Town of Ross
Planning Department
INITIAL STUDY AND CHECKLIST

California Environmental Quality Act (CEQA) Requirements

This report has been prepared pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et esq.) and the CEQA *Guidelines*.

Project Title: Upper Road Land Division

Project Location: Upper Road (APN: 073-011-26)
Ross, California 94957

Lead Agency: Town of Ross
Planning Department
31 Sir Francis Drake Boulevard
Ross, CA 94957
Contact: Elise Semonian
(415) 453-1453 ext. 121

Project Applicant: Berg Holdings
2330 Marinship Way, Suite 301
Sausalito, CA 94965
Contact: J.T. Wick

General Plan Designation/Zoning Classification: The Upper Road Land Division Project ("proposed project") is located in the western area of the Town of Ross, Marin County, California (Figure 1). The project site, as described in the Town of Ross General Plan, is designated Very Low Density (VL). The land use designation is defined as an average of 0.3 to 3.0 persons per acre and is consistent with R-1:B-A, R-1:B-5A and R-1:B-10A zoning, with lots one acre or more in size (Town of Ross 2007). The site is zoned R-1:B-10A, Single Family Residential, 10-acre minimum lot size. Uses permitted as a matter of right in an R-1 District without a Use Permit (subject to modification by applicable combining district regulations) include single family residences and accessory uses including garages, greenhouses, terraces, swimming pools, private stables, tennis courts (daytime use),screening walls, fences, driveways, and walkways.

Site Description: The project site is comprised of a single, irregularly shaped, 35.97-acre parcel of hillside land on the southeastern section of Bald Hill, which is located on the northern slope of Mount Tamalpais (Figure 2). The site is adjacent to Marin Municipal Water District (MMWD) lands and Natalie Coffin Green Park (a Town facility) on the west and southerly sides. The remaining adjacent and nearby land is privately-owned and mostly developed with single family homes, some of which are on large lots. Access to the site is from Upper Road, which is a narrow and windy public street. The average slope of the lot is about 27 percent, but the lot is much steeper in areas. The site is heavily wooded with native oak, redwood, and other trees and non-native Scotch and French Broom shrubs. The site also contains a large rock outcropping and two swales. Two non-habitable dilapidated small cabins, a greenhouse, deck, and two dilapidated water tanks exist on the site.

Project History: Property owners have proposed to subdivide the project site for over twenty years. An application for a five-lot subdivision (named the Monte Bello project) was submitted to the Town of Ross and an Environmental Impact Report (EIR) was certified for that project in 1991. However, that project was denied by the Town Council. A subsequent, revised plan for a five-unit subdivision was submitted and was also denied by the Town in 1995.

A new application was submitted for a three-lot subdivision in 2000 and accepted as complete in 2002. An Initial Study on that project was completed in May 2002 and a Draft Subsequent EIR of the 2002 plan was initiated. Before the Draft Subsequent EIR (SEIR) was published the applicant decided to revise the plan to respond to some of the issues identified in the environmental review. The revised site plans were completed in January 2004 and a revised Initial Study was prepared in February 2004. In April 2004, the applicant decided to again revise the project plans to balance the cut and fill volumes of soil excavation on the project site and to include a water tank and associated roadway. In December 2006, a Draft Subsequent EIR was circulated for public review and comment; however, the applicant withdrew the project prior to completion of the Final Subsequent EIR to address issues raised in that document.

In January, 2012, the applicant submitted a new application with a modified project for a three-lot subdivision. The new project has removed the previously-proposed water tank and associated roadway and grading, and also balances grading on-site. In addition, proposed project grading has decreased compared to previous designs. Total cut and fill has been reduced by 64% from 61,500 cubic yards (CY) in the prior design to 22,400 CY in the current proposed project. Most of the reduction in grading would be a result of lessening the road grade over steep terrain at the project site entrance as well as the elimination of a previously-proposed water tank and associated access road.

Project Description: The proposed project requests approval of a Vesting Tentative Subdivision Map for three residential sites and approval of Design Review and Hillside Lot Applications for grading, and retaining wall construction and approvals for a common driveway and utilities to serve the site. The proposed Vesting Tentative Subdivision Map would divide the parcel into three new parcels of 11.89, 11.00, and 13.08 acres each (Figure 3). Table 1 below provides for each parcel gross acreages and net acreages derived by subtracting the easement areas devoted to access and utilities. No home designs are proposed currently and the single family residences would be reviewed by the Town through future development applications.

Table 1
Proposed Parcels

Parcel Number	Size		Purpose
	Gross (acres)	Net (acres)	
1	11.89	11.58	Single Family Residence
2	11.00	10.71	Single Family Residence
3	13.08	12.76	Single Family Residence

Access

Access to the site is from Upper Road via Lagunitas Road and Sir Francis Drake Boulevard. Upper Road is a local street, providing access to Glenwood Avenue and Lagunitas Road for traffic to and from the east and south and to Bolinas Avenue for traffic to and from the north and west. The site entrance is located adjacent to a tight hairpin curve on Upper Road.

A common road would serve the three home sites. Private driveways would connect each home to the common road (Figures 3 and 4). From the project entrance at Upper Road, a 20-foot wide access way

would extend about 992 feet connecting Upper Road to 12-foot wide driveways for Parcels 1, 2 and 3. The Parcel 1 driveway would be 39 feet long; the Parcel 2 driveway would measure 59 feet; and Parcel 3 would extend 126 feet, relying on an upslope retaining wall for support. Most of the common road would be depressed in a graded cut, with retaining walls on the westerly side and a cut upslope on the easterly side. The curving entranceway would have a maximum slope of 18 percent compared to the 27 percent average slope of the existing topography at this location.

A curb and gutter would line the westerly side and a two-foot wide shoulder would mark the easterly side of the road. Natural rock-clad, tiered retaining walls in compliance with Town code would support the road. The depressed design of this access way would allow auto travel while buffering noise and headlight effects on neighboring properties.

The project site features moderate topography with an elevation change of approximately 220 feet from the Upper Road entrance to the area above the westerly boundary of Parcel 3. Accordingly, the road system climbs steadily uphill as it traverses the site. The applicant has shortened substantially the road length from 2,741 to 992 feet- a 63 percent improvement- and to lower the road grade from an average of 20-25 percent grade to an average of 15 percent. Parcel driveways would not exceed 18 percent in grade with more level transitions to building areas ranging from 2-8 percent.

Surrounding Land Uses and Urban Context

The Town of Ross is a small, residential community with land area of more than 1,000 acres. Residential parcels occupy about 75 percent of the Town's land area, while parks occupy five percent of land area, cultural and religious institutions occupy four percent, and streets and roads occupy about 14 percent. The Town has approximately 1.3 acres of commercial space and no industrial areas or office developments. Ross is a predominately residential community with very high land and home values. The site of the proposed Upper Road subdivision is located along the Town's western boundary, in a low-density, 1-4 acre neighborhood.

Four residential parcels abut the site. The smallest is 1.0 acre; the others are 2.1, 2.8, and 4.0 acres respectively. Of these, the site shares 769 feet of common boundary with the 7 Upper Road parcel, 383 feet with 31 Upper Road, 233 feet with 27 Upper Road, and 191 feet of common boundary with 25 Upper Road. The entire 35.97-acre parcel has only one point of access to the public road system, and the total length of the Upper Road frontage is 130 feet.

Along most of its eastern boundary, the site abuts Natalie Coffin Greene Park, a 1,118 foot long common boundary. The southwestern and northwestern sides of the park border MMWD lands (2,243 of common boundary) and an open space parcel owned by the Town (995 feet of common boundary). There is no vehicular access to the site from the park, MMWD, or Town lands. To summarize, almost 72 percent of the site's boundary adjoins open space and parkland, about 26 percent of the boundary adjoins low-density residential development.

Beyond the immediately adjacent parcels, the land use patterns that provide the urban context are not substantially different. Open space and watershed lands extend for long distances, even miles to the west and northwest. Low density, residential small-town suburban land use patterns extend for about a mile to the east, while Kentfield lies to the south and San Anselmo to the north. These communities have a similar pattern of land use, but with somewhat higher residential densities, smaller homes, and larger commercial areas.

Grading

Figure 3 illustrates detailed grading design plans and identifies the locations of the proposed building sites and driveways. The plans identify anticipated volumes of cut and fill and locations of retaining walls, culverts, catch basins and the bridge, all associated with the road and driveway construction. The project objective of balancing cut and fill on-site and further reducing road grades is proposed to be accomplished by taking the cut material from the road system and incorporating it into a single fill pad on Parcel 1 with irregular contours which preserve the adjacent Redwood grove and swales. A series of 6 terraced concrete retaining walls of approximately six feet in height would also be constructed on Parcel 1 to buttress the fill material.

No cut material would be off-hauled by truck through Town roads. Total cut and fill has fallen 64 percent from 61,500 cubic yards (CY) in the prior design to 22,400 CY in the proposed project. Most of the cut comes from lessening the road grade over steep terrain at the project entry.

Drainage and Utilities

Runoff collected on developed hard surfaces would be directed to storm drain inlets and transported in short pipes to downslope outlets/energy dissipaters to merge with sheet flows of runoff flowing to the existing Swan Swale. Four inlet, pipe and dissipater systems are called for along the driveway system. Water collected on the entrance roadway would flow in the gutter to Upper Road where it would be diverted to the drainage ditch along Upper Road. Two detention basins on Swan Swale would capture uphill drainage in a manner that would result in less post project off-site drainage than existing conditions in compliance with Town Code Sections 18.39.090 (i) and 15.54.010 (b). Drainage details are shown in Figure 3.

All the retaining walls would have back drains and drain rock on the upslope sides to collect and drain groundwater away from their footings in the rainy season. In addition, all of the retaining walls on the high sides of the driveways or lots would have concrete ditches on the uphill sides to intercept the surface runoff and direct it downslope, around the walls. Driveway wall heights would respect the six foot maximum for individual walls, minimum three foot separation of walls, and 18 foot aggregate height for multiple walls according to Town Code Section 18.39.090 (c). Cut and fill would not exceed 2:1 in steepness in compliance with this same standard. The terraced walls to buttress the fill material would exceed the height limit of eighteen feet for the slope (Ross Municipal Code Section 18.39.090(c).

Water and sanitary sewer lines would be installed beneath the new road and driveways. The sewer lines would connect with an existing sewer main beneath Upper Road. The Upper Road water main would be upsized from the entrance to 7 Upper Road to the project entrance. A new main would extend up and along the new road with laterals serving each of the three residences.

Landscaping

The tree survey identified 2,187 subject trees; each numbered and tagged by the arborist. The arborist report identifies 72 trees that are "dead/fallen/hazardous/diseased" and 356 additional trees to be removed for development for a total of 428 trees proposed to be removed. The replanting plan (Figure 5) illustrates that 977 trees are proposed be replanted to completely reforest the site with a greater diversity of native trees. The proposed tree replacement design reduces tree loss by 57 percent compared to the previously-proposed project design.

Town Code Section 12.24.080(d) provides for three replacement trees to be planted on a project site for every one removed. Where on-site trees are not feasible, a project sponsor may make an in-lieu

payment to the Town for the provision of off-site trees. As previously indicated, the project replacement plan calls for 977 replacement trees on a site where 428 trees would be removed for the three homes and infrastructure, attaining a replacement ratio of 2.7:1.[1] The applicant proposes to work with the Town Council and staff to fund an economic equivalent of public tree planting as part of the Downtown Tree Plan.

