ☒ | ☐ |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | ☐ | ☐ | ☒ | ☐ |

**Environmental and Regulatory Setting**

Gases that trap heat in the atmosphere and affect regulation of the Earth's temperature are known as greenhouse gases (GHG). Common GHG include carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), hydrofluorocarbons (HFCs), and sulfur hexafluoride ($SF_6$).

GHG emissions from human activities contribute to overall GHG concentrations in the atmosphere and climate scientists have become increasingly concerned about the effects of these emissions on global climate change. Human (anthropogenic) production of GHGs has increased steadily since pre-industrial times and atmospheric $CO_2$ concentrations have increased from a pre-industrial value of 280 ppm to 387 ppm in 2010 (NOAA, 2010). The United Nations' International Panel on Climate Change (IPCC) fourth assessment report (AR4) concluded that recent regional climate changes, particularly temperature increases, are affecting many natural systems including water, ecosystems, food, coasts, and health (IPCC 2007). The AR4 concluded that most of the observed increase in global average temperature since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations (IPCC 2007a).

GHGs can remain in the atmosphere long after they are emitted. The potential for a GHG to absorb and trap heat in the atmosphere is considered its global warming potential (GWP). The reference gas for measuring GWP is $CO_2$, which has a GWP of one. By comparison, $CH_4$ has a GWP of 21, which means that one molecule of $CH_4$ has 21 times the effect on global warming as one molecule of $CO_2$. Multiplying the estimated emissions for non-$CO_2$ GHGs by their GWP determines their carbon dioxide equivalent ($CO_2e$), which enables a project's combined global warming potential to be expressed in terms of mass $CO_2$ emissions. Table 3.7-1 below presents the GWPs of common GHGs.

**Table 3.7-1. GHG Global Warming Potentials**

| Compound | Global Warming Potential (GWP) Relative to $CO_2$ |
|---|---|
| Carbon Dioxide ($CO_2$) | 1 |
| Methane ($CH_4$) | 21 |
| Nitrous Oxide ($N_2O$) | 310 |
| Hydrofluorocarbons (HFCs) | -- |
| HFC-23 | 11,700 |
| HFC-134a | 1,300 |
| HFC-152a | 140 |
| HCFC-22 | 1,700 |
| Sulfur Hexafluoride ($SF_6$) | 23,900 |

*Source: ARB 2009.*

In 2006, the California State Legislature adopted the California *Global Warming Solutions Act of 2006*, Assembly Bill (AB) 32, which required the California Air Resources Board (ARB) to: 1) determine 1990 statewide GHG emissions, 2) approve a 2020 statewide GHG limit that is equal to the 1990 emissions level, 3) adopt a mandatory GHG reporting rule for significant GHG emission sources, 4) adopt a Scoping Plan to achieve the 2020 statewide GHG emissions limit, and 5) adopt regulations to achieve the maximum technologically feasible and cost-effective reductions.

In 2007, the ARB approved a statewide 1990 emissions level and corresponding 2020 GHG emissions limit of 427 million metric tons of carbon dioxide equivalents (MMTCO2e) (ARB 2007). In 2008, the ARB published its *Climate Change Scoping Plan*, which projects, absent regulation or under a "business as usual" (BAU) scenario, 2020 statewide GHG emissions levels of 596 million MTCO2e and identifies the numerous measures (i.e., mandatory rules and regulations and voluntary measures) that will achieve at least 169 MMTCO2e of reductions and reduce statewide GHG emissions to 1990 levels by 2020 (ARB, 2008). Also in 2007, the ARB adopted its Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Title 17, CCR, Section 95100 – 95133 (17 CCR §95100 – 95133)), which requires facilities that emit greater than or equal to 25,000 metric tons of $CO_2$ annually to report their GHG emissions to the ARB.

Regionally, the BAAQMD has also adopted regulations and guidelines to track and reduce GHG emissions from stationary sources. In 2005, the BAAQMD established is Climate Protection Program to reduce pollutants that contribute to the global climate change. In 2008, the BAAQMD adopted a GHG fee of 4.4 cents per metric ton of GHG emissions that applies to permitted industrial facilities and businesses. In 2010, the BAAQMD released an updated inventory of Bay Area GHG emissions for base year 2007. The Bay Area emitted 95.8 MMTCO2e in 2007, with San Mateo County contributing 11.0 MMTCO2e to this total (BAAQMD 2010e).

The BAAQMD's *CEQA Air Quality Guidelines* contain guidance for lead agencies to asses and mitigate GHG emissions impacts. The BAAQMD has not adopted a threshold of significance for construction-related GHG emissions, but the District does encourage lead agencies to quantify and disclose construction-related GHG emissions, determine the significance of these emissions, and incorporate best management practices to reduce construction-related GHG emissions.

The BAAQMD maintains a CEQA GHG threshold of significance for land use projects such as residential developments of 1,100 metric tons of carbon dioxide equivalents (MTCO2e) (BAAQMD 2010c) or 4.6 MT CO2e per service population per year. The BAAQMD defines service population to be the total number of residents and employees that the project would serve. The BAAQMD considers projects that exceed the District's CEQA thresholds to have a significant air quality effect.

The BAAQMD's *CEQA Air Quality Guidelines* also contain screening criteria to provide lead agencies with a conservative indication of whether a proposed project could result in potentially significant air quality impacts. Consistent with the District's guidance, if a project meets all of the screening criteria then the project would result in a less than significant air quality impact and a detailed air quality assessment is not required for the project. The operational GHG screening criteria for single-family residential land uses is 56 dwelling units.

The project would be subject to a number of local and state regulations related to reducing GHG emissions from residential siting, design, and construction. These regulations are briefly summarized below.

*California 2010 Green Building Standards Code (CALGreen)*

The CALGreen code is the 11th of 12 parts to Title 24 of the California Code of Regulations, also known as the California Building Standards Code. The purpose of the CALGreen code is to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact, or positive environmental impact and encouraging sustainable construction practices relates to planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. The code becomes effective January 1, 2011.

*Portola Valley Code*

The Portola Valley Code contains a number of requirements related to "green" building practices and conservation of natural resources.

Title 8, Chapter 8.09 (Recycling and Diversion of Construction and Demolition Debris) requires construction and remodeling projects to divert from landfill at least 60 percent of the waste tonnage generated from construction debris. The town may grant an exception if more than 40 percent of project debris consists primarily of non-recyclable materials.

Title 15, Chapter 15.10 of the Portola Valley Code (Green Building) establishes green building practices that are designed to enhance public health and welfare through encouraging the conservation of natural resources and reduction of GHG emissions. The standard applies to all projects applying for Architectural and Site Control Commission (ASCC) review, including new residences and additions larger than 400 square feet, and all building permit applications for additions and/or remodeling. The standard requires applicants to complete the Build It Green Checklist. Build It Green is a non-profit membership organization promoting healthy, energy- and resource-efficient building practices in California. Applicants subject to ASCC review are required to have the project certified by a GreenPoint Rater. New construction projects over 3,000 square feet are required to meet a minimum threshold of 75 Built It Green points plus one additional point for each 30 square feet over 3,000 square feet. This equates to 125 Build It Green points for a 4,500 square foot residential development.

Title 15, Chapter 15.30 of the Portola Valley Code (Indoor Water Conservation) establishes efficiency standards for indoor water fixtures, including faucets, showers, and water meters.

Title 15, Chapter 15.32 of the Portola Valley Code (Water Conservation in Landscaping) establishes standards for designing and maintaining landscapes. Applicants are required to submit a landscape project application and demonstrate compliance with for planting restrictions, outdoor water use efficiency (including irrigation system controls), and landscape and irrigation maintenance requirements. The code requires all new construction with irrigated landscapes areas greater than one thousand feet to be designed by a certified professional.

*Portola Valley General Plan Sustainability Element*

The Portola Valley General Plan states an overarching goal of the plan is to reduce carbon emissions to 1990 levels by the year 2020 and to 80% below 1990 levels by the year 2050." The plan contains six goals and corresponding objectives to encourage use of energy efficient features and practices, green building design standards, water conservation measures, and a reduction in greenhouse gases.

*Existing GHG Emission Sources*

As described in Section 3.3, Air Quality, the existing residential land uses at 1260 Woodridge Drive generate emissions from landscaping equipment, passenger car trips, residential heating devices, and an emergency back-up generator that is limited to testing no more than 20 minutes per week. The existing residential land uses also generate GHG emissions from electricity use, natural gas and water/wastewater transport and use, and solid waste generation.

*Proposed GHG Emissions Sources*

The proposed project would increase the number of single family residential units at the site from one to three or result in a combination of residential units and accessory structures. This increase in residential units would increase the amount of building square footage at the site and result in corresponding increases in electricity, natural gas, and water consumption as well as wastewater and solid waste) generation. The addition of two single-family residences would also result in up to 40 additional vehicle trips per day. Landscaped areas would generate emissions from the use of gasoline-powered landscaping equipment. Site development would generate short-term construction emissions.

*Would the project:*

**a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Global climate change is the result of GHG emissions worldwide; individual projects do not generate enough GHG emissions to influence global climate change. Thus, the analysis of GHG emissions is by nature a cumulative analysis focused on whether an individual project's contribution to global climate change is cumulatively considerable.

**Less Than Significant Impact.** The proposed project would produce GHG emissions from construction-related fuel combustion and long-term occupancy of the site, however, these emissions would not exceed applicable BAAQMD significance thresholds and would therefore not have a significant impact on the environment.

As described in Section 3.3, Air Quality the proposed project is below the BAAQMD's single-family land use criteria air pollutant construction screening level size of 114 dwelling units. The BAAQMD, however, encourages lead agencies to quantify and disclose construction-related GHG emissions. As estimated using URBEMIS2007 V 9.2.4, project construction could emit approximately 375 metric tons of carbon dioxide ($MTCO_2$) over an approximately 9 ½ month construction period; emissions of $CH_4$ and $N_2O$ from construction-related fuel combustion would be negligible. The BAAQMD does not have an adopted GHG significance threshold for construction activities but as reference the project's construction-related GHG emissions (375 MTCO2) would not exceed the BAAQMD's GHG significance thresholds for land use projects of 1,100 MTCO2e per year and are therefore considered less than significant.

The proposed project would result increase the number of single family residences at the site from one to three and result in increases in total building space, impervious surfaces, and common, paved driveway space. The two new single family homes would generate operational GHG emissions from utilities, landscaping, and vehicle trips. The development of two single-family housing units is below the BAAQMD single-family land use GHG operational screening level size of 56 dwelling units. Consistent with the BAAQMD's *CEQA Air Quality Guidelines*, projects that are below this screening criteria threshold would not result in emissions that exceed BAAQMD significance thresholds. The project, therefore, would not result in a significant impact to air quality from long-term operational emissions.

Site preparation and grading and subsequent home construction would be subject to California and Portola Valley green building standards that require implementation of best management practices during siting, design, and construction of residential developments that would further reduce the magnitude of potential construction and operational GHG emissions from the project.

**b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

**Less Than Significant Impact.** The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. GHG emissions from off-road equipment, residential fuel usage, electricity generation, and transportation are identified and planned for in the BAAQMD's 2010 Clean Air Plan as well as the BAAQMD's Source Inventory of Bay Area Greenhouse Gas Emissions (BAAQMD 2010a and 2010d). A primary objective of the 2010 Clean Air Plan is to reduce greenhouse gas emissions to 1990 levels by 2020 and 40% below 1990 levels by 2035. The 2010 Clean Air Plan considers an increase in off-road, residential fuel, electricity, and transportation GHG emissions and identifies control measures designed to achieve regional GHG reduction goals.

The project would meet or exceed all applicable California and Portola Valley green building and energy efficiency standards. The project would not contain any stationary sources that are subject to state or federal GHG reporting regulations.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.8 HAZARDS AND HAZARDOUS MATERIALS --** Would the project: | | | | |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | ☐ | ☐ | ☒ | ☐ |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | ☐ | ☒ | ☐ | ☐ |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | ☐ | ☐ | ☐ | ☒ |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | ☐ | ☐ | ☐ | ☒ |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☐ | ☒ |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☐ | ☒ |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☒ | ☐ |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized | ☐ | ☐ | ☒ | ☐ |

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| areas or where residences are intermixed with wildlands? | | | | |

The information and impact analyses contained in this section are based upon a search of available environmental records conducted by Environmental Data Resources, Inc (EDR). The complete EDR report is available for review at the Portola Valley Building and Planning Department at 765 Portola Road in Portola Valley.

**Environmental Setting**

1260 Westridge Drive consists of an 11.5 acre residential zoned parcel. The existing site features include a residence and accessory structures, including a greenhouse, a propane-fired, 120 horsepower emergency back-up generator, and propane storage tank. TRA Environmental Sciences interviewed the head grounds crew member regarding any potential leaks or spills of oils or fuel. The grounds crew member was not aware of any such leaks or spills having ever occurred on-site (Serafin Lopes, pers. comm., 2011).

A search of available environmental records was conducted to determine if any hazardous materials or wastes may exist at or near the site. The search was centered at 37° 23” 4.9’ North latitude and 122° 30” 13.4’ West longitude. The search included a review of records related to: federal National Priority List site, federal Comprehensive Environmental Response, Compensation, and Liability Information System, federal Resource Conservation and Recovery Act, federal Emergency Response Notification System, state ENVIROSTOR database, and state and local registered, leaking, and/or historical aboveground storage tank (AST) and underground storage tank (UST) locations.