The Preliminary Landscape Plan also indicates that disturbed areas would be reseeded with a mix of native seeds and that drip irrigation systems would be installed for each lot.

Public agency approval(s) required:

- Vesting Tentative Map approval
- A Hillside Lot Permit pursuant to Town of Ross Municipal Code section 18.39.020 for development and subdivision of a parcel that is completely or partially within areas designated as slope stability 3 or 4 on the Town's slope stability map.
- Design review for grading and retaining walls.
- Public Sewer Extension Permit (PSX Permit)

Other public agencies whose approval may be required include:

- Regional Water Quality Control Board, San Francisco Bay Region
- United States Army Corps of Engineers
- United States Fish and Wildlife Service
- California Department of Fish and Game
- Marin Municipal Water District

[1] *Tree replacement ratio does not include dead, fallen, hazardous or diseased trees. (977 / 356 = 2.74)*

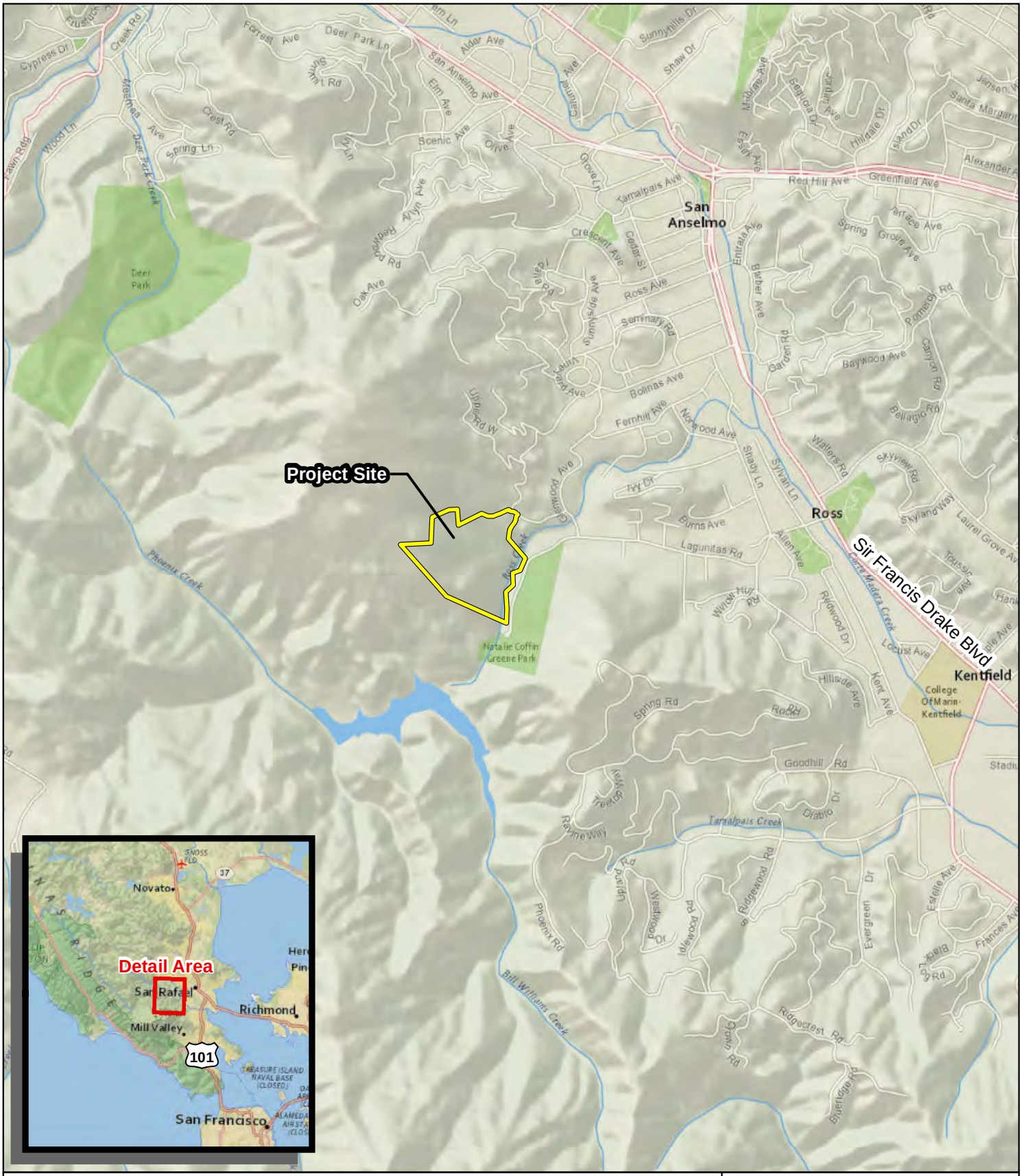

Figure 1. Regional and Vicinity Map

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Upper Road Land Division Project
Town of Ross, California

Date: August 2012
Map By: Derek Chan

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Figure 2. Aerial Photograph of the Project Site

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Upper Road Land Division Project
Town of Ross, California

Date: August 2012
Map By: Derek Chan

Path: L:\Acad 2000 Files\22000\22141\GIS\ArcMap\Fig2_Aerial_20120918.mxd

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GRADING NOTES:

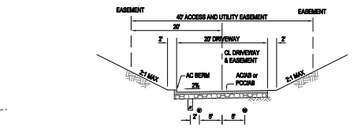
1. THE GEOTECHNICAL ELEMENTS OF GRADING ARE TO BE IN GENERAL CONFORMANCE WITH THE RECOMMENDATIONS PRESENTED IN THE 1989 REPORT BY HERZOG ASSOCIATES AND THE NOVEMBER 3, 1999 ANALYSIS BY PHOENIX GEOTECHNICAL. THE PROJECT GEOTECHNICAL ENGINEER AND CERTIFIED ENGINEERING GEOLOGIST ARE TO REVIEW AND APPROVE ALL ASPECTS OF THE GRADING WORK RELATED TO THE CONSTRUCTION ON KEY WAYS, SUB DRAINS, ENGINEERED FILLS, RETAINING WALL FOOTINGS AND BACK DRAINS, AND CUT SLOPES. A FINAL REPORT SHALL BE SUBMITTED OUTLINING THIS WORK.
2. CUTS 2:1 UNLESS APPROVED BY ENGINEERING GEOLOGIST. IN STRONG SANDSTONE CUTS IN SHEARED MELANGE MAY NEED TO BE RECONSTRUCTED.
3. FINAL DETAILS REGARDING SPOILS DEPOSITION WILL BE SUBJECT TO REVIEW AND APPROVAL OF CERTIFIED ENGINEERING GEOLOGIST.
4. GRADING DESIGN FOR BUILDING PADS ASSUMES USE OF PIER AND GRADE BEAM FOUNDATION DESIGN WITH ABOVE GRADE PLACEMENT OF CAST IN PLACE GRADE BEAMS.
5. CONCEPTUAL BUILDING AREAS ARE SHOWN FOR PURPOSES OF CONDUCTING ENVIRONMENTAL REVIEW. FINAL LOCATIONS AND CONFIGURATIONS WILL BE DETERMINED THROUGH TOWN REVIEW OF INDIVIDUAL LOT DESIGN AND DEVELOPMENT.

PRELIMINARY CUT AND FILL VOLUMES

	CUT (CUBIC YARDS)	FILL (CUBIC YARDS)
PARCEL DRIVEWAYS & SITE	16,500	600
PARCEL 1 FILL AREA		22,500
DETENTION PONDS	**CUT (CUBIC YARDS)**	**FILL (CUBIC YARDS)**
SWAN SWALE (UPPER)	2,400	0
SWAN SWALE (LOWER)	4,200	0
PROJECT TOTAL	23,100	23,100

NOTE:

PRELIMINARY CUT AND FILL VOLUMES ARE BASED ON DIFFERENCES BETWEEN EXISTING GRADE CONTOURS AND FINISH GRADE CONTOURS.



TYPICAL SECTION A-A
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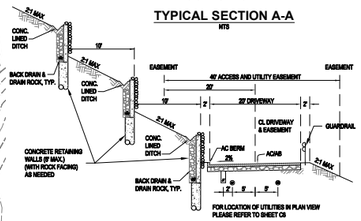

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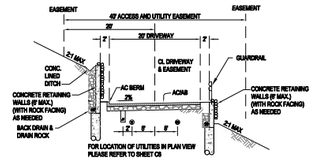

TYPICAL SECTION C-C
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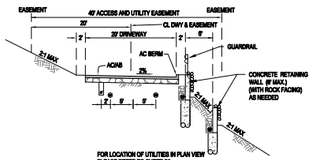

TYPICAL SECTION D-D
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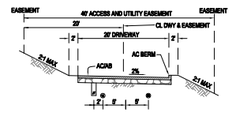

TYPICAL SECTION E-E
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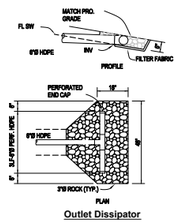
TYPICAL WALL DETAIL
N.T.S.



Outlet Dissipator

DRAIN

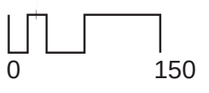


Figure 3. Preliminary Grading and Drainage Plan

Upper Road Land Division Project
Town of Ross, California

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Date: OCTOBER 2012
Source: CSW | Stuber-Stroeh Engineering Group, Inc.