The records search indicated that no releases of hazardous materials have occurred at the site, and that there are no historical or current ASTs or USTs located at the site (EDR 2011). The records search did reveal the following records within 0.5 miles of the site: one hazardous material release (mineral oil with PCBs), three historical Cortese List sites, five leaking underground storage tank sites, and 12 facilities subject to state Hazardous Material Business Plan requirements. The closest of these sites is a registered, non-leaking UST site subject to HMBP requirements located approximately 0.12 miles north of the site at 133 Mapache Drive (EDR 2011).

1260 Westridge Drive is surrounded by residential land uses and approximately 25 residences are located within 1,000 feet of the property boundary. The Carillion Preschool-Christ Church is located approximately 1,400 feet southwest of the site and the Ormondale Elementary School is located approximately 2,200 feet southeast of the site. The closest public use airport, Palo Alto Airport, is located approximately eight miles northeast of the site and there are no private air strips in the vicinity of 1260 Westridge Drive.

The Circulation Element of the Portola Valley General Plan identifies Westridge Drive as a major collector road. The General Plan considers Interstate 280 and arterial roads to be “evacuation routes,” however, the Portola Valley Fuel Hazard Assessment Study identifies Westridge Drive as a major emergency access/egress route connecting Portola Valley Road with Alpine Road.

1260 Westridge Drive consists of a mix of Oak Woodland and Urban Forest/Garden habitat and vegetation types. According to the Portola Valley Fuel Hazard Assessment Study, these habitat types have the highest potential fire behavior ranking (i.e., highest fire risk) (Portola Valley 2008). The site, however, is not located in a Very High Fire Hazard Severity Zone according to the California Department of Forestry and Fire Protection (CAL FIRE) Portola Valley Local Responsibility Area map (CAL FIRE 2008). The site is within the jurisdiction of the Woodside Fire Protection District.

*Proposed Operations and Sensitive Receptors*

The proposed tentative map involves residential land uses that would use and store common, commercially-available solvents and cleaners, the storage and use of which would occur in and from small containers.

**Regulatory Setting**

*Portola Valley Code*

Title 15, Chapter 15.04 defines the Portola Valley building code, which includes the 2007 California Building Code (CBC) and California Fire Code (CFC). Chapter 15.04 also amends the 2007 Fire Code to require all new buildings to comply with the "Materials and Construction Methods for Exterior Wildfire Exposure" standards contained in the California Residential Code. Future development would be subject to the Town's recently adopted ordinance (2010-388) that amends Chapter 15.04 to include the 2010 CBC and CFC.

*Portola Valley General Plan*

A basic goal of the Portola Valley General Plan is to prevent the loss of life, reduce injuries and property damage, and minimize economic and social dislocation that may result from hazards including fires. The Safety Element of the General Plan contains the following policies concerning fire hazards.

9. Policies Concerning Fire Hazards

a. Do not construct buildings for human occupancy, critical facilities and high value structures in areas classified as having a high fire risk, unless it is demonstrated that mitigating measures will be taken which will reduce the fire risk to an acceptable level.
b. Prior to the approval of any subdivision of lands[1] in an area of high fire risk, the planning commission should review the results of a study which includes at least the following topics:
    1. the costs and means of providing fire protection to the subdivision, and
    2. an indication of who pays for the costs involved, and who receives the benefits.
c. Provide adequate clearance around structures to prevent spread of fire by direct exposure to assure adequate access in times of emergency and for the suppression of fire.
d. In locations identified as presenting high fire hazard, require special protective measures to control spread of fire and provide safety to occupants, including but not limited to types of construction and use of appropriate materials.

[1] This policy was not intended for infill development such as the proposed project.

e. When reasonable and needed, make privately owned sources of water, such as swimming pools, in or adjacent to high fire risk areas, accessible to fire trucks for use for on-site fire protection.
f. Establish street naming and numbering systems to avoid potential confusion for emergency response vehicles.
g. Design and permit all private roads for unrestricted access to all Woodside Fire Protection District equipment.

*Would the project:*

**a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

**Less Than Significant Impact.** The conceptual residential land uses proposed for Lots A and Lots C would not involve the routine transport, use, or disposal of hazardous materials that could create a significant hazard to the public or the environment.

**b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

**Less Than Significant Impact with Mitigation.** Site development would require the use of construction equipment containing fuel and lubricating oils. Contractor transport, storage, safe handling, and use of construction-related lubricating and fuel oils would occur in accordance with applicable federal and state Department of Transportation, California Division of Occupational Safety and Health (CAL/OSHA), and California Department of Health Services requirements designed to protect the public and the environment from hazardous conditions. Construction activities, including trenching, would occur in close proximity to Corte Madera Creek and/or an associated drainage. Potential leaks or spills from construction-related activities are likely to be limited to drips or leaks from fuel tanks and engines and therefore be small in nature. Given the proximity of Corte Madera Creek and other drainage channels to the proposed construction areas, however, any leak or spill of fuel oil, lubricating oil, or other hazardous would be a potentially significant impact.

An environmental records search of 1260 Westridge Drive did not reveal any evidence of contaminated or other impacted soil or ground water conditions along the proposed utility trenching routes or at 1260 Westridge Drive, however, as at any site, the potential exists to encounter previously unknown contamination (EDR 2011).

To mitigate the risks from construction-related leaks and spills of hazardous materials and any potentially unknown contamination on-site, the following mitigation measures shall apply to the project.

**Impact HAZ-1**: Construction activities could result in leaks or spills of fuel oil, lubricating oil, or other hazardous materials into the environment and/or Corte Madera Creek and/or encounter previously unknown contamination at the site.

**Mitigation Measure HAZ-1**: To reduce the potential for construction-related leaks or spills to enter the environment and the accidental discovery of contaminated materials during site development, construction contractors shall:

1. Site and perform all vehicle storage, refueling and equipment maintenance in a designated area at least at least 100 feet from Corte Madera Creek and all drainage ;

2. Upon discovering any leak or spill, immediately implement appropriate control measures to stop the leak or spill and containment measures to prevent any spreading of the leak or spill.
3. Report any oil or other petroleum product leak, spill, or other discharge that enters Corte Madera Creek or drainage channels to the California Office of Emergency Services and the San Francisco Regional Water Quality Control Board.
4. Upon discovering contaminated soils and/or groundwater, immediately cease all work and report the discovery to the appropriate agency (e.g., Department of Toxic Substances Control or Regional Water Quality Control Board) for approval of measures necessary to proceed with construction (i.e, development of a soil management plan, site work plan, etc.).

**Effectiveness:** This measure would reduce the potential risks from construction-related spills and leaks and unknown environmental factors at the site to less than significance.
**Implementation:** Condition of PUD and incorporated into site plans and future construction contracts.
**Timing:** Condition of PUD to be implemented when construction occurs.
**Monitoring:** Portola Valley shall review all appropriate engineering and site plan documents for inclusion of this mitigation measure.

Implementation of Mitigation Measures HAZ-1 would reduce Impact HAZ-1 to a less than significant level.

The proposed residential land uses would not create a significant hazard to the public or the environment through the routine transport, use, storage, or disposal of hazardous materials nor through a reasonably foreseeable upset or accident condition.

**c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or hazardous waste within one-quarter mile of an existing or proposed school?**

**No Impact.** There are no schools within ¼ mile of 1260 Westridge Drive. The closest schools to the site are the Carillon Preschool-Christ Church located 0.3 miles south of the site and the Ormondale Elementary School located 0.34 miles southeast of the site.

**d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

**No Impact.** 1260 Westridge Drive is not a site listed pursuant to Government Code Section 65962.5 by the DTSC (EDR, 2011).

**e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

**No Impact.** 1260 Westridge Drive is located approximately eight miles from the nearest public airport and is not located within an airport land use plan area.

**f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

**No Impact.** There are no private airstrips located within at least one mile of 1260 Westridge Drive.

**g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

**Less Than Significant Impact.** The Portola Valley Fuel Hazard Assessment Study identifies Westridge Drive as an emergency access/egress route connecting Alpine Road and Portola Valley Road. Future utility trenching across Westridge Drive would require an encroachment permit from and coordination with the Portola Valley Public Works Department regarding single lane closures during trenching work. Once developed, the proposed residential land uses would not impair or interfere with use of Westridge Drive as an emergency response or evacuation route.

**h) 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?**

**Less Than Significant Impact.** Although the site is not located in a CAL FIRE-delineated fire hazard severity zone, the Portola Valley Fuel Hazard Assessment Study identifies the site's oak woodland and urban forest/garden habitats as having the highest potential fire behavior ranking (i.e., highest fire risk). The Woodside Fire District has preliminarily reviewed and approved the tentative grading and drainage plans provided by the applicant with the following conditions:

1. The shared portion of the driveway including gated entrance is 18 feet wide.
2. One hundred feet of defensible space around the proposed new structures is required prior to construction
3. Upon final inspection, a 30 foot perimeter defensible space will need to be completed.
4. Fire hydrants must be within 500 feet of all structures.

Defensible space is defined as a perimeter 30 feet from the property line, which is free of hazardous vegetation, specifically flashy fuels consisting of weeds and annual grasses, as well as dead vegetative material and litter that is capable of being easily ignited and endangering property as determined by the fire marshal (Section 304.1.2.A of the Woodside Fire Protection District fire code).

The implementation of standards required by the Portola Valley Building Code and the Woodside Fire Protection District would reduce any potential exposure of people or structures to risks from wildland fires to less than significant levels.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.9 HYDROLOGY AND WATER QUALITY --** Would the project: | | | | |
| a) Violate any water quality standards or waste discharge requirements? | ☐ | ☒ | ☐ | ☐ |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | ☐ | ☐ | ☒ | ☐ |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | ☐ | ☐ | ☒ | ☐ |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | ☐ | ☐ | ☒ | ☐ |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | ☐ | ☐ | ☒ | ☐ |
| f) Otherwise substantially degrade water quality? | ☐ | ☐ | ☐ | ☒ |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | ☐ | ☐ | ☐ | ☒ |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | ☐ | ☐ | ☐ | ☒ |

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | ☐ | ☐ | ☐ | ☒ |
| j) Inundation by seiche, tsunami, or mudflow? | ☐ | ☐ | ☐ | ☒ |

**Environmental Setting**

The existing parcel is bordered by Corte Madera Creek an unnamed drainage that flows into the creek. The topography of the site is relatively level, generally draining to Corte Madera Creek at elevations ranging from about 445 feet to 415 feet. The majority of the site is undeveloped and, according to the Town Geologists report (see Appendix C), drainage at the site is characterized primarily by infiltration, but overland flow is directed to the northwest. The applicant removed approximately 9,600 square feet of impervious pathway paving from areas on the site, including areas within the creek setback. The Town requires future driveway and pathway materials to be pervious.

*Flooding*

The National Flood Insurance Program branch of the Federal Emergency Management Agency (FEMA) maintains maps of floodways and floodplains for the United States. FEMA maps these areas on Flood Insurance Rate Maps or FIRMs. A typical FIRM will show specific flood hazard areas, flood risk zones, and floodplains at a local level of detail. In some identified flood hazard zones, certain types of construction and/or uses are prohibited or are required to carry flood insurance. Cities and other jurisdictions use FIRMs to establish zoning districts, buffers, or other regulatory requirements intended to protect people and property from flood damage and minimize the cost of physical flood control mechanisms. The latest official flood maps for the project site date from 1979 (Community Panel Number 065052-0002 C).

As explained in Chapter 2. Project Description, the applicant is requesting a revision to the existing FEMA 100-year flood boundary across the parcel. After the revision, a portion of proposed Lot A will remain in the 100-year flood zone. The 100-year flood zone is also called Flood Zone A. Areas classified as Zone A are high risk and are considered to be a Special Flood Hazard Area (SFHA). The project site is also currently designated to be within flood Zone B by FEMA. Parcels classified as Zone B are considered to be areas of moderate risk that are inundated by 500-year flooding; inundated by 100-year flooding with an average depth of less than 1 foot, or are drainage areas less than one square mile.

If the applicant is unable to secure the revised flood boundary from FEMA, any future development within the floodplain will need to comply with the Town's Municipal Code Chapter 18.32 Floodplain Combining District Regulations.

**Regulatory Setting**

*Clean Water Act*

The Clean Water Act ("CWA") is the primary Federal legislation governing water quality and forms the basis for several state and local laws throughout the nation. The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Important and applicable sections of the Act are:

- Sections 303 and 304 provide for water quality standards, criteria, and guidelines. The State implements these sections through the State Water Resources Control Board ("SWRCB") and RWQCB, as discussed below.
- Section 401 requires an applicant for any Federal permit that proposes an activity that may result in a discharge to "waters of the United States" to obtain certification from the State that the discharge will comply with other provisions of the Act. In California, certification is provided by the SWRCB.
- Section 402 establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredge or fill material) into waters of the United States. In California, this permit program is administered by the RWQCBs, and is discussed in detail below.

*Porter-Cologne Water Quality Control Act*

The state's Porter-Cologne Water Quality Control Act, as revised in December 2007 (California Water Code Sections 13000-14290), provides for protection of the quality of all waters of the State of California for use and enjoyment by the people of California. It further provides that all activities that may affect the quality of waters of the state shall be regulated to obtain the highest water quality that is reasonable, considering all demands being made and to be made on those waters. The Act also establishes provisions for a statewide program for the control of water quality, recognizing that waters of the state are increasingly influenced by interbasin water development projects and other statewide considerations, and that factors such as precipitation, topography, population, recreation, agriculture, industry, and economic development vary regionally within the state. The statewide program for water quality control is therefore administered most effectively on a local level with statewide oversight. Within this framework, the Act authorizes the SWRCB and regional boards to oversee the coordination and control of water quality within California.

*National Pollutant Discharge Elimination System*

The CWA has nationally regulated the discharge of pollutants to the waters of the U.S. from any point source since 1972. In 1987, amendments to the CWA added section 402(p), which established a framework for regulating nonpoint source storm water discharges under the NPDES. The NPDES General Construction Permit Requirements apply to clearing, grading, and disturbances to the ground such as excavation. Construction activities on one or more acres are subject to a series of permitting requirements contained in the NPDES General Construction Permit. This permit requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes BMPs to be implemented during project construction. The project sponsor is also required to submit a Notice of Intent (NOI) with the SWRCB Division of Water Quality. The NOI includes general information on the types of construction activities that would occur on the site.

*State Water Resources Control Board*

Created by the California State Legislature in 1967, the SWRCB holds authority over water resources allocation and water quality protection within the State. The five-member SWRCB allocates water rights, adjudicates water right disputes, develops Statewide water

protection plans, establishes water quality standards, and guides the nine RWQCBs. The mission of the SWRCB is to, "preserve, enhance, and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations."

*San Francisco Bay Regional Water Quality Control Board*

If activities, discharges, or proposed activities and discharges from a property could affect California's surface, coastal, or ground waters, in most cases a permit will need to be acquired from the RWQCB. Dischargers whose projects disturb one or more acres of soil (including all construction disturbance) are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ). Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must list BMPs the discharger will use to protect storm water runoff and the placement of those BMPs. Furthermore, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP.

*San Mateo County*

Projects that add and/or replace over 10,000 square feet of impervious surface must comply with San Mateo County's Provision C.3 of the San Mateo Countywide Water Pollution Prevention Program's (SMCWPPP) amended NPDES permit.

The proposed project and future development would be subject to Provision C.3 of the County's NPDES Permit which requires:

- Numeric Sizing Criteria for Pollutant Removal Treatment Systems. The project must include source controls, site design measures, and treatment controls to minimize stormwater pollutant discharges. Pollution treatment controls shall be sized to treat the volume of annual runoff required to achieve 80 percent or more capture of average annual runoff (in the Bay Area this is equivalent to having the capacity to repetitively treat storm events of about 1 inch of precipitation).
- Operation and Maintenance of Treatment Measures. Treatment controls often do not work unless adequately maintained. The permit requires an Operations and Maintenance (O&M) Agreement and a maintenance plan.
- Limitation on Increase of Peak Stormwater Runoff Discharge Rates. Urbanization creates impervious surfaces that reduce the landscape's natural ability to absorb water and release it slowly to creeks. These impervious surfaces increase peak flows in creeks and can cause erosion (referred to as hydromodification). Projects must evaluate the potential for this to occur and provide mitigation as necessary.

*Portola Valley*

The Portola Valley General Plan contains policies related to hydrology including:

4149 (7). Policy Concerning Erosion and Sedimentation. (a) Maintain natural slopes and preserve existing vegetation, especially in hillside areas. When change in natural grade or removal of existing vegetation is required, employ remedial measures to restore or provide appropriate vegetative cover and to control storm water runoff. Give special attention to minimizing erosion problems resulting from the keeping of animals. In specific application these policies will be tempered by needs for fire safety

The Portola Valley Site Development Ordinance contains several sections related to drainage and erosion. These are summarized as follows:

15.12.210 Drainage: Adequate provision must be provided to prevent surface waters from damaging the cut face of an excavation or any fill. All drainageways and structures must carry water without producing erosion to the nearest practical street storm drain or natural water course approved by the Town engineer.

15.12.260 Erosion control and landscaping. All cut and fill surfaces shall be planted with a ground cover.

6.08.140 Corrals, stables and shelters – Construction. (C) All corrals shall have effective drainage facilities as dictated by slope, soil condition, and drainage. Runoff shall be handled in such a manner so as not to constitute a nuisance and so it will not increase erosion.

6.08.150 Corrals, stables and shelters – Maintenance. (A) Corrals shall be kept in a clean and sanitary condition. Manure shall be spread to dry, or if gathered for hauling, must be hauled away at least weekly.

**Discussion:**

*Would the project:*

**a) Violate any water quality standards or waste discharge requirements?**

**Less Than Significant Impact with Mitigation.** The project would disturb more than one acre of soil and create or replace more than 10,000 square feet of impervious surface. If the proposed subdivision is recorded, triggering the required improvements including driveways and structures, the project would be subject to a San Francisco Bay Regional Water Quality Control Board General Construction Permit and Provision C.3 of the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) and the applicant would be required to develop and implement a stormwater pollution prevention plan (SWPPP) prior to installation of the improvements.

**Impact HYD-1:** Runoff from the construction site could impact nearby sensitive resources, including Corte Madera Creek and ultimately San Francisco Bay.

**Mitigation Measure HYD-1:** The applicant shall prepare a comprehensive erosion control plan and SWPPP. Potential construction-phase and post-construction pollutant impacts from development can be controlled through preparation and implementation of an erosion control plan and a SWPPP consistent with recommended design criteria, in accordance with the NPDES permitting requirements enforced by the SMCWPPP and the San Francisco Bay RWQCB. The erosion control plan forms a significant portion of the construction-phase controls required in a SWPPP, which also details the construction-phase housekeeping measures for control of contaminants other than sediment, as well as the treatment measures and BMPs to be implemented for control of pollutants once the project has been constructed. The SWPPP

also sets forth the BMP monitoring and maintenance schedule and identifies the responsible entities during the construction and post-construction phases.

**Effectiveness:** Implementation of the erosion control plan and SWPPP would ensure water quality is preserved during construction and that the project does not violate the water quality standards.

**Implementation:** The applicant shall insure these measures are included in construction plans and contracts. The SWPPP will be submitted to San Mateo County and/or the RWQCB.

**Timing:** The comprehensive erosion control Plan and SWPPP shall be prepared prior to the finalization of the construction contract. The BMPs recommended in these reports shall be in place during all phases of construction.

**Monitoring:** The Town shall review all appropriate bid, contract, and engineering and site plan (e.g. building, grading, improvement plans) documents for inclusion of this measure.

Implementation of Mitigation Measure HYD-1 would reduce impact HYD-1 to a less than significant level.

**b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (for example, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?**

**Less Than Significant Impact.** California Water Service provides potable water service to the Portola Valley area. They use a combination of local surface water and surface water purchased from the City and County of San Francisco (SFPUC). The local surface water, about 11% of the total supply, comes from a 1,200-acre watershed in the Woodside hills; which is collected and treated at their reservoir and treatment plant in Atherton. The remaining 89% of the supply is purchased from the SFPUC. Two eighty foot groundwater wells and associated tanks exist at the site on proposed Lot A, within 55 feet of the top of the bank of Corte Madera Creek. The water from the tanks is used for irrigation during the summer. Ownership of the tanks and use of water in the tanks will be determined if and when there are development plans. Since this is an existing use and no change in use is currently proposed, the impact is determined to be less than significant. The proposed subdivision would not use ground water supplies for potable water use or significantly affect the groundwater aquifer through the placement of impervious surfaces at the site. Therefore, the impact is considered less than significant.

**c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?**

**Less Than Significant Impact.** The project does not propose to significantly alter the existing drainage pattern of the site or area. No alterations would be made to the adjacent Corte Madera Creek or its associated drainages that would result in substantial erosion or siltation on- or off-site.

**d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?**

**Less Than Significant Impact.** No significant amounts of cut or fill are currently proposed by the project that would substantially alter the drainage pattern of the site or area. No alteration of Corte Madera Creek or any associated drainages are proposed. Drainage plans for individual sites will be developed once site plans are developed. Municipal Code Title 15.12.170 requires that drainage ways and structures must carry water without producing erosion to the nearest practical street storm drain or natural water course approved by the Town Engineer. Therefore the impact is considered less than significant.

**e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**

**Less Than Significant Impact**. New development on the subdivided parcels would be subject to Portola Valley regulations including the Site Development Ordinance, specifically sections 15.12.210 and 15.12.260 regarding drainage and erosion control and landscaping. The parcels' land use is and would be residential in nature and is not expected to result in significantly polluted runoff. If a stable is added, Portola Valley Municipal Code Section 6.08.140 and 6.08.150 (Horsekeeping and Stables) as stated above prevents impacts to nearby waterways by requiring effective drainage ways dictated by slope, soil condition and drainage and that drainage shall not increase erosion. Manure must be spread to dry or hauled away at least weekly (if gathered for hauling). Stables are also not allowed near the creek, and the SWPPP for the site will include best management practices for manure management if stables are proposed.

**f) Otherwise substantially degrade water quality?**

**No Impact.** The project is the subdivision of a single residential parcel in Portola Valley and would not otherwise substantially degrade water quality.

**g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?**

**No Impact.** No housing is proposed within a 100-year flood hazard area. Therefore there is no impact.

**h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?**

**No Impact.** No structures are proposed within the revised 100-year flood hazard area identified on Lot A. Lots B and C contain 100-year flood hazard areas that are confined to Corte Madera Creek; no structures would be located within these areas. Therefore there is no impact from structures impeding or redirecting flows.

**i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?**

**No Impact.** The project site is not located downstream of any levee or dam. Therefore there would be no impact to the project as a result of a levee or dam failure (ABAG 1995).

**j) Inundation by seiche, tsunami, or mudflow?**

**No Impact.** The project site is located well inland from San Francisco Bay and is not located in a tsunami hazard zone according to San Mateo County Hazard maps (2005).

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.10 LAND USE AND PLANNING --** Would the project: | | | | |
| a) Physically divide an established community? | ☐ | ☐ | ☐ | ☒ |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☒ | ☐ | ☐ |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | ☐ | ☐ | ☐ | ☒ |

**Environmental Setting**

The Shorenstein parcel is in a wooded, rural residential setting in the Town of Portola Valley. It is on Westridge Drive, which is an arterial, and the parcel is surrounded with residential uses. It is bordered on one side by Corte Madera Creek and on another side by an unnamed drainage channel. It is about 0.5 miles from the nearest school and about 0.5 miles from the Town Center and commercial uses near Town Center.

The parcel has a Conservation Residential land use designation. The Conservation Residential intensity is assigned to less steep land close to community and circulation facilities and existing development. The parcel is zoned Residential – Estate, 2.5 acre minimum parcel size (R-E/2.5A/SD2.5). The Zoning Ordinance (Section 18.50.040 – Slope Density Combining Districts) states that for areas with an average slope of less than 15%, the gross area per dwelling unit is 2 acres and the minimum parcel size is 2.5 acres.

The site is surrounded by other residential land uses and residential estate zoned parcels with a minimum lot size of 1 acre or more. All parcels that surround the project site are developed with single family homes. Two residential parcels adjoining Lot A are located in the town of Woodside; 35 and 45 Hidden Valley Lane.

A local trail crosses the entrance driveway just outside the entrance gate, next to the southbound lane of Westridge Drive. The trail allows for equestrians, pedestrians and dogs on leashes. Additional discussion of this trail is located in the Recreation section (3.15) of this document.

The Town supports a population of approximately 4,350 people (2010 Census, as reported by San Jose Mercury News 3/10/11).

**Regulatory Setting**

Portola Valley General Plan

The General Plan is a long-range guide for development in the Town and emphasizes preserving the small-town character and natural conditions of the area. The "goals", "objectives", principles", and "standards" stated in the General Plan set the framework for the zoning, site development, subdivision and other land use regulations of the Town (See Municipal Code below). A few of the major goals of the General Plan include:

> "1.To preserve and enhance the natural features and open space of the planning area because they are unusual and a valuable asset for the planning area, the peninsula, and entire San Francisco Bay Area."
>
> "2. To allow use of the planning area by residents and others but to limit that use so that the natural attributes of the planning area can be sustained over time."
>
> "3. To conserve the rural quality of Portola Valley and maintain the town as an attractive, tranquil, family-oriented residential community for all generations compatible with the many physical constraints and natural features of the area."
>
> "8. To provide civic and recreation facilities and activities desired by local citizenry and which encourage the interaction of residents in the pursuit of common interests and result in a strong sense of community identity."
>
> "12. To limit growth in order to minimize the need for additional governmental services and thereby maintain and preserve the Town's predominantly volunteer local government, a government which fosters a sense of community."

The parcel's existing Conservation – Residential land use designation includes existing developed residential areas where net residential land area per housing units averages from 2 to 4 acres. Residential areas of low densities are the main land use in the General Plan. Four categories of residential land use intensities are given in the general Plan. These are low-medium (less than one acre per housing unit), low (1 to 2 acres per housing unit), Conservation – residential (2 to 4 acres per housing unit), and open residential (more than 4 acres per housing unit). Important objectives of the Land Use Element include providing for residential uses and related facilities to enhance the quality of life for local residents, maintain the natural character of the area, minimize non-local traffic through the area, minimize energy consumption from non-renewable sources and encourage the use of renewable energy while preserving scenic and aesthetic qualities, encourage conservation of water in new buildings, and ensure new development accounts for geologic, fire, and flooding hazards to avoid exposure to unacceptable levels of risk.

Portola Valley Municipal Code

The Town's General Plan policies are codified into law in the Town's Municipal Code. The following are relevant Code sections for the project.