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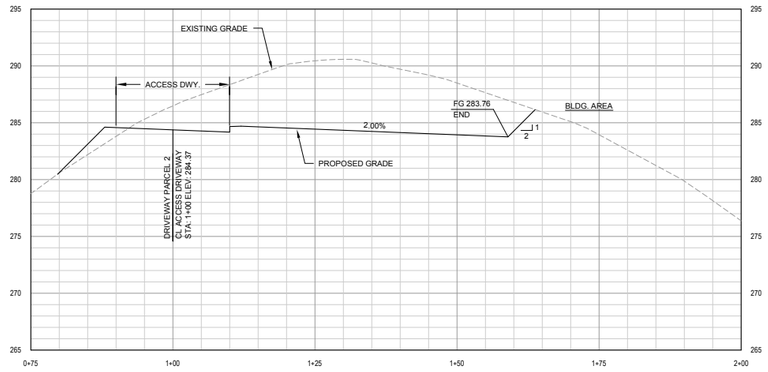
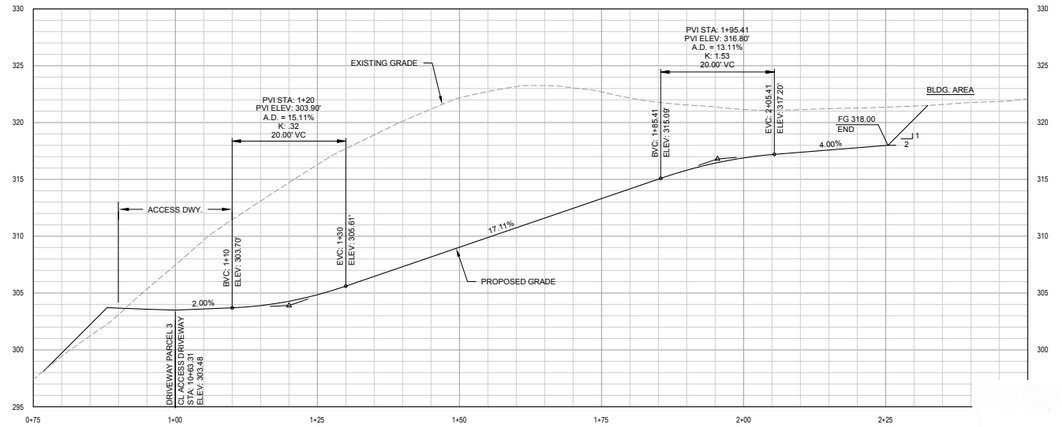
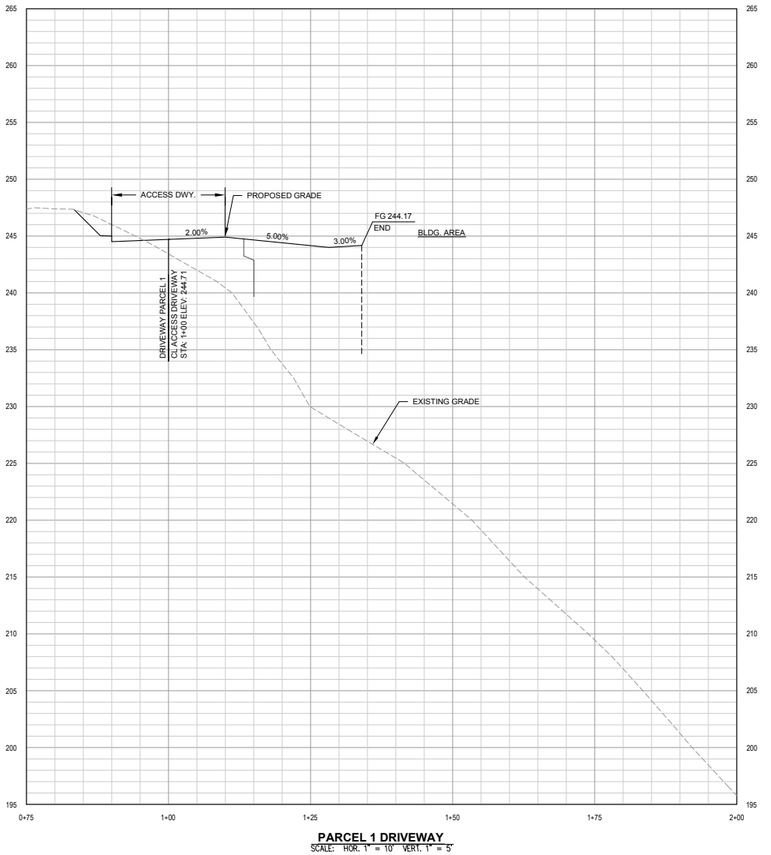


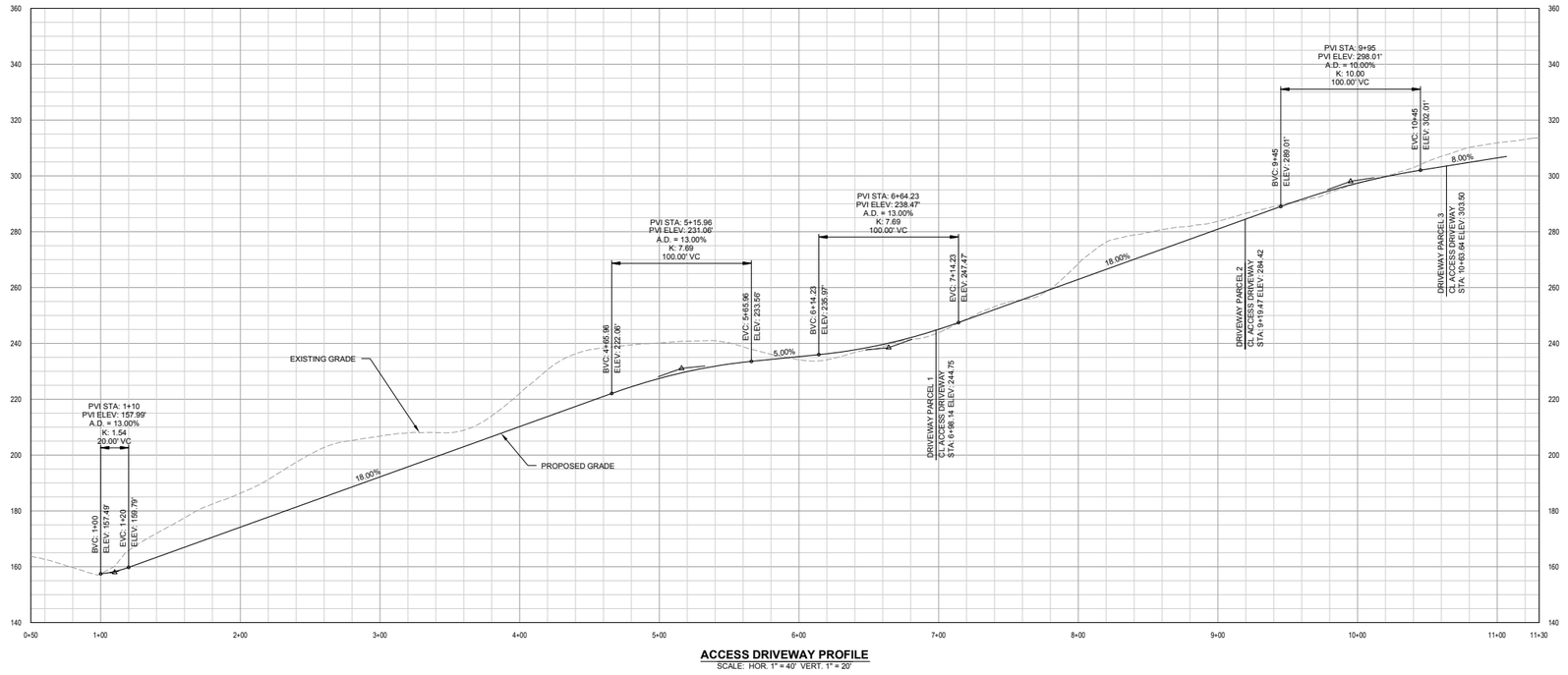
PARCEL 2 DRIVEWAY
SCALE: HOR. 1" = 10' VERT. 1" = 5'



PARCEL 3 DRIVEWAY
SCALE: HOR. 1" = 10' VERT. 1" = 5'



PARCEL 1 DRIVEWAY
SCALE: HOR. 1" = 10' VERT. 1" = 5'



ACCESS DRIVEWAY PROFILE
SCALE: HOR. 1" = 40' VERT. 1" = 20'

Figure 4. Preliminary Driveway Profiles

Upper Road Land Division Project
Town of Ross, California

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Date: OCTOBER 2012
Source: CSW | Stuber-Stroeh Engineering Group, Inc.

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NOTES:

1. PROJECT REPLANTING WILL CREATE A TOTAL NET GAIN OF 621 TREES.
2. FOR A COMPLETE LIST OF TREES TO BE REMOVED PLEASE SEE TREE REMOVAL REPORT FOR UPPER ROAD SUBDIVISION, PREPARED BY JAMES LASCOT, ARBORLOGIC CONSULTING ARBORISTS, MAY 8, 2012.
3. DISTURBED AREAS TO BE RESEEDED WITH MIX APPROVED BY COUNTY CREEK NATURALIST.
4. THE APPLICANT PROPOSES TO REPLACE SOME OF THE TREES WITH OTHER NATIVE SPECIES TO ALLOW FOR GREATER SPECIES DIVERSITY AT THE SITE.
5. IRRIGATION BY SEPARATE METER FOR EACH LOT BY DRIP IRRIGATION WITH ELECTRONIC DISTRIBUTOR.
6. PLEASE NOTE THAT THE TREE SURVEY EXTENDS ONLY TO THE RIDGE AND UPLAND GREENBELT BOUNDARY AND LIMITED AREAS BEYOND. PROJECT CHANGES TO SITE ABOVE THIS BOUNDARY WILL REQUIRE AN AMENDED TREE SURVEY AND MAY REQUIRE FURTHER ENVIRONMENTAL REVIEW.

TREE REMOVAL LEGEND

1759 TOTAL TREES	○	EXISTING TREE WITH TAG (TREE TO REMAIN)
72 TREES	◈	DEAD/FALLEN/HAZARDOUS/DISEASED
140 TREES	⊕	NECESSARY FOR PROPOSED CONSTRUCTION (TRUNK Ø < 12")
216 TREES	⊕	NECESSARY FOR PROPOSED CONSTRUCTION (TRUNK Ø > 12")
428 TOTAL TREES (TO BE REMOVED)		
2187 TOTAL TREES TAGGED		

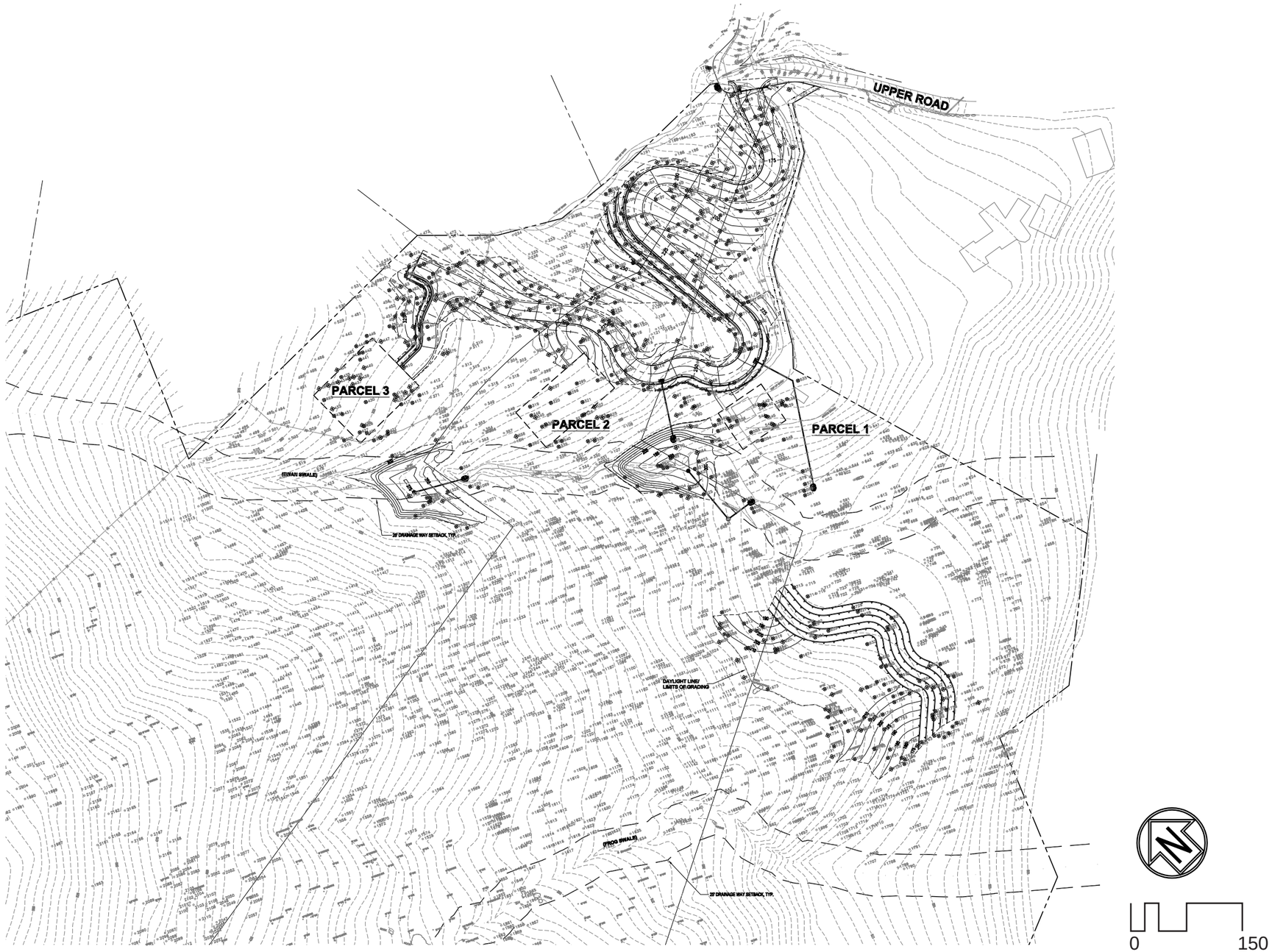

Figure 5. Existing Trees and Trees to be Removed and Replaced

Upper Road Land Division Project
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Date: OCTOBER 2012
Source: CSW | Stuber-Stroeh Engineering Group, Inc.

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Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project involving impacts that are a "Potentially Significant Impact" as indicated by the checklist on the pages below.

✓	1. Aesthetics	✓	7. Greenhouse Gas Emissions		13. Population / Housing
✓	2. Agriculture & Forestry Resources	✓	8. Hazards & Hazardous Materials		14. Public Services
✓	3. Air Quality	✓	9. Hydrology / Water Quality		15. Recreation
✓	4. Biological Resources	✓	10. Land Use / Planning	✓	16. Transportation / Traffic
✓	5. Cultural Resources		11. Mineral Resources	✓	17. Utilities / Service Systems
✓	6. Geology / Soils	✓	12. Noise	✓	18. Mandatory Findings of Significance

Determination

	I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION should be prepared.
	I find that although the proposed project could have a significant effect on the environment, there will 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 will be prepared.
✓	I find the proposed project MAY have a significant effect on the environment and a SUBSEQUENT ENVIRONMENTAL IMPACT REPORT is recommended based on Section 15162 of the CEQA Guidelines.
	I find that the proposed project MAY have a "potentially significant impact" 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.

Signature: Elise Semonian

Elise Semonian
Senior Planner, Town of Ross

Date: 11/20/12

Environmental Analysis

1. Aesthetics. Would the project:

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	✓			

Discussion:

a) ***Potentially Significant Impact***. A significant impact may occur if a project were to introduce incompatible scenic elements within a field of view containing a scenic vista or substantially block views of a scenic vista. The proposed project consists of a Vesting Tentative Subdivision Map for three residential lots as well as associated access road, retaining walls, and balancing all grading on-site on an undeveloped site. Although the proposed project would not block views of a scenic vista based on visual simulations prepared as a part of the Vesting Tentative Map Project Report, the project would be developed within a field of view containing a scenic vista. This is a ***potentially significant impact*** and will be addressed in the Subsequent Environmental Impact Report (SEIR) being prepared for the proposed project, including the preparation of new visual simulations of the project as viewed from various off-site public viewing locations.

b) ***No Impact***. A significant impact may occur only where scenic resources, including but not limited to trees, rock outcroppings, and historic buildings, would be damaged or removed by a project within a state scenic highway. The proposed project is not located adjacent to or within the proximity of a state listed scenic highway. Therefore, the proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway and ***no impacts*** would occur.

c) ***Potentially Significant Impact***. A significant impact may occur if a project were to introduce incompatible visual elements on the project site or visual elements that would be incompatible with the character of the area surrounding the project site. The proposed project would remove existing vegetation within a highly vegetated area. Although the proposed project would be consistent with surrounding land uses the project has the potential to degrade the existing visual character of the site. This is a ***potentially significant impact*** and will be addressed in the SEIR.

d) ***Potentially Significant Impact***. A significant impact may occur if a project were to introduce new sources of light or glare on or from the project site which would be incompatible with the area surrounding the project site, or which pose a safety hazard to motorists utilizing adjacent streets. Implementation of the proposed project would introduce new sources of light and glare, including interior and exterior building lighting and vehicle headlights, reflective surfaces, such as windows

and light-colored paint on a site that is currently vacant. The areas immediately surrounding the project site include single family residential land uses and open space. The introduction of additional light and glare from the new development would be noticeable to some viewers in the surrounding area. This is a ***potentially significant impact*** and will be addressed in the SEIR.

2. Agricultural and Forestry 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 prepared by the California Department 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:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, 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 4526), 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?	✓			

Discussion:

a) ***No Impact***. The Farmland Mapping and Monitoring Program (FMMP) designates the site as "Urban and Built-Up Land" and "Other Land".[2] Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. ***No impact*** would occur.

[2] *California Division of Land Resource Protection, Farmland Mapping and Monitoring Program. Marin County Important Farmland 2010. ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/mar10.pdf, Accessed September 7, 2012.*

b) ***No Impact***. The site is zoned R-1:B-10A, Single Family Residential, 10-acre minimum lot size. Uses permitted as a matter of right in an R-1 District without a Use Permit (subject to modification by applicable combining district regulations) include single family residences and accessory uses including garages, greenhouses, terraces, swimming pools, private stables, tennis courts (daytime use),screening walls, fences, driveways, and walkways. There are no agricultural resources or Williamson Act lands within Ross (Town of Ross 2007a). Therefore, no conflict with existing zoning for agriculture would result from project implementation. The project site is not under Williamson Act Contract. Therefore, ***no impacts*** would occur.

c) ***No Impact***. The site is zoned R-1:B-10A. As such, the proposed project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. Therefore, ***no impacts*** are anticipated and no additional analysis is required.

d) ***Potentially Significant Impact***. Forests and forest resources are directly linked to both greenhouse gas (GHG) emissions and efforts to reduce those emissions. For example, conversion of forests to non-forest uses may result in direct emissions of GHG emissions. Such conversion would also remove existing carbon stock (i.e., carbon stored in vegetation), as well as a significant carbon sink (i.e., rather than emitting GHGs, forests remove GHGs from the atmosphere). Changes in forest land or timberland zoning may also ultimately lead to conversions, which could result in GHG emissions, aesthetic impacts, impacts to biological resources and water quality impacts, among others. Therefore, these additions are reasonably necessary to ensure that lead agencies consider the full range of potential impacts in their initial studies. Although the project site is not technically zoned as forest land or timberland by the Town of Ross, Public Resources Code section 12220(g) defines forest land as:

> "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

By this definition, the project area would be considered forest land. The tree survey identified and tagged 2,187 subject trees out of an estimated 5,000 trees (ArborLogic 2012). The removal of 433 trees (73 "dead/fallen/hazardous/diseased" trees, 140 non-significant trees and 216 significant trees) would reduce the on-site tree count by approximately seven percent. Therefore, the proposed project would result in the loss of forest land which would be a ***potentially significant impact*** and will be analyzed in the SEIR.

e) ***Potentially Significant Impact***. As described under Questions 2c and 2d above, the site is zoned R-1:B-10A and would not result in the conversion of farmland to non-agricultural use. Additionally, the site is not zoned as forest land but does meet the definition of forest land under Public Resources Code section 12220(g). Therefore, the proposed project would involve changes in the existing environment that could result in the conversion of forest land to non-forest uses. This is a ***potentially significant impact*** and will be analyzed in the SEIR.

3. Air Quality.

The significance criteria established by the Bay Area Air Quality Management District (BAAQMD) may be relied upon to make the following determinations. Would the project:

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?			✓	

The project is located in the eastern portion of Marin County, which is in the San Francisco Bay Area Air Basin. Marin County is bounded on the west by the Pacific Ocean, on the east by San Pablo Bay, on the south by the Golden Gate and on the north by the Petaluma Gap. Most of Marin's population lives in the eastern part of the county, in small, sheltered valleys. These valleys act like a series of miniature air basins.

Although there are a few mountains above 1,500 feet, most of the terrain is only 800 to 1,000 feet high, which usually is not high enough to block the marine layer. Because of the wedge shape of the county, northeast Marin County is further from the ocean than is the southeastern section. This extra distance from the ocean allows the marine air to be moderated by bayside conditions as it travels to northeastern Marin County. In southern Marin the distance from the ocean is short and elevations are lower, resulting in higher incidence of maritime air in that area.

Wind speeds are highest along the west coast of Marin, averaging about 8 to 10 miles per hour. The complex terrain in central Marin creates sufficient friction to slow the air flow. At Hamilton Air Force Base, in Novato, the annual average wind speeds are only 5 mph. The prevailing wind directions throughout Marin County are generally from the northwest.

In the summer months, areas along the coast are usually subject to onshore movement of cool marine air. In the winter, proximity to the ocean keeps the coastal regions relatively warm, with temperatures varying little throughout the year. Coastal temperatures are usually in the high 50's in the winter and the low 60's in the summer. The warmest months are September and October.

Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$).

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NOx). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. Highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

The Bay Area Air Quality Management District (BAAQMD) is the regional agency tasked with managing air quality in the region. At the State level, the California Air Resources Board (CARB, which a part of the California Environmental Protection Agency) oversees regional air district activities and regulates air quality at the State level.

Discussion:

a) ***Less Than Significant Impact***. The BAAQMD, with assistance from the Association of Bay Area Governments and the Metropolitan Transportation Commission has prepared and implements specific plans to meet the applicable laws, regulations, and programs. Among them are the Carbon Monoxide Maintenance Plan (1994), the 2001 Ozone Attainment Plan, and the Bay Area 2010 Clean Air Plan. In formulating compliance strategies, the BAAQMD relies on planned land uses established by local general plans. When a project proposes to change planned uses, by requesting a general plan amendment, the project may depart from the assumptions used to formulate BAAQMD in such a way that the cumulative result of incremental changes may hamper or prevent the BAAQMD from achieving its goals. This is because land use patterns influence transportation needs, and motor vehicles are the primary source of air pollution. The proposed project would not cause changes to local population projections or regional changes in vehicle use. As a result, the proposed project would not conflict with the clean air plan efforts and impacts would be a ***less than significant***.

b, c) ***Less Than Significant Impact***. The Bay Area is considered a non-attainment area for ground-level ozone and fine particulate matter ($PM_{2.5}$) under both the federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for respirable particulates or particulate matter with a diameter of less than 10 micrometers (PM_{10}) under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM_{10}, the BAAQMD has established thresholds of significance for air pollutants. These thresholds are for ozone precursor pollutants (ROG and NOx), PM_{10} and $PM_{2.5}$ and apply to both construction period and operational period impacts. Construction and operational air pollutant emission thresholds are as follows:

ROG, NOx or $PM_{2.5}$ = 54 pounds per day

PM_{10} = 82 pounds per day

Note that $PM_{2.5}$ and PM_{10} emission thresholds are based on the exhaust portion of emissions only.

Construction Phase

The proposed project requests approval of a Vesting Tentative Subdivision Map for three residential units, Design Review approvals for grading, and retaining wall construction and approvals for a common driveway to serve the site. Project construction activity would involve demolition of the existing on-site structures and new infrastructure construction. During demolition and construction activities, dust would be generated. Most of the dust would result during grading activities. BAAQMD has identified the size of land use projects that could result in significant air pollutant emissions. For construction impacts, the threshold size for a single-family residence project is 140 dwelling units. Although the proposed project may be under the threshold, given the project involves grading of 22,400 cubic yards of soil, construction-related air quality impacts could be ***potentially significant*** and will be addressed in the SEIR. Construction air quality impacts will be addressed by predicting construction period emissions and health risk impacts to nearby sensitive receptors and identifying best management practices to control emissions.