*Site Development Ordinance (Chapter 15.12 of the Municipal Code)*

The Site Development Ordinance regulates new developments including: requiring Soil Engineering and engineering geology reports (15.12.080), hours of operation (15.12.160), dust control (15.12.170), drainage (15.12.210), erosion control and landscaping (15.12.260),

protection of significant trees (15.12.275), driveway design for entrances (15.12.300), width and surfacing (15.12.310).

*Zoning Ordinance (Chapter 18 of the Municipal Code)*

The Residential – Estate zoning designation (Chapter 18.12 of the Municipal Code) provides for single family home uses. Conditional uses allowed by permit include crop and tree farming, non-retail nurseries and greenhouses, horticulture and cattle grazing and wineries. Permitted accessory uses include second units, equestrian facilities (stables, corral, etc.), private swimming pools, cabanas, tennis courts, private garages, and other parking areas, among others. The parcel's zoning designation provides for specific maximum floor area and maximum impervious areas as described in Chapter 2.3. Required conditions include that all vehicles on the premises be contained in a garage or other building or otherwise screened from view, vehicles cannot be occupied for living, sleeping or cooking.

*Other relevant sections in the Zoning Ordinance include:*

18.42.16(A) – Entryway features including gates shall be set back from the road a minimum of one-half the distance of the required front yard. The required front yard is 50 feet and the existing entrance gate is located 15 feet from the property boundary.

18.42.018 – No up-lighting of landscaping. The parcel currently contains floodlights under the row of redwood trees along the existing driveway.

18.43.20(3) – No fences (including those along property lines) are allowed in districts with minimum parcel areas of 2 acres or more. Horse fences are excepted. A perimeter fence currently exists at the site.

18.44.050(D) – Traffic from a new development shall not exceed the capacity for which access streets are designed. The proposed subdivision will not result in enough traffic to exceed the capacity of access streets.

18.46.010 – Any legally existing nonconforming structure or nonconforming use may be continued even though such structure or use may not conform to the provisions of this title or the district in which it is located. The existing building structures on proposed Lot B are legally existing non conforming structures for square footage and location within the required building setbacks. Existing non-legal and nonconforming features of the site include perimeter fencing, location of the entry gate, landscaping lighting directed upward, and the location of two groundwater tanks within the creek setback.

18.48.010 – Basic floor area, impervious surface and setback requirements for the R-E zoning district including maximum floor area, maximum impervious surface, a 50-foot front yard, and 20-foot side and rear yards, 28-foot height limit and a 34-foot maximum height. The existing residence exceeds the maximum allowable floor area of 6,558 square feet for the parcel zoning, and the existing amount of impervious surface exceeds the maximum of 14,050 allowed for the parcel zoning.

18.59.030 – Creek setbacks shall be 55 feet from the top of bank for parcels 2.5 acres in size or greater. The distance can be increased to increase safety or protect the natural environment. Currently fencing and two water tanks are located in this setback.

18.64.010 – Architectural site plan review shall be required for all developments greater than 400 square feet and all structures two stories or more in height.

*Other pertinent sections in the Municipal Code include:*

Chapter 6.08 – Construction and maintenance of corrals, stables, and shelters
Chapter 8.09 – Construction and Demolition (Also addressed in sections 3.3 and 3.7 of this document)

Chapter 8.28 – Stormwater Management and Discharge Control (Also addressed in section 3.9 of this document)

Chapter 9.10 – Noise Control (Addressed in section 3.12 of this document)

Chapter 15.04 – Building standards for the Town (Addressed in section 3.8 of this document)

Chapter 15.10 – Green Building (Addressed in section 3.7 of this document)

Chapter 15.12 – Permit requirement for removal of Significant Trees (Addressed in section 3.4 of this document)

Chapter 15.30 – Indoor water use conservation (Addressed in Chapter 3.7 of this document)

Chapter 15.32 – Water Conservation in Landscaping (Addressed in Chapter 3.7 of this document)

**Discussion:**

*Would the project:*

**a) Physically divide an established community?**

**No Impact.** The project proposes to subdivide an existing residential parcel into three parcels in an established residential area. The addition of two new residential parcels does not physically divide the existing community, therefore there is no impact.

**b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

**Less Than Significant Impact with Mitigation**. The project is consistent with the plans and policies contained in the Portola Valley General Plan and Municipal Code, with the exception of Municipal Code sections 18.42.16(A) (entryway features); 18.42.20(3) (landscape lighting); 18.43.20(3) (fencing); 18.48.010 (property line setbacks and maximum development area); and18.59.030 (creek setbacks). All new structures and improvements other than driveway improvements and extension would be outside of the creek setback. The driveways will be made of pervious surfaces. The following mitigation measures are proposed to prevent significant impact:

**Impact LU-1:** The existing entrance gate is located 15 feet from the property line and is therefore out of compliance with Municipal Code 18.42.16(A), which states that entry features, including gates, are required to be set back a minimum of one-half the distance of the front yard requirement. The front yard requirement for the parcel is 50 feet.

**Mitigation Measure LU-1:** If the subdivision map is recorded, the entrance gate shall be removed and, if replaced, shall comply with the zoning code then in effect.

**Effectiveness:** Would remove structures within the front yard setback and comply with zoning regulations then in effect.
**Implementation:** Condition of the PUD and incorporated into site plans and future construction contracts.
**Timing:** During final construction design.
**Monitoring:** The Town shall review all appropriate engineering and site plan documents for inclusion of this measure.

Implementation of Mitigation Measure LU-1 would reduce Impact LU-1 to less than significant.

**Impact LU-2:** The parcel currently has landscape lighting that is directed upward and is therefore out of compliance with Municipal Code 18.42.018 which states that there shall be no up-lighting of landscaping.

**Mitigation Measure LU-2:** If the subdivision map is recorded, existing lighting on the parcel that is directed upward to illuminate landscaping shall be removed/made to conform with the zoning code then in effect.

**Effectiveness:** Would remove landscape lighting that is out of compliance with the zoning code.
**Implementation:** Condition of the PUD and incorporated into site plans and future construction contracts.
**Timing:** During final construction design.
**Monitoring:** The Town shall review all appropriate engineering and site plan documents for inclusion of this measure.

Implementation of Mitigation Measure LU-2 would reduce Impact LU-2 to less than significant.

**Impact LU-3:** The existing perimeter fence is out of compliance with Municipal Code section 18.43.20(3), which states that no fences (including those along property lines) are allowed in districts with minimum parcel areas of 2 acres or more.

**Mitigation Measure LU-3:** If the subdivision map is recorded, the perimeter fence shall be brought into compliance with the zoning code then in effect. If removal is required, it shall take into account Mitigation Measures BIO-2, BIO-3, and AES-1.

**Effectiveness:** Would bring site fencing into compliance with the Municipal Code.
**Implementation:** Condition of the PUD and incorporated into site plans and future construction contracts.
**Timing:** During final construction design.
**Monitoring:** The Town shall review all appropriate engineering and site plan documents for inclusion of this measure.

Implementation of Mitigation Measure LU-3 would reduce Impact LU-3 to less than significant.

**Impact LU-4:** The existing residence is a legal, non-conforming use that exceeds the square footage allowed for main residences according to the parcel's zoning (Municipal Code

18.48.010). In addition, the existing impervious area exceeds the maximum allowed (Municipal Code 18.48.010).

**Mitigation Measure LU-4:** Whenever development of either lots A or C is proposed, the maximum floor area and impervious surface amounts allowed on those lots shall be no more than is allowed under ordinances then in effect, reduced by one-half the excess amounts of floor area and impervious surfaces then on Lot B as compared to the amounts allowable on Lot B under Town ordinances then in effect.

**Effectiveness:** Would assure that future structures and impervious surfaces on Lots A, B, and C do not exceed square footage and impervious surface maximums when considered in the aggregate and that new structures and development (not including repair or replacement of existing structures and impervious surfaces due to damage or destruction) meet zoning requirements.
**Implementation:** Condition of the PUD and incorporated into site plans and future construction contracts.
**Timing:** During final construction design.
**Monitoring:** The Town shall review all appropriate engineering and site plan documents for inclusion of this measure.

Implementation of Mitigation Measure LU-4 would reduce Impact LU-4 to less than significant.

**Impact LU-5:** Existing structures on Lot B are located within 20 feet of the property line and are out of compliance with Municipal Code 18.48.010, which requires a 20-foot rear yard setback.

**Mitigation Measure LU-5:** If future development is proposed for Lot B, existing structures within the 20-foot rear setback shall be brought into compliance with the zoning code then in effect.

**Effectiveness:** Would bring site development on Lot B into compliance with the zoning code.
**Implementation:** Condition of the PUD and incorporated into site plans and future construction contracts.
**Timing:** During final construction design.
**Monitoring:** The Town shall review all appropriate engineering and site plan documents for inclusion of this measure.

Implementation of Mitigation Measure LU-5 would reduce Impact LU-5 to less than significant.

**Impact LU-6:** The existing perimeter fence and water tanks are out of compliance with Municipal Code 18.59.030, which states that creek setbacks shall be 55 feet from the top of bank for parcels 2.5 acres in size or greater. The water tanks pre-date the subdivision ordinance and are a legal, non-conforming use.

**Mitigation Measure LU-6:** If the subdivision map is recorded, the perimeter fence shall be brought into compliance with the municipal zoning code then in effect. If the fence is removed, removal shall comply with Mitigation Measures BIO-2, BIO-3, and AES-1. If the water tanks are moved or increased in size in the future, they shall be in compliance with the municipal zoning code then in effect.

**Effectiveness:** Would bring the site into compliance with the zoning.
**Implementation:** Condition of the PUD and incorporated into site plans and future construction contracts.
**Timing:** During final construction design.
**Monitoring:** The Town shall review all appropriate engineering and site plan documents for inclusion of this measure.

Implementation of Mitigation Measure LU-6 would reduce Impact LU-6 to less than significant.

**c) Conflict with any applicable habitat conservation plan or natural community conservation plan?**

**No Impact.** No habitat conservation or natural community conservation plans are currently in effect in the project area. Therefore, there would be no impact.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.11 MINERAL RESOURCES --** Would the project: | | | | |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | ☐ | ☐ | ☐ | ☒ |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | ☐ | ☐ | ☐ | ☒ |

**Environmental Setting**

No valuable mineral resources have been found to occur in Portola Valley. Quarrying is prohibited.

**Discussion:**

*Would the project:*

**a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

**b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

**No Impact (a-b).** The project is the subdivision of an 11.6 acre lot currently used as a residential estate. No element of the proposed project would use known mineral resources. In addition, the Conservation Element of the Portola Valley General Plan (Section 4210.a) prohibits the quarrying of rock, sand, and gravel as such uses are incompatible with basic Town objectives. There are no known mineral resources at the project site therefore, there would be no loss of availability of known mineral resources. The project site is located in a residential area and would not result in the loss of availability of a locally-important mineral resource recovery site.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.12 NOISE --** Would the project result in: | | | | |
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | ☐ | ☒ | ☐ | ☐ |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | ☐ | ☒ | ☐ | ☐ |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☐ | ☒ | ☐ |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☒ | ☐ | ☐ |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☐ | ☒ |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☐ | ☒ |

This section describes the fundamentals of noise and the existing noise conditions in the project area, summarizes applicable regulations that govern noise, evaluates the noise impacts from the construction and operation of the proposed project features, and identifies mitigation measures to address the impacts found to be potentially significant.

The information and analyses contained in this chapter are based on information in the Portola Valley General Plan and short-term daytime noise measurements recorded by TRA Environmental Sciences, Inc. (TRA) in February 2011.

**Noise Fundamentals**

Noise may be defined as unwanted sound. The frequency (pitch), amplitude (intensity or loudness), and duration of noise all contribute to the effect on a listener, or receptor, and whether or not the receptor perceives the noise as objectionable, disturbing, or annoying.

*The Decibel Scale (dB)*

The decibel scale (dB) is a unit of measurement that indicates the relative amplitude of a sound. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a tenfold increase in acoustic energy, while 20 dbs is 100 times more intense, 30 dBs is 1,000 more intense, etc. In general, there is a relationship between the subjective noisiness or loudness of a sound and its amplitude, or intensity, with each 10 dB increase in sound level perceived as approximately a doubling of loudness.

*Sound Characterization*

There are several methods of characterizing sound. The most common method is the "A-weighted sound level," or dBA. This scale gives greater weight to the frequencies of sound to which the human ear is typically most sensitive. Thus, most environmental measurements are reported in dBA, meaning decibels on the A-scale.

Human hearing matches the logarithmic A-weighted scale, so that a sound of 60 dBA is perceived as twice as loud as a sound of 50 dBA. In a quiet environment, an increase of 3 dB is usually perceptible, however, in a complex noise environment such as a long a busy street, a noise increase of less than 3 dB is usually not perceptible, and an increase of 5 dB is usually perceptible. Normal human speech is in the range from 50 to 65 dBA, with levels rising as the distance between speakers increases or as background noise level rises and forces the speakers to raise their voice in order to be heard. Generally, as environmental noise exceeds 50 dBA, it becomes intrusive and above 65 dBA noise becomes excessive. Nighttime activities, including sleep, are more sensitive to noise and are considered affected over a range of 40 to 55 dBA. Table 3.12-1 lists typical outdoor and indoor noise levels in terms of dBA.

Sound levels are typically not steady and can vary over a short time period. The equivalent noise level (Leq) is used to represent the average character of the sound over a period of time. The Leq represents the level of steady noise that would have the same acoustical energy as the sum of the time-varying noise measured over a given time period. Leq is useful for evaluating shorter time periods over the course of a day. The most common Leq averaging period is hourly, but Leq can describe any series of noise events over a given time period.