Operational Phase

For operational impacts, the project size threshold was identified at 325 dwelling units. Since the project proposes three units, emissions would be below the BAAQMD significance thresholds for operational emissions. Therefore, operational impacts would be ***less than significant***.

f) ***Less Than Significant Impact***. According to the BAAQMD, the types of projects that commonly result in odor impacts include: wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing, fiberglass manufacturing, auto body shops, rendering plants, and coffee roasters. The proposed project does not include any of these uses and would not create objectionable odors that would affect a substantial number of people. The project site is not affected by existing odor sources that would cause odor complaints from new residents. Therefore, odor impacts would be ***less than significant***.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.	**Biological Resources.** Would the project:				
a.	Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations 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 the City or regional plans, policies, regulations by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	✓			

4. Biological Resources. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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 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?				✓

The Town of Ross has determined that impacts to Biological Resources would be potentially significant and will be addressed in the SEIR. Information provided in this Initial Study will be supplemented in the SEIR.

Biological resources were identified through the review and compilation of existing information, a field reconnaissance survey, and detailed surveys of the site and surrounding area. The 2006 Subsequent EIR on the Upper Road Land Subdivision provides information on resources occurring on the site approximately six years ago. Updated tree inventories and removal reports were prepared for the applicant by a certified arborist in 2012 (ArborLogic 2012). Other references provided information on general resources in the area and the distribution and habitat requirements of special-status species which have been reported from or are suspected to occur in the Ross vicinity, including: records on occurrences of special-status species and sensitive natural communities maintained by the California Natural Diversity Data Base (CNDDB) of the Department of Fish and Game (CDFG); the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California; the CDFG's list of special animals and plants; and the United States Fish and Wildlife Service (USFWS).

An initial field reconnaissance of the site was conducted on 18 September 2012 by WRA staff biologists. During the reconnaissance, walking transects were made across portions of the site proposed for access and infrastructure improvements. The reconnaissance survey served to confirm biological features, determine changes in conditions on the site since 2006, and review the updated tree survey in relation to proposed improvements. This initial field reconnaissance included systematic surveys for special-status plant species and detailed surveys for the federal-threatened northern spotted owl. Inspections focused on portions of the site where development, grading and tree removal is proposed. The surveys for northern spotted owl involved five night surveys and four daytime surveys completed by Glenn Edwards in consultation with the Point Reyes Bird Observatory (PRBO) in August 2012. The following provides a

description of vegetation and wildlife habitat, potential for occurrence of special-status species, and possible jurisdictional waters on the site.

Biotic Habitats

Vegetation

Vegetation on the site is composed primarily of oak-bay woodland, with redwood forest in the draws on the lower elevations and small areas of open grassland and scrub at the upper elevations of the site. Sparse riparian vegetation consisting primarily of elk clover *(Aralia californica)* and bigleaf maple *(Acer macrophyllum),* occurs along the two drainages on the site. French broom *(Genista monspessulana)* and Scotch broom *(Cytisus scoparius),* both introduced and highly invasive plant species have spread throughout most of the site, forming dense thickets where they haven't been cut back. Several large rock outcrops occur along the spur ridge at the western edge of the site.

The composition of the woodland varies with slope and exposure, and has been severely affected by Sudden Oak Death (SOD). Woodland tree species on the site consist of coast live oak (*Quercus agrifolia*), California black oak (*Q. kelloggii*), Oregon white oak (*Q. garryana*), California bay (*Umbellularia californica*), Pacific madrone (*Arbutus menziesii*), Douglas fir (*Pseudotsuga menziesii*), and bigleaf maple. The understory is now dominated by thickets of broom, together with native species such as honeysuckle (*Lonicera hispidula*), California huckleberry (*Vaccinium ovatum*), poison oak (*Toxicodendron diversilobum*), western sword fern (*Polystichum munitum*), and California hazelnut (*Corylus cornuta* var. *californica*). Redwood (*Sequoia sempervirens*) forms the dominant cover on the lower slopes of the site along Swan and Frog Swales, with limited understory due to the intense shade. The redwood trees on the site have re-sprouted after timber harvest in the past.

Trees in the woodland and forest vary in age, size, condition and distribution. Considerable tree loss was observed during the August 2010 field reconnaissance, presumably from the effects of SOD (ArborLogic 2012). A number of species are being affected by SOD, including tanoaks (*Notholithocarpus densiflorus*), coast live oaks, California black oaks, and Pacific madrone which are dying in large numbers, and California buckeye, California bay, evergreen huckleberry, and rhododendron are suspected to be hosts or potential carriers of the fungus suspected to cause mortality, *Phytophthora ramorum.* This fungus and several beetle species are consistently associated with the dying trees. The disease is contributing to significant changes in vegetative cover over large parts of coastal California, including Marin County, altering habitat for woodland-dependent species and exacerbating hazardous fire conditions where wildlands interface with developed areas.

The updated tree survey in 2010 mapped all trees with trunk diameters of eight inches or more located within the project site. A total of 2,020 (2,187 alive minus 167 dead) trees with trunk diameters of eight inches or more measured at 4.5 feet above grade were identified and mapped within the limits of the survey area in the 2010 inventory. Of this total, 826 were California bay, 555 coast live oak, 236 madrone, 193 redwood, 63 valley oak, 49 black oak, 17 Douglas-fir, 6 bigleaf maple, and 167 were snags of dead oaks. The number of snags and downed trees has increased 21 percent since the tree surveys conducted in 2001 and 2003.

Scrub and grassland vegetation occurs along the spur ridge at the western edge of the site, continuing as an open oak savanna on the MMWD lands further west. Scrub vegetation occurs on the steep east facing slopes, composed of bush monkeyflower *(Mimulus aurantiacus),* coyote brush (*Baccharis pilularis*), toyon (*Heteromeles arbutifolia*), and poison oak. Native and introduced grasses and forbs occur in the grassland and savanna, and extend into the understory of the woodland on the site, dominated by wild oat (*Avena* sp.), ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), quaking

grass (*Briza minor*), California fescue (*Festuca californica*), Idaho fescue (*Festuca idahoensis*), purple needlegrass (*Stipa pulchra*), dogtail (*Cynosurus echinatus*), brodiaea (*Brodieaea* sp.), iris (*Iris* sp.), filaree (*Erodium* sp.), vetch (*Vicia* sp.) soap plant (*Chlorogalum pomeridianum*), and California poppy (*Eschscholzia californica*).

Wildlife Habitat

The size of the site, proximity to other undeveloped property and open space, presence of surface water, and varied vegetative cover contribute to the wildlife habitat value of the property. The dramatic loss of trees due to SOD and the spread of broom are changing the habitat value, and in many ways limiting opportunities for many species of wildlife. Broom creates dense thickets which outcompete native groundcover species and limit foraging opportunities for birds and mammals. This is particularly true as the broom spreads from the relatively sparse understory of the woodland into the surrounding grasslands.

Wildlife that occur on, or frequent the site are commonly associated with woodland, forest, scrub and grassland habitats. Trees in the woodland and forest provide nesting and perching substrate and foraging opportunities for numerous bird species, such as chestnut-backed chickadee (*Poecile rufescens*), oak titmouse (*Baeolophus inornatus*), and yellow warbler (*Dendroica petechial*). The trees produce seed crops in the fall, particularly oaks, which are consumed by insects, birds, and mammals, and provide an important source of food through the fall and winter months for species such as mule deer (*Odocoileus hemionus*), western grey squirrel (*Sciurus griseus*), and Western scrub jay (*Aphelocoma californica*). Other wildlife commonly associated with the dense woodland and forest habitat include: dusky-footed woodrat (*Neotoma fuscipes*), ringneck snake (*Diadophis punctatus*), and California slender salamander (*Batrachoseps attenuatus*). The large rock outcrops provide sunning areas for reptiles such as western fence lizard (*Sceloporus occidentalis*) and California alligator lizard (*Elgaria multicarinata*), as well as protective cover for woodrats. The small extent of grassland which extend onto the adjacent MMWD lands provide habitat for numerous animal species including California vole (*Microtus californicus*), pocket gopher (*Geomyidae* spp.), and Pacific gopher snake (*Pituophis catenifer catenifer*).

Special-Status Species

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed and proposed species. In addition, California Department of Fish and Game (CDFG) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, and CDFG special-status invertebrates are all considered special-status species. Although CDFG Species of Special Concern generally have no special legal status, they are given special consideration under the California Environmental Quality Act (CEQA). In addition to regulations for special-status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act of 1918. Under this legislation, destroying active nests, eggs, and young is illegal. Plant species on California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (Inventory) with California Rare Plant Ranks (Rank) of 1 and 2 are also considered special-status plant species and must be considered under CEQA. Rank 3 species have little or no protection under CEQA, but are included in this analysis for completeness.

Special-Status Plants

Based upon a review of the resources and databases described above, 29 special-status plant species have been documented in the vicinity of the project site. The project site has the potential to support eight special-status plant species: Napa false indigo (*Amorpha californica* var. *napensis*, CNPS Rank 1B), white seaside tarplant (*Hemizonia congesta* ssp. *congesta*, CNPS Rank 1B), Santa Cruz tarplant (*Holocarpha macradenia*, Federal Threatened, State Endangered, CNPS Rank 1B), thin-lobed horkelia (*Horkelia tenuiloba*, CNPS Rank 1B), small groundcone (*Kopsiopsis hookeri*, CNPS Rank 2), marsh microseris (*Microseris paludosa*, CNPS Rank 1B), North Coast semaphore grass (*Pleuropogon hooverianus*, State Threatened, CNPS Rank 1B), and Santa Cruz microseris (*Stebbinsoseris decipiens*, CNPS Rank 1B).

These species have the potential to occur in the project site due to the presence of associated species, suitable habitats (e.g. redwood forest, grassland), suitable soil types (e.g. fine loams derived from sandstone), and/or suitable hydrologic conditions (e.g. well-drained soils), as well as the relative location of documented occurrences. For those 21 special-status plant species that are unlikely or have no potential to occur, the project site lacks constituent elements for these species such as soil types (e.g. serpentine), hydrologic conditions (e.g. surface ponding, saturated soils), habitats (e.g. chaparral), and/or topography (e.g. alluvial valley, coastal terrace). No special-status plant species were observed in the project site during the assessment site visit. The SEIR will detail the potential for occurrence for each special-status plant species with documented occurrences in the vicinity of the project site.

Special-Status Wildlife

Forty-two special-status species of wildlife have been recorded in the vicinity of the project site. The SEIR will summarize the potential for each of these species to occur in the project site. The project site has the potential to support five special-status wildlife species: western red bat (*Lasiurus blossevillii*, CDFG SSC), northern spotted owl (Strix occidentalis caurina), California red-legged frog (*Rana draytonii*, FT and CDFG SSC), Pacific pond turtle (*Actinemys marmorata*, CDFG SSC), and Central California Coastal Distinct Population Segment of steelhead (*Oncorhynchus mykiss*, FT).

These species have the potential to occur in the project site due to the presence of suitable habitats (e.g. redwood forest, dense riparian canopy, and grassland), suitable hydrologic conditions (perennial water in Ross Creek), as well as the relative location of documented occurrences. For those 37 special-status wildlife species that are unlikely or have no potential to occur, the project site lacks suitable habitat for these species (such as salt marsh and emergent wetlands, open grassland with burrow complexes, or thermally supportive maternity roost sites), and/or the project site is outside of the species documented range. One special-status wildlife species, northern spotted owl, was observed in the project site during the assessment site visit. The SEIR will detail the potential for occurrence for each special-status wildlife species with documented occurrences in the vicinity of the project site.

Wetlands and Waters

The project site was surveyed to determine if any wetlands and waters potentially subject to jurisdiction by the Corps, RWQCB, or CDFG were present. The assessment was based primarily on the presence of wetland plant indicators, but may also include any observed indicators of wetland hydrology or wetland soils. Any potential wetland areas were identified as areas dominated by plant species with a wetland indicator status[1] of OBL, FACW, or FAC as given on the U.S. Fish and Wildlife Service List of Plant

[1] OBL = Obligate, always found in wetlands (> 99% frequency of occurrence); FACW = Facultative wetland, usually found in wetlands (67-99% frequency of occurrence); FAC = Facultative, equal occurrence in wetland or non-wetlands (34-66% frequency of occurrence).

Species that Occur in Wetlands (Reed 1988). Evidence of wetland hydrology can include direct evidence (primary indicators), such as visible inundation or saturation, algal mats, and oxidized root channels, or indirect (secondary) indicators, such as a water table within two feet of the soil surface during the dry season. Some indicators of wetland soils include dark colored soils, soils with a sulfidic odor, and soils that contain redoximorphic features as defined by the Corps Manual (Environmental Laboratory 1987), the Arid West Regional Supplement (Corps 2008), and Field Indicators of Hydric Soils in the United States (NRCS 2010).

The preliminary waters assessment was based primarily on the presence of unvegetated, ponded areas or flowing water, or evidence indicating their presence such as a high water mark or a defined drainage course. Collection of additional data will be necessary to prepare a delineation report suitable for submission to the Corps.

Discussion:

a) ***Potentially Significant Impact***. A significant impact would occur if a project would have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations by the California Department of Fish and Game or U.S. Fish and Wildlife Service. The construction of the proposed project could result in the loss of nesting, foraging, roosting, burrowing, and breeding habitat for a variety of wildlife species and the loss of habitat for plant species and their associated plant communities. This is a ***potentially significant impact*** and will be addressed in the SEIR.

There are approximately 42 special status animal species, which occur, or once occurred within the region of the project site. Of these, 37 are absent or unlikely to occur on-site due to a lack of suitable habitat. The remaining five species, steelhead, northern spotted owl, California red-legged frog, Pacific pond turtle, and western red bat may occur more frequently as regular foragers or resident adjacent to or on the site. Additionally, while no nests of raptors or loggerhead shrike were observed on the proposed project site, there is a potential for new nests to be established prior to project implementation. If new nests are established prior to construction, vegetation clearing or disturbance in the immediate vicinity of a nest in active use could result in abandonment of the nest or loss of eggs and young, which would be a violation of the Migratory Bird Treaty Act. This is a ***potentially significant impact*** and will be addressed in the SEIR.

b) ***Potentially Significant Impact***. A significant impact would occur if a project would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in the Town or regional plans, policies, regulations by the California Department of Fish and Game or U.S. Fish and Wildlife Service. Riparian habitat associated with the Swan Swale is present on-site; and portions of the actual channels (i.e., bed and back) occur within the project boundaries. The project proposes to construct storm drain inlets and short pipes to downslope outlets/energy dissipaters to merge with sheet flows of runoff flowing to the existing Swan Swale. Four inlet, pipe and dissipater systems are called for along the driveway system. Two detention basins on Swan Swale would capture uphill drainage in a manner that would result in less post project off-site drainage than existing conditions in compliance with Town Code Section 18.39.090 (i). The installation of these drainages would permanently remove riparian vegetation associated with Swan Swale. This is a ***potentially significant impact*** and will be addressed in the SEIR.

c) ***Potentially Significant Impact***. A significant impact would occur if a project would 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. Natural drainage channels and adjacent wetlands may be considered "Waters of the United States" (hereafter referred to as "jurisdictional waters") subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE). The extent of jurisdiction has been defined in the Code of Federal Regulations, but has also been subject to interpretation of the federal courts. Jurisdictional waters generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce;
- All impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified in paragraphs (a)(1)-(4) (i.e. the bulleted items above).

As determined by the United States Supreme Court in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (the SWANCC decision), channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. However, the U.S. Supreme Court decisions *Rapanos v. United States* and *Carabell v. U.S. Army Corps of Engineers* (referred together as the Rapanos decision) impose a "significant nexus" test for federal jurisdiction over wetlands. In June 2007, the USACE and Environmental Protection Agency (EPA) established guidelines for applying the significant nexus standard. This standard includes 1) a case-by-case analysis of the flow characteristics and functions of the tributary or wetland to determine if they significantly affect the chemical, physical, and biological integrity of downstream navigable waters and 2) consideration of hydrologic and ecologic factors (EPA and USACE 2007). The USACE regulates the filling or grading of such waters under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by "ordinary high water marks" on opposing channel banks. Wetlands are habitats with soils that are intermittently or permanently saturated, or inundated. The resulting anaerobic conditions select for plant species known as hydrophytes that show a high degree of fidelity to such soils

Wetlands are identified by the presence of hydrophilic vegetation, hydric soils (soils saturated intermittently or permanently saturated by water), and wetland hydrology according to methodologies outlined in the 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987).

All activities that involve the discharge of fill into jurisdictional waters are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be issued until the Regional Water Quality Control Board (RWQCB) issues a certification (or waiver of such certification) that the proposed activity will meet state water quality standards. The filling of isolated wetlands, over which the USACE has disclaimed jurisdiction, is regulated by the RWQCB. It is unlawful to fill isolated wetlands without filing a Notice of Intent with the RWQCB. The RWQCB is also responsible for enforcing National Pollution Discharge Elimination System (NPDES) permits, including the General Construction Activity Storm Water

Permit. All projects requiring federal money must also comply with Executive Order 11990 (Protection of Wetlands).

The California Department of Fish and Game has jurisdiction over the bed and bank of natural drainages according to provisions of Section 1601 and 1602 of the California Fish and Game Code. Activities that would disturb these drainages are regulated by the CDFG via a Streambed Alteration Agreement. Such an agreement typically stipulates that certain measures will be implemented which protect the habitat values of the drainage in question.

The project site does contain linear waters, Frog Swale and Swan Swale, potentially within the jurisdiction of the Corps under Section 404 of the Clean Water Act and RWQCB under the Porter Cologne Act and Section 401 of the Clean Water Act. The proposed development of a drainage basin within Swan Swale would be a ***potentially significant impact*** and will be addressed in the SEIR.

d) ***Potentially Significant Impact***. A significant impact would occur if a project would 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. Wildlife species presently using the site are expected to continue moving through the site and within the swales' after project build-out. Due to the wooded nature of the majority of the site and the larger home range or territory of local wildlife, few individuals of the various vertebrate species presently occupying the site would be lost from the impact area of the project. Therefore, impacts to native wildlife resulting from the loss of forested habitat could be ***potentially significant*** and will be analyzed in the SEIR.

e) ***Potentially Significant Impact***. A significant impact would occur if a project would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. The Ross General Plan Part II, Our Relationship with the Natural Environment, includes goals and policies that the proposed project would be subject to. These policies include, but are not limited to: protection of environmental resources, tree canopy preservation, tree maintenance and replacement, natural areas retention, and open space planning. Protection of Environmental Resources includes hillsides, creeks, drainage ways, trees, and tree groves. The Town design review purposes include preserving vegetation and wildlife habitat, creeks, and threatened and endangered species habitat (RMC §18.41.010(b)(3)). The Town design review guidelines provide that the high-quality and fragile natural environment should be preserved and maintained through protecting scenic resources, vegetation and wildlife habitat, creeks, drainageways and threatened and endangered species habitat. (RMC §18.41.100(i)). The proposed project would require the removal of trees and involves construction within Swan Swale and thus has the potential to conflict with Policy 1.1 (Protection of Natural Resources) of the Town of Ross' 2007 – 2025 General Plan. This is a ***potentially significant impact***. A review of the conformance of the project to policies in the Ross General Plan pertaining to biological and natural resources and other local ordinances will be provided in the SEIR.

f) ***No Impact***. A significant impact would occur if a project would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The project site is not subject to a Habitat Conservation Plan, Natural Community Conservation Plan, or any other habitat plan. Therefore, development of the proposed project would not conflict with any habitat conversion plan. ***No impacts*** would occur.

5. Cultural Resources. Would the project:

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	✓			

Discussion:

a) ***No Impact***. Tom Origer & Associates conducted a cultural resources study of the project site in October 2012. Their findings indicated that no historical resources, as defined in §15064.5, are present on the site (Origer 2012). The property development consists of two non-habitable dilapidated small cabins, a greenhouse, deck, wooden water tanks, a paved driveway and a footbridge. The buildings do not meet any of the criteria for inclusion on the California Register of Historical Resources, that is, research found no associations with "events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States" (Criterion 1); with "...the lives of persons important to local, California, or national history" (Criterion 2); they do not embody "...the distinctive characteristics of a type, period, region or method of construction, or represents the work of a master or possesses high artistic values" (Criterion 3); and are unlikely to yield "...information important to the prehistory or history of the local area, California, or the nation" (Criterion 4). As the proposed project site does not contain a structure or resource of historical significance, ***no impacts*** would occur.

b) ***Potentially Significant Impact***. Prehistoric habitation is known to have occurred in the general region of Marin County. The prehistoric peoples who once lived in Marin and adjacent Sonoma County are referred to as the Coast Miwok. The Coast Miwok relied heavily on a hunting and gathering subsistence which was able to support a total population estimated at approximately 3,000. There are eight known archaeological sites, either temporary campsites or permanent occupation sites, which have been identified in the Town of Ross. These sites are located primarily along Corte Madera Creek (Town of Ross 2007a).

No evidence of prehistoric or historic archaeological sites has been identified by Tom Origer & Associates for the project site. The cultural resources study conducted at the site did not identify any archaeological resources through archival research or field survey. However, construction could result in encountering unanticipated archaeological resources, as prehistoric sites have been identified in the Town near the project site. Therefore, there is a possibility of unanticipated and accidental archaeological discoveries during ground-disturbing project-related activities. Unanticipated and accidental archaeological discoveries during project implementation have the

potential to affect significant archaeological resources. This is a ***potentially significant impact*** and will be analyzed in the SEIR.

c) ***Potentially Significant Impact.*** Paleontological resources are mineralized or fossilized remains of prehistoric plants and animals, as well as mineralized impressions or trace fossils that provide indirect evidence of the form and activity of ancient organisms. A search of the fossil database maintained by the University of California Museum of Paleontology at the University of California, Berkeley did not identify any fossils within Ross (Town of Ross 2007a). There are no known paleontological resources or unique geological features on the proposed project site. Soils mapped for the area were composed of Tocaloma-McMullin loams that are well-drained and typically found on alluvial fans. Subsurface geologic data were acquired from four investigations performed in 1982, 1989 and 1990. The project geologic consultant concludes that much of the property is characterized by shallow bedrock. Maps prepared for previous projects in the project area define three geologic formations: (1) "FM" which is relatively shallow Franciscan Complex bedrock; (2) "QC", which is thick colluvium (defined to be greater than 6 feet in thickness); and (3) "QSC", which is a combination of both landslide deposits and colluvium. Although these soils do not contain unique geological features, there is a possibility unknown paleontological resources could be uncovered during site excavations. This is a ***potentially significant impact*** and will be analyzed in the SEIR.

d) ***Potentially Significant Impact.*** Although no human remains are known to have been found on the project site, it is possible that unknown human remains could be encountered during project construction, particularly during ground-disturbing activities such as excavation and grading. This is a ***potentially significant impact*** and will be analyzed in the SEIR.