Variable noise levels are values that are exceeded for a portion of the measured time period. Thus, L01 is the level exceed one percent of the time and L90 is the level exceeded 90 percent of the time. The L90 value usually corresponds to the background sound level at the measurement location.

**Table 3.12-1. Typical Outdoor and Indoor Noise Levels**

| Common Outdoor Activities | Noise Level (dBA) | Common Indoor Activities |
|---|---|---|
| | -110- | Rock Band |
| Jet flyover at 1,000 feet | | |
| | -100- | |
| Gas lawn mower at 3 feet | | |
| | -90- | |
| Diesel truck at 50 feet at 50 mph | | Food blender at 3 feet |
| | -80- | Garbage disposal at 3 feet |
| Noise urban area, daytime | | |
| Gas lawnmower, 100 feet | -70- | Vacuum cleaner at 10 feet |
| Commercial area | | Normal speech at 3 feet |
| Heavy traffic at 300 feet | -60- | |
| | | Large business office |
| Quiet urban daytime | -50 | Dishwasher next room |
| Quite urban nighttime | -40- | Theater, large conference room (background) |
| Quiet suburban nighttime | | |
| | -30- | Library |
| Quite rural nighttime | | Bedroom at night |
| | -20- | |
| | | Broadcast/recording studio |
| | -10- | |
| Lowest threshold of human hearing | -0- | Lowest threshold of human hearing |

*Source: Caltrans 2009*

Noise exposure over the course of an entire day is described by the day/night average sound level, or Ldn, and the community noise equivalent level, or CNEL, descriptors. Both descriptors represent the 24-hour noise impact on a community. For Ldn, the 24-hour day is divided into a 15-hour daytime period (7 AM to 10 PM) and a nine-hour nighttime period (10 PM to 7 AM) and a 10 dB “penalty” is added to measure nighttime noise levels when calculating the 24-hour average noise level. For example, a 45 dBA nighttime sound level would contribute as much to the overall day-night average as a 55 dBA daytime sound level. The CNEL descriptor is similar to Ldn, except that it includes an additional 5 dBA penalty for sound events that occur during the evening time period (7 PM to 10 PM). The artificial penalties imposed during Ldn and CNEL calculations are intended to account for a receptor’s increased sensitivity to sound levels during quieter nighttime periods.

*Sound Propagation*

The energy contained in a sound pressure wave dissipates and is absorbed by the surrounding environment as the sound wave spreads out and travels away from the noise generating source. Theoretically, the sound level of a point source attenuates, or decreases, by 6 dB with each doubling of distance from a point source. Sound levels are also affected by certain environmental factors, such as ground cover (asphalt vs. grass or trees), atmospheric absorption, and attenuation by barriers. Outdoor noise is also attenuated by the building

envelope so that sound levels inside a residence are from 10 to 20 dB less than outside, depending mainly on whether windows are open for ventilation or not.

When more than one point source contributes to the sound pressure level at a receiver point, the overall sound level is determined by combining the contributions of each source. Decibels, however, are logarithmic units and cannot be directly added or subtracted together. Under the dB scale, a doubling of sound energy corresponds to a 3 dB increase in noise levels. For example, if one noise source produces a sound power level of 70 dBA, two of the same sources would not produce 140 dB – rather, they would combine to produce 73 dB.

Under controlled conditions in an acoustical 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 mid-frequency (1,000–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness.

**Regulatory Setting**

*Portola Valley General Plan*

The Portola Valley General Plan establishes transportation generated noise standards for evaluating the compatibility between the existing noise environment and a proposed land use. Table 3.12-2 shows the Portola Valley land use compatibility standards for transportation generated noise.

The General Plan contains several goals and policies related to transportation generated noise and land use compatibility.

*Goal 1 – Develop Land Uses Compatible with the Noise Environment*

Policy 1: The town will utilize the noise contours in Figure 1 and noise/land use compatibility standards on Figure 2.

Policy 2: New development of residential or other noise-sensitive land uses are discouraged in noise impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels in outdoor activity areas to 55 dBA Ldn or less.

Policy 3: Interior noise levels shall not exceed 45 Ldn in all new residential units (single- and multi-family). Residential development sites exposed to exterior noise levels exceeding 55 Ldn shall be analyzed following protocols in the 2007 California Building Code (Chapter 12, Appendix Section 1207.11.2) or the most recent revision.

**Table 3.12-2. Land Use Compatibility Standards for Transportation Generated Noise**

| Land Use Category | Exterior Noise Exposure (Ldn) 55 60 65 70 75+ |
|---|---|
| Single-Family Residential | |
| Multi-Family Residential | |
| Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds | |
| Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Religious Facilities | |
| Office Buildings, Business Commercial, and Professional | |
| Auditoriums, Concert Halls, Amphitheaters | |

Key:

| | | |
|---|---|---|
| | *Normally Acceptable* | Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special insulation requirements. |
| | *Conditionally Acceptable* | Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design. |
| | *Unacceptable* | New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies. |

*Source: Portola Valley 2009.*

*Goal 3 – Mitigate Noise from New Projects*

Policy 1: Noise created by new transportation noise sources (e.g., increased traffic or a new roadway) shall be mitigated so as to not cause the following criteria to be exceeded or to cause a significant adverse community response:

- Cause the Ldn at noise-sensitive uses to increase by 3 dBA or more and exceed the "normally acceptable" level. See Figure 2 for the definition of "normally acceptable."
- Cause the Ldn at noise-sensitive uses to increase by 5 dBA or more and remain "normally acceptable."

Where a proposed transportation noise source is likely to produce noise levels that would exceed the above standards, an acoustical analysis shall be required as a part of project review or as part of the environmental review process so that noise mitigation may be included in the project design.

The Portola Valley General Plan also contains non-transportation generated noise standards, however, the Portola Valley Noise Control Code supercedes these standards. The Noise Control Code is discussed further below.

Finally, the General Plan contains one goal related to noise generated by construction and yard maintenance activities.

*Goal 4 – Control Noise from Construction and Yard Maintenance Activities*

Policy 1: Implement appropriate standard controls for all construction projects carried out by contractors or homeowners.

Policy 2: Implement appropriate standard controls for yard maintenance activities carried out by commercial companies and homeowners.

Policy 3: Require ASCC review for all construction projects scheduled for or lasting more than 24 months and submittal of construction staging, timing and noise management plans.

Policy 4: Develop a guidance manual to provide information to the public regarding noise control.

Portola Valley has not developed the guidance manual referenced in Goal 4, Policy 4 of the General Plan Noise Element.

*Portola Valley Code*

Title Nine, Chapter 9.10 of the Portola Valley Code (Noise Control) was developed to implement the Noise Element of the Portola Valley General Plan. The code contains standards designed to protect the town's citizens from harmful and annoying effects of excessive and offensive noises and encourages residents to address noise issues amicably through direct communication with their neighbors.

Section 9.10.030 makes it unlawful for any person to create or cause any non-transportation noise that exposes properties in the vicinity to exceed the noise levels listed in Table 3.12-6 below. Construction activities are exempt from the noise levels listed in Table 3.-

12-3 but are regulated by section 9.10.040 of the Noise Control Code which is discussed further below.

Section 9.10.040 limits noise from construction activities, domestic garden tools, and residential emergency generators and requires all vehicles, equipment, and machines associated with these activities to incorporate design features for noise muffling and noise reduction.

Section 9.10.040A restricts commercial construction activities to between 8:00 AM and 5:30 PM Monday through Friday, prohibits construction activities on holidays, and requires that radios and other amplified sound devices not be audible beyond the property line of the construction site.

Section 9.10.040B restricts the use of domestic garden tools by commercial companies to between 8:00 AM and 5:30 PM Monday through Friday and Saturday between 10:00 AM and 5:00 PM, prohibits the use of chain saws and chippers on Sundays, and prohibits the use domestic garden tools on holidays. The noise control code defines “domestic garden tools” as leaf blowers, weed whackers, lawn mowers, chippers, chain saws, or any other lawn or garden power tool.

Section 9.10.040E restricts testing of residential emergency generators to no more than 20 minutes once per week, only on weekdays, between 10:00 AM and 4:00 PM. This section also prohibits the testing of generators on holidays, requires that generators not produce a sound exceeding 65 dBA when measured 22 feet from the generator, and requires generators to be equipped with mufflers and enclosures and be located as far as possible from adjoining properties.

**Table 3.12-3. Portola Valley Non-Transportation Generated Noise Standards**

| Land Use Receiving the Noise | Hourly Noise-Level Descriptor | Exterior Noise Level Standard In Any Hour (dBA) | | Interior Noise-Level Standard In Any Hour (dBA) | |
|---|---|---|---|---|---|
| | | Daytime (7am – 10pm) | Nighttime (10pm – 7am) | Daytime (7am – 10pm) | Nighttime (10pm – 7am) |
| Residential | Leq<br>Lmax | 50<br>65 | 40<br>55 | 40<br>55 | 30<br>45 |
| Medical, convalescent | Leq<br>Lmax | 55<br>70 | 45<br>60 | 45<br>55 | 35<br>45 |
| Theater, auditorium | Leq<br>Lmax | --<br>-- | --<br>-- | 35<br>50 | 35<br>50 |
| Religious Facility, meeting hall | Leq<br>Lmax | 55 | --<br>-- | 40<br>55 | 40<br>55 |
| Office building | Leq | -- | -- | 45 | -- |
| School, library, museum | Leq<br>Lmax | 55 | --<br>-- | 40<br>55 | --<br>-- |
| Playground, park | Leq | 55 | -- | -- | -- |

Notes:
a) The residential standards apply to all residentially zoned properties.
b) Each of the noise levels specified above shall be lowered by 5 dBA for tonal noises characterized by a whine, screech, or hum, noises consisting primarily of speech or music, or recurring impulsive noises.
c) The exterior noise standards are measured at the property line of the receiving property.
d) The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55

dBA if the noise is fluctuating. Outdoors, the thresholds are about 15 dBA higher. Steady noise of sufficient intensity, above 35 dBA, and fluctuating noise levels above about 45 dBA have been shown to affect sleep.

*Source: Portola Valley 2009.*

Section 9.10.060 of the code prohibits certain sources of noise, including the unnecessary racing of motor vehicle engines, amplified sound, and leaf blowers producing a sound that exceeds 65 dBA when measured at a distance of 50 feet.

**Existing Noise Levels and Sensitive Receptors**

The Portola Valley General Plan identifies that, in general, the town enjoys a low daytime ambient noise level of about 45 dBA Leq that contributes to the rural quality of the community. The General Plan identifies that transportation and non-transportation generated noise affects community noise levels. In addition to General Plan data, TRA conducted short-term daytime noise monitoring at the project area to objectively characterize background sound levels at the site and sound levels generated by vehicles travelling on the site's gravel driveway at a speed of 15 miles per hour.

*Transportation Generated Noise*

The General Plan considers motor vehicle noise to constitute the primary source of consistent noise pollution in Portola Valley and identifies Alpine Road and Portola Road as major sources of traffic noise. Figure 1 of the General Plan Noise Element presents 2007 traffic noise contours that show that traffic noise along Westridge Drive between Mapache Drive and Possum Lane to be 55 dba Ldn.

The General Plan also identifies aircraft, including private airplanes and helicopters, as a source of noise in the community, however, the project area is located approximately eight miles away from the closest airport, Palo Alto Airport.

*Non-Transportation Generated Noise*

The General Plan identifies construction noise, barking dogs, yard maintenance, and mechanical equipment as primary sources of non-transportation generated noise. These non-transportation noise sources have the potential to affect ambient noise levels over shorter time periods throughout the day and night.

*Existing Noise Levels in the Project Area*

On Friday, February 4, 2011, TRA conducted short-term, daytime noise measurements at two sites at 1260 Westridge Drive in order to characterize ambient noise levels at the project site (See Figure 9, Noise Monitoring Locations). TRA measured noise levels with two Larson Davis Model 720 Type 2 sound level meters. Noise monitoring was conducted in 15-minute intervals between 10:30 AM and 12:30 PM. Conditions during the monitoring were mostly clear and sunny, with temperatures in the range of approximately 60° to 70° Fahrenheit and light to calm wind.

Figure 9 shows the noise monitoring sites: Site N1 was located approximately 450 feet northwest of Westridge Drive within proposed Lot C; site N2 was located approximately 650 feet northwest of Westridge Drive within proposed Lot B. Westridge Drive was not visible from the monitoring sites due to intervening trees and shrubs.

Table 3.12-4 summarizes the results of the February 4, 2011 noise monitoring; refer to Appendix D for detailed noise monitoring data.

**Table 3.12-4. Background Noise Levels in the Project Area**

| Site | Average Short-Term Background Noise Measurement Levels (dBA) | | | | | | |
|---|---|---|---|---|---|---|---|
| | Leq | Lmax | Lmin | L1 | L10 | L50 | L90 |
| N1 (Lot C) | 46.2 | 58.9 | 39.9 | 56.0 | 48.4 | 43.8 | 41.3 |
| N2 (Lot B) | 45.3 | 59.1 | 39.6 | 54.9 | 47.9 | 42.6 | 40.6 |

*Source: TRA Environmental Sciences (Refer to Appendix D).*

Noise sources observed included transportation sources (traffic on Westridge Drive and aircraft overflight) and non-transportation sources (lawn equipment and domestic animals and wildlife such as dogs, horses, and crows). The short-term noise monitoring indicates that daytime average noise levels (Leq) at the project area are low, in the range of 45.3 to 46.2 dBA. The average maximum noise level recorded was about 59 dBA; L1 levels ranged from 54.9 to 56.0 dBA at the site. The monitoring indicates that ambient noise levels are lower at the site farther from Westridge Drive; observation during monitoring suggests that short-term noise levels in the interior of the property are more affected by nearby residential activities than by road traffic.

Field measurements and absence of any unusual noise sources suggest that the noise environment of the project site is typical of the low density residential land uses in the Portola Valley area away from main traffic routes (Portola Road and Alpine Road). Field measurements did not include 24-hour monitoring; the approximate Ldn can be inferred from the daytime measurements by assuming the level persists through the day and night and by applying the 10 dB nighttime penalty to compute the Ldn (see Appendix D). The result puts Lot B at 51.7 Ldn and lot C at 52.6 Ldn, which is considered normally acceptable under the General Plan standards. This result is consistent with the 55 dB Ldn level mapped for Westridge Road in Figure 1 of General Plan Noise Element (Portola Valley 2009).

*Existing Noise Levels from Vehicle Travel on Gravel Driveways in the Project Area*

The site currently contains 650 feet of asphalt paved driveway and 985 feet of unpaved, gravel driveway. TRA conducted measurements of noise from a passenger vehicle traveling on the site's unpaved gravel driveway. Noise monitoring was conducted in one minute intervals between 1:05 and 1:10 PM on Friday, February 4, 2011. One noise monitor was positioned 25 feet from the edge of the gravel driveway and the second monitor was positioned 50 feet from the edge of the gravel driveway. TRA staff drove a passenger car at approximately 15 mph continuously along the driveway, traversing the monitoring site about 15 times during the five minute monitoring period. There was no vegetation or other structures between the driveway and the monitors. Table 3.12-5 summarizes the results of the gravel driveway noise monitoring.

**Table 3.12-5. Gravel Driveway Noise Levels in the Project Area**

| Site | Average Short-Term Driveway Noise Measurement Levels (dBA) | | | | |
|---|---|---|---|---|---|
| | Leq | Lmax | L1 | L10 | L90 |
| 25 ft from Driveway | 57.1 | 65.4 | 65.2 | 62.1 | 46.0 |
| 50 ft from Driveway | 51.3 | 59.2 | 59.0 | 55.6 | 42.9 |

*Source: TRA Environmental Sciences (Refer to Appendix D).*

As Table 3.12-3 shows, cars traveling on the existing gravel driveway generated Lmax noise levels of 65.4 dBA at 25 feet and 59.2 dBA at 50 feet. This corresponds to 6.2 dBA of attenuation for a doubling of distance. The observed 6.2 dBA attenuation is higher than the 3 dB

per doubling of distance normally used for a line source because the maximum sound level of the single passing vehicle acts as a point source and because of the high attenuation of the site's soft ground cover. Thus, at 100 feet Lmax noise levels generated from passenger vehicles on the gravel driveway would be approximately 53 dBA.

*Sensitive Receptors*

Sensitive receptors are facilities that house or attract people who are especially sensitive to the effects of the noise environment. Hospitals, schools, convalescent facilities, parks, and residential areas are examples of sensitive receptors. The project area is bordered by eleven residences to the north, south, and west. The line of sight between the project site and these adjoining residential locations is typically screened by vegetation. Noise levels at these locations are assumed to be similar to the short-term noise monitoring levels recorded at the project area and summarized in Table 3.12-2.

**Potential Project Noise Sources**

The proposed project would result increase the number of single family residences at the site from one to three and result in increases in total building space, impervious surfaces, and common, paved driveway space. This proposed development would result in the construction and operational noise sources described below.

*Construction Noise Sources*

Construction on Lot A and Lot C would occur weekdays for a period of 9 ½ months. Construction activities would include site grading, on- and off-site utility trenching, paving, foundation, building construction, and architectural coating. Table 3.12-6 lists typical construction equipment, the groundborne vibration in terms of peak particle velocity (inches/second) expressed on a logarithmic scale similar to the decibel scale, reference distance 25 feet, and the sound level it generates at a reference distance of 50 feet.

**Table 3.12-6. Typical Construction Equipment Noise Levels at 50 Feet From Source**

| Equipment | Vibratory Motion 25 Feet from Equipment (dBV) | Noise Level (Leq) 50 Feet from Noise Source |
|---|---|---|
| Backhoe | NA | 80 |
| Bulldozer | 87 | 85 |
| Concrete Mixer | NA | 85 |
| Crane | NA | 85 |
| Excavator | 87 | 85 |
| Generator | NA | 80 |
| Pneumatic Tools | NA | 85 |
| Scraper | NA | 85 |
| Truck (concrete and supplies delivery) | 86 | 84 |
| Vibratory Compactor | 94 | 85 |
| Vibratory Pile Driver | 104 | 101 |

*Source: FTA 2006, FHWA 2010.*

Depending on the results of a site specific geotechnical evaluation, Lot A and Lot C foundations may require the use of drill rigs and/or pile drivers to install foundations. Underground water, sewer, electric, and natural gas utility lines would require excavating

trenches on-site. The wastewater line would also require trenching off-site. The off-site sewer trenching would start approximately 675 feet southeast of the intersection of Cervantes Road and Westridge Drive (east of the project area), proceed northeast along Cervantes Road through the intersection with Westridge Drive, continue northeast along Mapache Drive for a distance of 425 feet, then turn south for 450 through an adjoining parcel owned by the Applicant and onto proposed Lot B in the project area. On-site trenching is expected to occur primarily within existing and proposed driveways.

*Operational Noise Sources*

Once developed, the residents would generate both transportation and non-transportation noise.

Transportation noise would include off-site vehicle trips on Westridge Drive and on-site vehicle trips along the common, paved driveway and each individual lot's gravel driveway. The addition of two single family residences would result in up to 20 vehicle trips per day. The tentative map depicts approximately 1,300 feet of paved driveway and 875 feet of unpaved driveway.

Non-transportation noise sources associated with the proposed residential land uses include human conversation, domestic animals, and yard maintenance. Underground utility equipment such as pumps are not expected to be audible beyond their immediate proximity.

*Would the project result in:*

**a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

**Less Than Significant Impact with Mitigation.** The proposed project is a residential subdivision project that would not expose persons to or generate transportation and non-transportation noise levels in excess of Portola Valley standards.

*Exposure to Transportation and Non-Transportation Noise Levels*

The proposed project site is on Westridge Drive, which has an estimated average daily traffic volume of 4,081 trips per day and an Ldn of 55 dBA. The Portola Valley General Plan sets 55 dBA Ldn as the normally acceptable transportation generated exterior noise exposure level for single-family residential land uses (see Table 3.12-3).

Exterior transportation generated noise levels at the site do not exceed 55 dBA Ldn. Noise levels immediately adjacent to Westridge Drive approach but do not exceed 55 dBA Ldn while noise levels within the interior of the project area 450 to 650 feet from Westridge Drive are estimated to be around 52 dBA Ldn. The proposed project, therefore, would not expose persons to transportation generated noise levels in excess of Portola Valley standards.

The proposed site is surrounded by residential land uses which lack significant sources of non-transportation noise such as mechanical equipment. The Portola Valley Noise Ordinance restricts and/or limits the amount of noise that other non-transportation noise sources may generate, including domestic animals, musical instruments, construction noise, and domestic garden tools. The proposed project, therefore, would not expose persons to non-transportation generated noise levels in excess of Portola Valley standards.

*Generation of Transportation Noise Levels*

Vehicle travel noise is generated by a vehicle's engine and the vehicle's tire-roadway interface characteristics. Passenger vehicle noise originates near the ground and is primarily generated by the tire-roadway interaction; generally, noise increases and decreases as vehicle speeds increase and decrease. The roadway surface (e.g., asphalt, asphalt-concrete, gravel) also affects tire-roadway interaction, with paved roadway surfaces being quieter than gravel road surfaces due to less vibration between the tire and roadway. A paved road is one made of asphalt or concrete, including cobblestone surfaces bound together with mortar, or set in sand/concrete, etc. Unpaved roads include loose materials such as gravel or other uncemented aggregate. Paved cobblestone surfaces and unpaved gravel or other loose aggregate surfaces increase vehicle vibration, and voids in the surface of these types of roadways hold air that is expelled when a vehicle travels over the roadway surface, resulting in more sources of noise than a paved roadway surface.

The proposed project would generate on- and off-site transportation noise. The project has the potential to increase traffic on Westridge Drive by up to 40 total daily vehicle trips per day and up to 8 peak hour vehicle trips per hour. Caltrans considers a doubling of traffic volume to result in a 3 dBA increase in traffic noise levels (Caltrans 2009). The project's potential increase of 40 daily vehicle trips would represent a 1 percent increase in daily traffic volumes and would result in insignificant increases in hourly Leq and daily Ldn traffic noise along Westridge Drive.

Project vehicles would enter and exit the site off of Westridge Drive. The tentative map identifies approximately 1,310 feet of paved driveway and 875 feet of unpaved driveway at the site. Thus, the proposed subdivision would increase the total linear distance of paved surfaces at the site by 660 feet and decrease the total linear distance of unpaved surfaces by 110 feet. Vehicle travel along unpaved surfaces on Lot A would be limited to a 275-foot long driveway; the project would not increase unpaved surfaces at proposed Lot B (the existing site); and, vehicle travel along unpaved surfaces on Lot C would be limited to the proposed 80-foot long driveway.

Based on noise monitoring conducted at the site, vehicles traveling along unpaved roadways at a speed of 15 miles per hour are estimated to produce short duration Lmax noise levels of 59.2 dBA at 50 feet and 53 dBA at 100 feet. These short-duration noise levels would not exceed Portola Valley noise standards. Although there are no houses within 100 feet of the proposed gravel driveway locations, noise from vehicle travel along these unpaved surfaces may be heard and considered intrusive at neighboring residential land uses if road surface conditions were such that vehicle activity produced higher sound levels than measured (e.g., use of paved cobblestone surfaces or non-compacted aggregate surfaces). Mitigation Measure NOI-1 would further reduce the magnitude of potential impacts from vehicle travel on unpaved roadways.

**Impact NOI-1**: On-site vehicle travel would not exceed Portola Valley standards but may intrude upon adjoining residential land uses.

**Mitigation Measure NOI-1**: To reduce the potential for on-site vehicle travel noise to intrude upon adjoining residential land uses the Town shall:

1. Prohibit the use of paved cobblestone driveway surfaces;
2. Inspect for aggregate compaction in accordance with Portola Valley Code Section 15.12.310 (ninety-five percent compaction).

**Effectiveness:** This measure would reduce the potential for on-site vehicle travel noise to intrude upon adjoining residential land uses to a less than significant level.
**Implementation:** Condition of PUD and incorporated into subdivision map and construction documents (for compaction).
**Timing:** Condition of PUD to be implemented at design and construction stages.
**Monitoring:** Portola Valley shall review all appropriate engineering and site plan documents for inclusion of this mitigation measure and shall inspect for appropriate compaction.

*Generation of Non-Transportation Noise Levels*

Once developed the proposed residential land uses would generate non-transportation noises from conversation, potential domestic animals, and operation of domestic garden and construction tools. These noises could intrude upon adjoining residential land uses.

Chapter 9.10 of the Portola Valley Code limits the hours of operation of domestic garden tools, large vehicle deliveries and loading, garbage collection and garbage collection to daytime hours generally between 8 AM and 5:30 PM. The code also generally prohibits disturbing, annoying, and or unnecessary noise levels from animals and fowl, vehicle horns, racing engines, musical instruments and amplifiers, explosives and firearms, motor vehicle maintenance, and leaf blowers. Implementation of the Portola Valley Noise Control Code would reduce any non-transportation noise levels generated by the project to less than significant levels.

**b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**

**Less Than Significant Impact with Mitigation.** Site construction and development would involve the use of construction equipment such as scrapers, rollers, backhoes, and, potentially, pile drivers that would expose people and structures to groundborne vibration. Human response to groundborne vibration is subjective and varies from person to person. Caltrans identifies the following threshold criteria for human response to and potential damage from continuous or frequent intermittent sources of vibration such as a pile driver.

**Table 3.12-7. Groundborne Vibration Threshold Criteria**

| **Land Use Criteria - Human Response** | **Maximum PPV (inches/second)** | **Max Lv (dBV)** |
|---|---|---|
| Workshop - Distinctly feelable vibration | -- | 90 |
| Office - Feelable vibration | -- | 84 |
| Residential Day – Barely feelable vibration | -- | 78 |
| Residential Night – Vibration not likely feelable | -- | 72 |
| Threshold of human perception | -- | 65 |
| | | |
| **Construction Vibration Damage Criteria** | **Maximum PPV (inches/second)** | **Approximate Lv (dBV)** |
| I. Reinforced concrete steel or timber | 0.5 | 102 |
| II. Engineered concrete and masonry (no plaster) | 0.3 | 98 |
| III. Non-engineered timber and masonry buildings | 0.2 | 94 |
| IV. Buildings extremely susceptible to vibration damage | 0.12 | 90 |

*Source: FTA 2006 and TRA Environmental Sciences (Refer to Appendix D).*

The proposed building foot prints where pile driving and other large equipment operation would occur are located approximately 200 feet from any residence. Table 3.12-8 lists the estimated vibratory motion for this equipment at a reference distance of 25 feet and at a distance of 200 feet.

| **Table 3.12-8. Groundborne Vibration Estimates** | | |
|---|---|---|
| **Equipment** | **Estimated PPV at 200 Feet (inches/second)** | **Estimated Lv at 200 Feet (dBV)** |
| Vibratory roller | 0.021 | 66.9 |
| Large bulldozer | 0.009 | 59.9 |
| Small bulldozer | 0.000 | 30.9 |
| Loaded truck | 0.008 | 58.9 |
| Jackhammer | 0.004 | 51.9 |
| Caisson drilling | 0.009 | 59.9 |
| Vibratory pile driver | 0.066 | 76.9 |

*Source: TRA Environmental Sciences (Refer to Appendix D).*

The Portola Valley Noise Control Code limits construction activities from 8:00 AM to 5:30 PM. The operation of vibratory paving and pile driver equipment would occur intermittently during daytime hours; the Corte Madera Creek and surrounding drainage channels located between the construction areas and the surrounding residential land uses may also serve to reduce groundborne vibrations. As Table 3.12-9 shows, construction equipment, including pile driving, is not expected to exceed recommended maximum dBV values for residential daytime land use receptors. Depending on the receptor and the final equipment model selected, groundborne vibration and noise from pile driving equipment could generate vibrations and noise that may be intrude upon surrounding residential land uses. Mitigation Measure NOI-2 would further reduce the less than significant of potential impacts from vehicle travel on unpaved roadways.