6. Geology & Soils. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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?	✓			

6. Geology & Soils. Would the project:

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No 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 offsite 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?				✓

The property is characterized by a steep to precipitous (typically 40 to 80 percent gradients), east-facing hillslope and intervening ravines and gullies. Elevations on the property generally are between 100 and 550 feet; however, the westernmost comer of the property rises to an elevation of approximately 675 feet. The area to the west of the property continues to rise in elevation to the crest of Bald Hill at an approximate elevation of 1,000 feet. The eastern property boundary is located immediately upslope of Ross Creek, a northeast-trending stream canyon. The southern property boundary roughly follows the crest of an east-trending spur ridge, which has a moderate slope gradient on the order of 15 to 25 percent. A second, moderately sloping (15 to 25 percent gradient) spur ridge crosses the northern portion of the property.

Overland drainage is characterized as uncontrolled sheetflow and channeled flow in two ravines ("Swan Swale" and "Frog Swale") that are directed to the east where they are intercepted at the base of the hillslope by Ross Creek. Ross Creek flows northeastward from Phoenix Lake, located approximately 1,300 feet southeast of the property.

The project site, like all properties in the San Francisco Bay area, is situated in a seismically active area. The regional seismic setting is dominated by stress associated with the oblique collision of the Pacific tectonic plate with the North American tectonic plate. The boundary between the two tectonic plates is the San Andreas fault system, which extends nearly 700 miles along a northwest trend from Mexico to offshore northern California. In the San Francisco Bay Area, the San Andreas fault system includes the San Andreas, Hayward, Calaveras, Seal Cove-San Gregorio, and other related faults in the San Francisco Bay area. According to the U.S. Geological Survey (Working Group on California Earthquake Probabilities 2003), there is a 62% chance of at least a magnitude 6.7 (or greater) earthquake in the San Francisco Bay region between 2003 and 2032.

The subject property is located approximately seven miles northeast of the active San Andreas fault zone, which is responsible for several large historic earthquakes in northern California, including those reported in 1800 (San Juan Bautista area), 1838 (San Francisco to Santa Clara), and 1865 (Santa Cruz Mountains). The largest northern California earthquake was the 1906 San Francisco earthquake (M=7.9), in which an estimated 270-mile-long segment of the San Andreas fault ruptured from near Fort Bragg to Hollister. That earthquake was felt from the Oregon border south to Los Angeles, and as far east as Nevada.

General geologic conditions on the property are portrayed on available publications from the U.S. Geological Survey and California Geological Survey and in the Town of Ross General Plan. The publicly

available geologic maps indicate the property to be underlain, at depth, by bedrock of the Franciscan Complex (primarily sandstone, shale, altered volcanic rock, and melange). The maps further indicate the bedrock materials to be overlain by extensive landslide deposits over nearly all of the property (Donaldson Associates 2006).

According to the Town's Relative Slope Stability Map, most of the property is situated within Slope Stability Zones 3 and 4 (Donaldson Associates 2006). The slope stability zones (1 through 4) represent qualitative evaluations of potential slope instability (Zone 1 being the most stable, and Zone 4 being the least stable).

The weathering of bedrock and the growth of vegetation have resulted in the formation of relatively shallow (20 to 40 inches typical) soils on the hillside. According to the Soil Survey of Marin County, California (U.S. Department of Agriculture 2012), the predominant soil type on the property is the Tocaluma-McMullin Complex, which is a gravelly to gravelly clay loam.[3] The Tocalurna-McMullin soils have a "severe" erosion rating, indicating that significant erosion should be expected. The soils also have a moderate corrosion potential for steel and concrete.

Discussion:

a) i. ***Less Than Significant Impact.*** Based on the 2006 SEIR and associated geotechnical reports, no active or potentially active faults have been identified on the project site. Consequently, the hazard associated with potential surface fault rupture is considered to be ***less than significant***.

ii. ***Potentially Significant Impact.*** Seismically-induced ground shaking would occur at the project site in the event of a regional earthquake on the San Andreas Fault. A repeat of the 1906 event would result in very strong to violent shaking at the project site.[4] Other faults in the region are also capable of generating substantial shaking at the project site. Previous major Bay Area earthquakes last occurred on the San Andreas (1989 and 1906), Hayward (1868), and Calaveras (1861) faults. Based on the 2006 EIR, it is reasonable to assume that the proposed structures will be subjected during their useful life to at least one moderate to severe earthquake. Therefore, implementation of the proposed project could result in significant impacts to structures and occupants. This is a ***potentially significant impact*** that will be further addressed in the SEIR.

iii. ***Less Than Significant Impact.***

Liquefaction is the process whereby saturated non-bedrock materials lose shear strength and behave as a fluid in response to strong earthquake ground shaking. The results of liquefaction include sudden settlement of liquefied soils and loss of bearing capacity to any foundation element deriving support from those soils.

The project site is in an area mapped by the USGS and Association of Bay Area Governments (ABAG) as having a very low susceptibility to liquefaction within a majority of the site. Furthermore, in order for liquefaction to occur, two criteria must be met: 1) potentially liquefiable soils must be present, and 2) those soils must be saturated or nearly saturated (i.e., high ground water levels). The majority of liquefaction hazards are associated with

[3] *U.S. Department of Agriculture (USDA), Natural Resources Conservation Service. 2012. Web Soil Survey. Online at http://websoilsurvey.nrcs.usda.gov; most recently accessed: September 12, 2012.*

[4] *Association of Bay Area Governments (ABAG), 2004. Earthquake Shaking Scenario, Entire San Andreas (1906 Quake) – Magnitude 7.9 event. Accessed September 12, 2012 at gis.abag.ca.gov.*

sandy soils, certain gravelly soils, and silty soils of low plasticity. Cohesive soils, similar to the majority of non-bedrock materials encountered on the property, are generally not considered to be susceptible to liquefaction. Liquefaction is not a significant hazard at the project site, because the geologic materials that are normally susceptible to liquefaction are not present (Donaldson 2006). However, portions of the site adjacent to Ross Creek are illustrated as having very high susceptibility.[5] These areas will not be developed as part of the proposed project. Therefore, the proposed project would not expose people or property to seismic-related ground failure, including liquefaction and impacts would be ***less than significant***.

iv. ***Potentially Significant Impact***. The potential impacts of landsliding and hillslope instability are the most significant geologic hazards at the project site. Elevations on the property generally are between 100 and 550 feet; however, the westernmost corner of the property rises to an elevation of approximately 675 feet. The proposed project maps existing landslides and areas of slope instability and situates proposed development to avoid these areas. However, the presence of extensive landslide deposits and thick colluvium deposits on the property indicate a moderate to high potential for future slope instability and proposed construction activities could potentially decrease existing slope stability in localized areas. This is a ***potentially significant impact*** that will be further addressed in the SEIR.

b) ***Potentially Significant Impact***. According to the Soil Survey of Marin County, California (U.S. Department of Agriculture 2012), the predominant soil type on the property is the Tocaluma-McMullin Complex, which is a gravelly to gravelly clay loam. The Tocaluma-McMullin soils have a "severe" erosion rating, indicating that significant erosion should be expected. This would be a ***potentially significant impact*** and will be addressed in the SEIR.

c) ***Potentially Significant Impact***. Refer to responses 6a(iii) and 6a(iv) above.

d) ***Potentially Significant Impact***. Expansive soils can result in damage to building foundations and flatwork such as sidewalks and driveways, or damage to sub-surface utility installations. In particular, flatwork can present tripping hazards and uneven surfaces that may be hazardous to the mobility impaired. The 2006 SEIR states that much of the property is composed of weak and potentially compressible soils, which are unsuitable for support of foundations. The impacts related to expansive soils may be potentially significant based on compressible soil characteristics. This would be a ***potentially significant impact*** and will be addressed further in the SEIR.

e) ***No Impact.*** No impact is anticipated related to the use of septic tanks or other wastewater disposal systems as the proposed project would connect sewer lines to the existing sewer mains located adjacent to the project site running underneath Upper Road. Therefore, ***no impacts*** are anticipated.

7. **Greenhouse Gas Emissions.** Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	✓			

[5] *ABAG, 2006. Bay Area Liquefaction Susceptibility Mapping based on USGS OFR 00-444. Accessed 1-11-2011 at gis.abag.ca.gov.*

7. Greenhouse Gas Emissions. Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

Climate change is a shift in the average weather patterns observed on earth, which can be measured by such variables as temperature, wind patterns, storms and precipitation. The temperature on earth is regulated by what is commonly known as the "greenhouse effect." Naturally occurring greenhouse gases in the atmosphere, including carbon dioxide, methane, nitrous oxides, and water vapor, absorb heat from the earth's surface and radiate it back to the surface.

Human activities result in emissions of four principal greenhouse gases: carbon dioxide, methane, nitrous oxide, and halocarbons (fluorine, chlorine and bromine). Of all human activities, the burning of fossil fuels is the largest contributor in overall greenhouse gas emissions, releasing carbon dioxide gas into the atmosphere.

The resulting increases in greenhouse gas emissions from human activities are leading to higher concentrations and a change in composition of the atmosphere. For instance, the concentration of CO_2 in the atmosphere has risen about 30 percent since the late 1800s (National Assessment Synthesis Team [NAST], 2001). Many sources and models indicate that temperatures on earth are currently warming and will continue to warm at unprecedented levels. The global mean surface temperature has increased by 1.1˚ F since the 19th century (IPCC Synthesis report, 2001), and the 10 warmest years of the last century all occurred within the last 15 years.

The many effects of Greenhouse Gas Emissions are still being researched and are not fully known, but are expected to include increased temperatures which would: reduce snowpack, a primary source of drinking water; exacerbate air quality problems and adversely impact human health by increasing heat stress and related deaths; increase the incidence of infectious disease, asthma and respiratory health problems; cause sea levels to rise, threatening urban and natural coastlands; increase pests and pathogens; and cause variations in crop quality and yields.

In California, the majority of human activity greenhouse gas emissions can be broken down into four sectors: transportation, industrial, electrical power, and agriculture/forestry. The largest source is from the transportation sector.

In 2005, Governor Schwarzenegger issued Executive Order S-02-05, calling for statewide reductions to 2000 levels by 2010, 1990 levels by 2020 and to 80 percent below 1990 levels by 2050. The Executive Order also called for the creation of a state "Climate Action Team", which would report to the Governor every two years on both progress toward meeting the targets and effects of Greenhouse Gas Emissions on the state.

In the fall of 2006, the Governor signed Assembly Bill 32 (AB32), the "Global Warming Solutions Act of 2006," committing the State of California to reducing greenhouse gas emissions to 1990 levels by 2020. The statute requires CARB to track emissions through mandatory reporting, determine what 1990 emissions were, set annual emissions limits that will result in meeting the target, and identify a list of discrete early actions that directly address greenhouse gas emissions, are regulatory, and can be enforced by January 1, 2010.