**Impact NOI-2**: The use of pile driving equipment during construction may generate groundborne vibration and noise levels that are perceptible to surrounding residences.

**Mitigation Measure NOI-2**: Groundborne vibration and noise levels shall not exceed a peak value of 78 dBV at surrounding residences. This shall be accomplished by:

1. Avoiding the use of impact and vibratory pile driving equipment during construction, if feasible; or
2. If it is not feasible to avoid the use of pile driving equipment during construction, the construction contractor shall submit a project-specific attenuation analysis demonstrating that groundborne vibration levels from pile driving equipment would not exceed 78 dBV.
    1) If the project-specific attenuation analysis shows that groundborne vibration levels from pile-driving equipment may exceed 78 dBV, the construction contractor shall develop and submit to Portola Valley a Vibration Mitigation Plan that demonstrates the measures the contractor would take to reduce vibration levels to less than 78 dBV. Such measures may include the use of barriers, pre-drilling, pile cushioning, use of non-impact drivers, or other measures.
3. In the event of pile-driving, construction contractors shall provide five days advance written notice to surrounding residential land uses of the planned pile driving activities and schedule.

**Effectiveness:** This measure would reduce the potential risk for annoying groundborne vibration and noise levels at surrounding residential land uses.
**Implementation:** Condition of PUD and incorporated into subdivision map and construction documents.
**Timing:** Condition of PUD to be implemented when construction occurs.
**Monitoring:** Portola Valley shall review all appropriate engineering and site plan documents for inclusion of this mitigation measure and shall inspect for appropriate compaction.
**Implementation:** Condition of PUD and incorporated into site plans and future construction contracts.
**Timing:** Condition of PUD to be implemented when construction occurs.

**c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Less Than Significant Impact**. The proposed subdivision consists of residential land uses and activities that would not result in a substantial increase in ambient noise levels at surrounding residential land uses. As demonstrated under discussion (a.) above, project-related traffic would not significantly increase noise levels along Westridge Drive or at adjacent residential land uses and the project-would not generate non-transportation noises that would exceed Portola Valley standards.

**d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Less Than Significant Impact with Mitigation.** Site construction and development could temporarily increase noise levels at residences surrounding the site. The noise would occur mainly from mobile and stationary heavy-duty construction equipment sources (e.g., graders, bulldozers, backhoes, drill rigs). As Table 3.12-4 shows, pile driving equipment would have the worst case noise level at a distance of 50 feet (101 dBA Leq). The next worst-case noise level for any one piece of construction equipment would be 85 dBA at Leq at 50 feet. When equipment is used in combination, noise levels would be higher.

Surrounding residences are located approximately 200 feet away from construction sites, and the vegetated land cover at the site would serve to reduce construction equipment noise levels at residence locations. As described above, sound level from stationary sources such as a pile driver or drill rig decreases with distance because sound waves spread out, resulting in a reduction of sound pressure level of 6 dB per doubling of distance from the source. Project construction-related noise is expected to be greatest during scraping, grading, and foundation installation. Noise levels during these construction activities could intrude upon surrounding residential land uses.

Construction equipment is exempt from the non-transportation noise standards of the Portola Valley Noise Control Code. The Noise Control Code does, however, does require the following:

- All construction vehicles, equipment, and machines shall incorporate design features in good operating order that meet current industry standards for noise muffling and noise reduction.
- Commercial construction activities may take place between eight a.m. and five-thirty p.m., Monday through Friday. Commercial construction activities are prohibited on holidays. Exceptions to these hours may be permitted in unusual circumstances

pursuant to written authorization from the director of public works.

- No radios or other amplified sound devices shall be audible beyond the property line of the construction site.
- Construction noise sources shall be subject to applicable conditional use permit conditions, construction program agreements, town noise reduction guidelines, and other forms of regulation.

With implementation of the Portola Valley Noise Control Code requirements the impacts from construction noise would likely be less than significant. Mitigation Measure NOI-2 would further reduce the magnitude of potential construction noise impacts.

**Impact NOI-3**: Site development and construction could temporarily increase ambient noise levels at surrounding residential land uses.

**Mitigation Measure NOI-3**: The following measures shall apply to site development and construction:

1. Signs will be posted at the entrance to the site and at construction equipment staging areas informing all workers and construction contractors of Portola Valley Noise Control Code requirements. The sign shall also provide a contact name and phone number for the job site and the Portola Valley Department of Public Works.
2. Surrounding residential land uses shall be given at least five days advanced written notice of construction activity scheduling and hours of construction.
3. Stationary equipment such as compressors, generators, and welder machines shall be located as far away from surrounding residential land uses as possible.
4. Impact tools such as jack hammers shall be hydraulically or electrically powered wherever possible to avoided noise associated with compressed air exhaust from pneumatically powered tools. When use of pneumatic tools is not unavoidable, an exhaust muffler shall be used on the compressed air exhaust.
5. Prior to issuance of any grading permit or building permit, whichever occurs first, for the Project, the Applicant shall prepare a Construction Noise Complaint Plan and submit it to the Portola Valley Department of Public Works for approval. The Construction Noise Complaint Plan shall detail how the Applicant will respond to construction noise complaints, keep the Town apprised of the complaints, and document the resolution of those complaints.

| | |
|---|---|
| **Effectiveness:** | This measure would reduce temporary construction-related noise levels. |
| **Implementation:** | Condition of PUD and incorporated into site plans and future construction contracts. |
| **Timing:** | Condition of PUD to be implemented when construction occurs. |
| **Monitoring:** | Portola Valley shall review all appropriate engineering and site plan documents for inclusion of this mitigation measure. |

**e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

**No Impact.** 1260 Westridge Drive is located approximately eight miles from the nearest public airport (Palo Alto Airport) and is not located within an airport land use plan area.

**f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?**

**No Impact.** There are no private airstrips located within at least one mile of 1260 Westridge Drive.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.13 POPULATION AND HOUSING--** | | | | |
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | ☐ | ☐ | ☒ | ☐ |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☒ |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☒ |

**Environmental Setting**

Portola Valley is a rural subdivision on the San Francisco peninsula. It has a population of 4,353 (2010 Census, as reported by SJ Mercury News 3/10/11), and its General Plan and Zoning Ordinance are designed to protect the rural character of the community.

**Discussion**

*Would the project:*

**a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

**Less Than Significant Impact.** The Town's General Plan housing element states the average number of people per household in the Town was 2.6 in 2000 and that the Town had a population of 4,622. As noted above, the 2010 census data report a slightly smaller population of 4,353. However, to be conservative this Initial Study is estimating that future homes could have 4 people per household. Furthermore, all extensions of infrastructure (driveways and utilities) would be sized and built to serve only the planned new parcels. The addition of 8 new people to the Town does not represent substantial population growth in the area, either directly or indirectly, therefore the impact is considered less than significant.

**b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

**c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

**No Impact (b-c).** The proposed subdivision does not remove any existing housing nor does it displace any people necessitating the construction of replacement housing elsewhere. Therefore, there is no impact.

| | | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **3.14 PUBLIC SERVICES --** | | | | | |
| a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | | | | | |
| i) | Fire protection? | ☐ | ☐ | ☒ | ☐ |
| ii) | Police protection? | ☐ | ☐ | ☒ | ☐ |
| iii) | Schools? | ☐ | ☐ | ☒ | ☐ |
| iv) | Parks? | ☐ | ☐ | ☒ | ☐ |
| v) | Other public facilities? | ☐ | ☐ | ☒ | ☐ |

**Environmental Setting**

Public service providers in the project area include the Woodside Fire Protection District for fire protection and Woodside Patrol (private) and County Sheriff for police services. The nearest fire station is located at 135 Portola Road, about 1.5 mile south of the project site. The Portola Valley School District provides public education for elementary school age children and the Sequoia Union High School District provides public education for high-school age children. The nearest parks to the subject properties are located at Ormondale School (200 Shawnee Pass) about 0.5 mile southeast of the project site and town center, about 0.5 miles west of the project site.

**Discussion:**

**a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:**

**i) Fire protection?**

**Less Than Significant Impact.** Two new homes on Westridge Drive would not require the need for new or physically altered fire stations to maintain acceptable service ratios, response times or other performance objectives in the service area.

All driveways for Lots A, B, and C meet the required turnaround geometry (40 foot radius) and road widths required for fire protection (J. Lea Pers. Comm. 2011). Preliminary review by the Woodside Fire Protection District gave approval of the building plans provided the following conditions are met:

1. Shared portion of the driveway including gated entrance is 18 feet.
2. One hundred feet of defensible space around the proposed new structures is required prior to construction
3. Upon final inspection, a 30 foot perimeter defensible space will need to be completed
4. Fire hydrants must be within 500 feet of all structures.

Defensible space is defined as a perimeter 30 feet from the property line, which is free of hazardous vegetation, specifically flashy fuels consisting of weeds and annual grasses, as well as dead vegetative material and litter that is capable of being easily ignited and endangering property as determined by the fire marshal (Section 304.1.2.A of the Woodside Fire Protection District fire code).

Future development would be subject to the Town's recently adopted ordinance (2009-377) that amends the Town's Building regulations (Municipal Code Sections 15.04.010 and 15.04.020) requiring the use of ignition resistant materials and construction methods. All new structures, as well as any addition, alteration, or repair to any buildings regardless of cause, size or location, unless otherwise exempt shall comply with the Materials and Construction Methods for Exterior Wildfire Exposure as specified in Chapter 7A of the 2007 California Building Code.

**ii) Police?**

**Less Than Significant Impact.** The addition of two new homes in the rural residential area of Portola Valley would result in a negligible increase in response times for police services. No new officers would be required and the impact is considered less than significant.

**iii) Schools?**

**Less Than Significant Impact.** New developments involving the addition of more than 500 square feet of living space are required to pay school impact fees to the local elementary school district and the Sequoia Union High School District. The impact fees are used by the schools for capacity enhancing capital facilities. The fees are based on the square footage of the proposed building and building permits will not be issued by the Town of Portola Valley until these fees are paid. Therefore, the impact is considered less than significant.

**iv) Parks?**

**Less Than Significant Impact**. The net addition of two new homes and approximately eight people to the area would not require the building of additional parks to serve the new development nor would it result in substantial degradation of existing park facilities. Therefore, the impact is considered less than significant.

**v) Other public facilities?**

**Less Than Significant Impact.** If the map is recorded the project will be annexed to the West Bay Sanitary Sewer District and a connection made to the existing line on Cervantes Drive. The sewer district has indicated that it has wastewater treatment capacity to serve the project. See Section 3.17 for a discussion of sanitary sewer service.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.15 RECREATION --** | | | | |
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | ☐ | ☐ | ☐ | ☒ |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | ☐ | ☐ | ☐ | ☒ |

**Environmental Setting**

Portola Valley is a rural suburban town which primarily relies on open space for recreation. School sites and the town center also provide recreation sites for more organized activities such as team sports. The town has an extensive network of trails that provide opportunities for walking, hiking, running, and horseback riding. The Westridge Trail crosses the entrance driveway to the project site and will not be changed by the project.

**Discussion**

*Would the project:*

**a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

**b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

**No Impact (a-b).** The addition of approximately 8 new people to the Town does not represent an increase in the use of existing neighborhood and regional parks such that it would result in substantial physical deterioration of the facilities or acceleration of such deterioration. The project is not large enough to require the construction or expansion of off-site recreational facilities.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.16 TRANSPORTATION/TRAFFIC --** Would the project: | | | | |
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit? | ☐ | ☐ | ☒ | ☐ |
| b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? | ☐ | ☐ | ☒ | ☐ |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | ☐ | ☐ | ☐ | ☒ |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | ☐ | ☒ | ☐ | ☐ |
| e) Result in inadequate emergency access? | ☐ | ☐ | ☒ | ☐ |
| f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | ☐ | ☐ | ☐ | ☒ |

**Environmental Setting**

The property is located in Portola Valley, a rural suburban town in San Mateo County bounded by the town of Woodside to the north, Palo Alto to the east, La Honda to the west and Los Altos Hills to the south. Portola Road and Alpine Road provide local access to the site on Westridge Drive.

The closest surface street to the project is Westridge Drive, a curving two lane road with a designated speed limit of 25 miles per hour. Because of the low number of cars on the road, this speed limit is often exceeded. Westridge Drive is identified as a major collector road in the Town's Circulation element and has an estimated average daily traffic volume of 4,081 trips per day (CEHTP 2010) although traffic surveys conducted over several days in 2005 counted approximately 2,400 vehicles on Westridge Drive.

Access to Westridge Drive is provided by two arterial roads; Alpine Road to the northeast and Portola Road to the southwest. Alpine Road serves as an arterial from Junipero Serra Boulevard to Portola Road. Portola Road is the main road through the town and is a two lane road. Both Alpine Road and Portola Road support left turn lanes at major intersections.

The current driveway entrance has a limited sight line, and it is difficult to safely enter and exit the site in a vehicle. The proposed project requires that the entrance be moved into the project site in order to comply with property line setbacks. This will improve safety. The sight lines must also be addressed in the final driveway design.

*Bicycle and Pedestrian Facilities*

Westridge Drive, Portola Road and Alpine Road are not officially designated bike routes; however these roads are popular with cyclists. Pedestrian facilities along Westridge Drive consist of an unpaved trail adjacent to the project side of the road. The trail also accommodates equestrians and dogs on leash.

*Transit Service – SamTrans*

The property is directly served by local buses on Route 85 which is provided by SamTrans the San Mateo County Transportation Authority. Route 85 provides service between Menlo Park, Portola Valley and Woodside. In the vicinity of the project site, the route travels from Menlo Park on Alpine Road to Portola Road, then up Westridge Drive and makes a loop around Cervantes Road and Shawnee Pass, double backs on Westridge Drive to Portola Road, then continues on to Woodside.

**Regulatory Setting**

*San Mateo County Congestion Management Plan*

The CMP roadway system comprises of 53 roadway segments and 16 intersections. The roadway network includes all of the State highways within the County in addition to Mission Street, Geneva Avenue, and Bayshore Boulevard. The intersections are located mostly along El Camino Real. Baseline Level of Service (LOS) Standards were adopted for each of the roadway segments and intersections on the system wherein five roadway segments and four intersections were designated LOS F (F designated as the worse possible congestion).

**Discussion:**

*Would the project:*

**a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?**

**Less Than Significant Impact.** The project could potentially add two new homes in the area. Conservatively this represents approximately 8 new residents (assuming 4 new residents per home; Portola Valley's average is 2.5 people per home) who could utilize mass transit facilities, non motorized travel and other components of the circulation system. Portola Valley's Circulation Element does not contain any policies establishing measures of effectiveness for the performance of the circulation system. However, the net addition of 8 new residents to the area is not expected to result in a significant change to the performance of the local circulation system. The estimated average daily traffic for Westridge Drive is 4,081 trips per day according to CEHTP (2010) and 2,400 vehicles according to Portola Valley (Public Works survey 2005). The standard trip generation rate for a single family home is 10 trips per day. To conservatively estimate the anticipated number of new trips from the two new homes, the single family home trip generation rate was doubled. Therefore, the conservative estimate for the anticipated number of trips from each new home is 20 trips per day; or 40 trips for both new homes. This represents a 1.7 percent increase in traffic on Westridge Drive (using Portola Valley's survey of 2,400 vehicles on Westridge Drive in 2005). Portola Valley reviewed the information and concluded the addition of traffic would be insignificant to Westridge Drive (Young pers. comm. 2011). Therefore the impact is considered less than significant.

Construction traffic is not normally considered a potentially significant impact due to its temporary nature. However, the Town may wish to consider further minimizing construction traffic through time of day restrictions (requiring construction traffic to occur outside of peak hours) and/or require the preparation of a traffic management plan in the event that construction would occur simultaneously across all three proposed parcels in the subdivision.

**b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

**Less Than Significant Impact.** The San Mateo County Congestion Management Program (CMP) requires new development projects that add 100 or more peak hour trips to the CMP roadway network to implement Travel Demand Management (TDM) measures that would reduce project impacts. In the vicinity of the project site, facilities that are part of the CMP network only include SR 280. The project would generate less than 100 peak hour trips. As a result, a TDM program is not required for the proposed project.

The standard trip generation rate for single family homes is 10 trips per day (per home). Since the project is assuming a higher than average number of residents per home, standard trip generation rates were doubled to conservatively estimate projected trips. Therefore the new subdivision (addition of two new homes) could add 40 trips per day to the local roadway system and this number falls well below the requirement for a CMP analysis which is 100 peak hour trips.

Forty trips per day as a result of the project represents about 1.7 percent of overall traffic on Westridge Drive, the major collector road adjacent to the project site.

Therefore, the project would not significantly affect level of service standards or travel demand management measures established by the county congestion management agency.

**c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

**No Impact.** The project is the subdivision of land and issuance of a planned unit development permit for residential use. It would have no effect on air traffic patterns including no increase in traffic levels nor a change in location that results in substantial safety risks. Therefore, there is no impact.

**d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

**Less Than Significant Impact with Mitigation.** Project plans include widening the entrance at Westridge Drive. Minor clearing of vegetation would need to be performed to increase sight distance at that intersection. The posted speed limit on Westridge Drive is 35 miles per hour (mph). Using a design speed of 70 kilometers per hour (43.5 mph) to account for a 25 percent overage in actual driving speed, 364 feet of sight distance is needed to meet AASHTO (American Association of State Highway and Transportation Officials) design standards. These design standards assume a combination of reaction time and breaking time, adjusted conservatively to recognize an inattentive driver, and wet weather conditions. This sight distance is achieved to the north by removing brush of moderate height and a clump of 8-inch bay trees near the right of way. To the south, there are a few oak saplings (approximately 2-inches in diameter) that should be removed. Ivy on the existing fence will also be removed to improve visibility for drivers. This would result in sight distances of 400 feet and 500 feet, to the north and south, respectively (J. Lea pers. comm. 2011). Measure TRA-1, below requires that the driveway entrance design address sight lines, including vegetation trimming and/or removal along Westridge Drive. During construction, large slow moving trucks hauling construction materials will be entering and exiting the site, and may result in a traffic hazard. Measure TRA-2 is recommended to provide for safety during construction.

**Impact TRA-1:** Sight lines at the existing driveway pose a traffic safety hazard.

**Mitigation Measure TRA-1**: Additional sight distance shall be achieved by vegetation removal at the site's entrance and providing the required setback from the front property line. This additional sight distance is achieved on the north by removing brush of moderate height and a clump of 8-inch bay trees near the right of way. To the south, there are a few oak saplings (approximately 2-inches in diameter) that should be removed. Enough ivy shall be removed from the fence to improve visibility for drivers. This achieves sight distances of 400 feet and 500 feet, to the north and south, respectively.

**Effectiveness:** Will increase traffic safety for drivers entering or exiting the site.
**Implementation:** Will be incorporated into the re-design of the driveway entrance.
**Timing:** When driveway entrance is designed.
**Monitoring:** Condition of PUD permit.

**Impact TRA-2:** The entering and exiting of the site by slow moving construction vehicles can pose a hazard for other traffic on Westridge Drive.

**Mitigation Measure TRA-2**: Advance construction signage and flaggers shall be present on Westridge Drive to warn drivers that slow moving vehicles are present, and assist those vehicles when entering and exiting the property. Signage and controls shall also provide for the safety of pedestrians, equestrians and cyclists.

**Effectiveness:** Provides for the safe entry and exit of slow moving construction vehicles during construction.
**Implementation:** The applicant shall insure these measures are included in construction plans and contracts.

**Timing:** Advanced signing and flaggers shall be used whenever large trucks enter or exit the site.

**Monitoring:** The Town shall review all appropriate bid, contract, and engineering and site plan documents for inclusion of this measure.

The implementation of Measures TRA-1 and TRA-2 would mitigate potential safety hazards.

**e) Result in inadequate emergency access?**

**Less Than Significant Impact.** Woodside Fire Protection District reviewed the grading plans and approved the project plans with conditions. The conditions are as follows and shall be incorporated into the project:

1. Shared portion of the driveway including gated entrance is 18 feet.
2. One hundred feet of defensible space around the proposed new structures is required prior to construction
3. Upon final inspection, a 30 foot perimeter defensible space will need to be completed
4. Fire hydrants must be within 500 feet of all structures.

It is assumed that trenching for extension of the sewer line from Cervantes Road to Mapache Drive would not require full closure of any road including Westridge Drive at any time. At least one lane shall remain open for one-way controlled traffic at all times. Maintaining at least one lane open preserves emergency access in the area. If one-lane access cannot be maintained throughout construction, additional environmental review will be required.

Therefore, the impact is considered less than significant.

**f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?**

**No Impact.** The project to subdivide parcels at 1260 Westridge Drive would not conflict with existing public transit, bicycle or pedestrian facilities, or significantly compromise the safety of these facilities. It has no effect on existing policies, plans or programs related to public transit, bicycle or pedestrian facilities. Safety precautions under Mitigation Measure TRA-2 will protect pedestrians, equestrians and cyclists during construction.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.17 UTILITIES AND SERVICE SYSTEMS --** Would the project: | | | | |
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | ☐ | ☐ | ☐ | ☒ |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☒ | ☐ |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☒ | ☐ |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | ☐ | ☐ | ☒ | ☐ |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | ☐ | ☐ | ☒ | ☐ |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | ☐ | ☐ | ☒ | ☐ |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | ☐ | ☐ | ☒ | ☐ |

**Environmental Setting**

The existing home on the site currently uses an on-site septic system. Any new development at the site would be required to connect to the South Bay Sewer Authority's (SBSA) 2 ½-inch force main located in Cervantes Road. West Bay Sanitary Sewer District is a member of SBSA and has an allocation of wastewater treatment capacity at the plant. SBSA provides the area's wastewater infrastructure. Wastewater is treated at the SBSA wastewater treatment plant. The subdivided parcels will utilize individual septic systems in which the effluent held in a septic tank and is then pumped to the sewer main (no leach fields are required). The existing sewer force main would be extended from Cervantes Road west to Mapache Drive, as

explained in section 2.0 Project Description. By connecting to the SBSA sewer main, the parcels would be annexed into the West Bay Sanitary Sewer service district and easements dedicated to West Bay Sanitary Sewer.

The site is served by a 12-inch California Water Service water main on Westridge Drive. Future development on Lots A and C would connect to the water main through an underground pipe located under the existing and new driveways.

Stormwater at the site is not currently collected or detained. Stormwater runoff would be collected on the project site and conveyed to existing stormwater drain lines on Westridge Drive or discharge into Corte Madera Creek or other storm drain easement on the project property. The future property owner(s) would work with the Town to resolve any issues related to the location of any proposed storm drain once the project moves toward the design phase and a specific site plan is developed.

Garbage service is provided by Greenwaste Recovery Inc., and refuse is disposed of at the Zanker Road Landfill in San Jose.

**Discussion**

*Would the project:*

**a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?**

**No Impact.** All wastewater generated by the new subdivided parcels would be treated by the SBSA wastewater treatment plant in Redwood City. The municipal wastewater discharged from the subdivided parcels would not affect the ability of SBSA to comply with treatment requirements of the RWQCB. No waste discharge permits are required by the Regional Water Quality Control Board.

**b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Less Than Significant Impact.** The project could result in three new connections to the sanitary sewer, including an extension of the sewer line through an existing utility easement across an adjacent parcel and in the roadbeds of Mapache Drive and Cervantes Road. No expansion of the wastewater treatment plant is required. The force main will be directionally bored under the adjacent parcel, and then trenched in the roadbeds. It will not result in significant environmental effects.

**c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Less Than Significant Impact.** No new or expanded stormwater drainage facilities need to be constructed off site as a result of this project. Therefore, the impact is considered less than significant.

**d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

**Less Than Significant Impact.** California Water Service has confirmed that it has enough water supply to serve a net addition of two homes in Portola Valley (Larry Mathias, Pers. Comm 2011).

**e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

**Less Than Significant Impact.** The West Bay Sanitary District has indicated that there is enough capacity to serve the project's addition of two new homes into the service area (Bill Kitajima, Pers Comm 2011).

**f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

**Less Than Significant Impact.** The Zanker Road Landfill has current capacity to serve its existing contracts. The net addition of two homes would not result in the need to increase landfill capacity.

**g) Comply with federal, state, and local statutes and regulations related to solid waste?**

**Less Than Significant Impact.** Solid waste generated by the project would be directed to landfills in accordance with applicable regulations. Portola Valley has a construction and demolition ordinance in effect (Municipal Code Chapter 8.09) that requires a minimum of 60% of construction and demolition materials be reused, recycled, or diverted from the waste stream. The project would not conflict with federal, state, or local statutes related to solid waste.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **3.18 MANDATORY FINDINGS OF SIGNIFICANCE --** | | | | |
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | ☐ | ☒ | ☐ | ☐ |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? (Cumulatively considerable means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | ☐ | ☐ | ☒ | ☐ |
| c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly? | ☐ | ☒ | ☐ | ☐ |

**Discussion:**

**a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

**Less Than Significant Impact with Mitigation.** The project has the potential to degrade the environment by impacting water quality, protected wildlife, aesthetics, the noise environment (during construction), prehistoric resources, and traffic (during construction). All of the impacts are reduced to less than significant impacts with measures that will be incorporated into the project.

**b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?**

**Less Than Significant Impact**. The project could result in the construction of two additional homes in Portola Valley. It would not result in a considerable cumulative effect on any environmental resource.

**c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?**

**Less Than Significant Impact with Mitigation.** As noted above, the project could result in adverse aesthetic, noise or traffic impacts that will be fully mitigated with measures incorporated into the project.

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