In 2005, the Ross community emitted approximately 17,209 metric tons of CO_2e. Electricity and natural gas consumption within the Residential Sector, the largest source of emissions, generated approximately 8,239 metric tons of CO_2e, or 47.9 percent of total 2005 emissions. Transportation Sector emissions, the second greatest source of 2005 emissions, are the result of diesel and gasoline combustion in vehicles traveling on local roads and Sir Francis Drake Boulevard; these generated 7,268 metric tons CO_2e, or 42.2 percent of the total. Electricity and natural gas use in Ross' Commercial/Industrial Sector produced 1,102 metric tons CO_2e, or 6.4 percent of total community emissions. The remaining 3.5 percent (600 metric tons) are the estimated future methane emissions that will result from the decomposition of waste that was generated by the Ross community during 2005 (Town of Ross 2005).

Discussion:

a) ***Potentially Significant Impact.*** The BAAQMD does not have an adopted Threshold of Significance for construction-related GHG emissions. However, BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable. Best management practices may include, but are not limited to: using alternative fueled (e.g., biodiesel, electric) construction vehicles/equipment of at least 15 percent of the fleet; using local building materials of at least 10 percent; and recycling or reusing at least 50 percent of construction waste or demolition materials. BAAQMD recommends calculating the emissions and disclosure that GHG emissions would occur during construction.

For operational GHG impacts, the BAAQMD uses a "bright-line" emissions threshold at 1,100 metric tons per year for land-use type projects and 10,000 metric tons per year for stationary sources. Land use projects with emissions above 1,100 metric tons per year are then judged based on the emissions per capita. Land use projects with annual emissions above 1,100 metric tons per year and annual emissions per capita greater than 4.6 metric tons are considered to have an impact, which, cumulatively, would be significant.

Since the project proposes only three dwelling units, GHG emissions are anticipated to be below the BAAQMD significance thresholds for operational emissions. However, emissions of GHG during construction and operation will be quantified in the SEIR using the CalEEMod model along with project specific inputs regarding traffic, energy usage, water usage and electricity emission rates. Effects of sustainability features included in the project would be incorporated to the extent that detailed information is provided.

b) ***Less Than Significant Impact.*** The project would be subject to new requirements under rule making developed at the State and local level regarding greenhouse gas emissions and be subject to local policies that may affect emissions of greenhouse gases.

8. Hazards & Hazardous Materials. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	

8. Hazards & Hazardous Materials. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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 areas or where residences are intermixed with wildlands?	✓			

Discussion:

a) ***Less Than Significant Impact.*** Full implementation of the proposed project would result in the routine handling and use of small quantities of commercially-available hazardous materials, such as household cleaning and landscaping supplies. These materials would not be expected to be used in large quantities or contrary to normal use, and therefore would not pose a threat to human health or the environment. Development of the project would have a ***less than significant impact*** on the public or the environment related to the routine transport, use, and handling of hazardous materials, since such activities are not expected.

b) ***Less Than Significant Impact.***

Project Construction

The 2006 EIR report indicates that there is no evidence to indicate that any parts of the site have been contaminated from the accidental or deliberate disposal of hazardous or toxic materials and no hazardous materials are stored or used on the site at the present time. Furthermore, the level of historical development consists only of two non-habitable dilapidated small cabins, a greenhouse, deck, wooden water tanks, a paved driveway and a footbridge. Hazardous materials that may be encountered during construction are discussed below.

Hazardous building materials may be present in structures proposed for demolition at the project site and could pose a threat of a hazardous materials release if not handled properly. The removal of hazardous building materials prior to demolition and renovation is governed by federal and state regulations. Section 19827.5 of the California Health and Safety Code requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants.

Building materials such as thermal system insulation, surfacing materials, and asphalt and vinyl flooring materials installed in buildings prior to 1981 may contain asbestos,[6] which is a state-recognized carcinogen.[7] The cabins on the project site may contain asbestos. All friable (crushable by hand) asbestos-containing materials (ACMs) or nonfriable ACMs subject to damage must be abated prior to demolition in accordance with applicable requirements. Friable ACMs must be disposed of as an asbestos waste at an approved facility. Nonfriable ACMs may be disposed of as nonhazardous waste at landfills that will accept such wastes. Workers conducting asbestos abatement must be trained in accordance with state and federal OSHA requirements.

Lead-based paint may have been applied to the surface of structures that remain on the project site.[8] Paint chips from lead-based paint may have also been deposited in shallow soils around the structures due to weathering. Hazardous concentrations of lead, which is a state-recognized carcinogen,[9] may be present on the surface of painted structures on the project site, as well as in shallow soils surrounding the painted structures. Loose and peeling lead-based paint must be disposed of as a state and/or federal hazardous waste if the concentration of lead equals or exceeds applicable waste thresholds. State and federal construction worker health and safety regulations require a supervisor who is certified to identify existing and predictable lead hazards to oversee air monitoring and other protective measures during demolition activities where lead-based paint may be present. Special protective measures and notification to the California Department of Industrial Relations, Division of Occupational Safety and Health (DOSH) are required for highly hazardous construction tasks related to lead, such as manual demolition, abrasive blasting, welding, cutting, or torch burning of structures where lead-based paint is present.[10]

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6 *Title 8 California Code of Regulations (CCR) §5208.*

7 *California Environmental Protection Agency (Cal/EPA), Office of Environmental Health Hazard Assessment, 2010, Safe Drinking Water and Toxic Enforcement Act of 1986, Chemicals Known to the State to Cause Cancer or Reproductive Toxicity, May 21.*

8 *DTSC, 2006, Interim Guidance Evaluation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers, June 9 (Revised).*

9 *Cal EPA, Office of Environmental Health Hazard Assessment, 2010, op. cit.*

10 *Title 8 CCR 1532.1.*

Provided the project conforms to all applicable existing federal, state and local regulations pertaining to the removal, handling and transport of asbestos and lead based paint, impacts would be ***less than significant***.

Project Operation

The proposed project is the subdivision of three lots and the development of infrastructure, as well as the eventual construction of three new single family homes. Therefore, the project is not expected to generate or use high levels of hazardous materials during its operation. No upset or accident conditions resulting in the release of hazardous material into the environment can be reasonably expected to occur during operation of the project and therefore this impact would be ***less than significant***.

c) ***Less Than Significant Impact.*** Children are more susceptible to health effects from exposure to hazardous materials than adults. Hazardous materials use near schools and day care centers must consider potential health effects to these populations. There are no schools within one-quarter of a mile from the project site. The Ross School is located at 9 Lagunitas Road in Ross, approximately 0.78 miles east of the project site. No significant quantities of hazardous materials are expected to be used, emitted, or stored during construction or operation of the project that could pose a significant hazard to human health and therefore impacts would be ***less than significant***.

d) ***No Impact.*** The provisions of Government Code 65962.5 require the DTSC, the State Water Resources Control Board, the California Department of Health Services, and the California Integrated Waste Management Board to submit information pertaining to sites associated with solid waste disposal, hazardous waste disposal, and/or hazardous materials releases to the Secretary of Cal/EPA. Based on a review of regulatory databases,[11] including listed hazardous materials release sites compiled pursuant to Government Code 65962.5, the project site is not listed as a hazardous materials site. The nearest active cleanup site is located at 4&8 Bolinas Avenue and 21 San Anselmo Avenue. This site was previously a dry cleaning operation and is now active cleanup site under the State's jurisdiction. Therefore, ***no impacts*** would occur.

e) ***No Impact.*** The project site is not located within an airport land use plan or within two miles of a public airport or public use airport. Therefore, the project would not expose people to safety hazards related to public airports. Therefore, ***no impacts*** would occur.

f) ***No Impact.*** The project site is not located within the vicinity of a private airstrip. The nearest airstrip is the San Rafael airstrip located 4.66 miles northeast of the project site. Therefore, the project would not expose people to safety hazards related to private airstrips. Therefore, ***no impacts*** would occur.

g) ***Potentially Significant Impact.*** The Town of Ross' General Plan states that the health and safety of the community are critical concerns. The Town has worked to prepare and practice emergency response and to minimize risks of fire danger by emphasizing responsible landscaping practices (especially in the steeper, less accessible areas of the Town). The project would be located in an area as having steeper slopes and therefore is subject to additional design criteria listed in the Hillside Lot Regulations and Special Hazard District requirements. The project has been designed to accommodate emergency vehicle access per Policy 5.12 of the

[11] *State Water Resources Control Board, 2011. GeoTracker Environmental Database. http://www.envirostor.dtsc.ca.gov/public/. Accessed on September 10, 2012.*

General Plan. General Plan Policy 5.13 requires that the Town (or projects approved by the Town) undertake emergency preparedness planning in cooperation with other public agencies and local organizations.

Implementation of the proposed project would result in the eventual construction of three new single family homes on an undeveloped site that is located adjacent to a Very High Fire Hazard Severity Zone. While the future population of the project would only consist of approximately 9 to 15 residents, only one ingress and egress location for the project is proposed at Upper Road. Also, the proposed driveway has an average slope of 15 percent, a consistent width of 20 feet, and curve radii that comply with applicable County road standards (the Town of Ross has no such standards). A hammerhead turnaround fire truck area at end of the common road is also proposed; however, such emergency access plans have not yet been approved by the Ross Valley Fire Department. Therefore, the project has the potential to adversely impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. This is a ***potentially significant impact*** that will be analyzed in the SEIR.

h) ***Potentially Significant Impact.*** The California Department of Forestry and Fire Protection (CAL FIRE) has mapped areas in Marin County with significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Very High Fire Hazard Severity Zones, are classified by the CAL FIRE Director in accordance with Government Code Sections 51175-51189 to assist responsible local agencies identify measures to reduce the potential for losses of life, property, and resources from wildland fire. According to CAL FIRE, the project site is not located within a Very High Fire Hazard Severity Zone (VHFHSZ) but the site is located directly adjacent to a VHFHSZ and there is concern over wildfire in the project area. SOD is also contributing to significant changes in vegetative cover at the project site, exacerbating hazardous fire conditions; however, the project proposes to remove SOD trees and replace them with healthy natives species that are either more resistant to SOD or are not subject to the disease. This is still a ***potentially significant impact*** and will be further addressed in the SEIR.

9. Hydrology & Water Quality. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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 offsite?	✓			

9. Hydrology & Water Quality. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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 offsite?	✓			
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?			✓	
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?				✓

The climate of Marin County is characterized as Mediterranean, with cool wet winters and warm dry summers. Mean annual rainfall in Ross is 47.5 inches, which is substantially higher than most other locations in the Bay Area. Precipitation occurs primarily during the winter wet season, which extends from November through March. Long-term precipitation records indicate that wetter and drier cycles lasting several years are common in the region.

The project site is located on the southeastern slope of Bald Hill with elevations ranging from approximately 100 feet above sea level along Ross Creek in Natalie Coffin Green Park to over 665 feet at the site's far northwestern comer. Bald Hill rises an additional 475 feet above the site toward the northwest. Drainage from the site, and the flanks of Bald Hill above it, flows generally to the east and south and discharges into Ross Creek downstream from Phoenix Lake.

There are three small intermittent drainage channels that collect runoff from the site and some adjoining land and transport it to Ross Creek. From east to west they include:

- An unnamed swale that flows along the site's boundaries with the adjoining parcels for the residences at 25, 27 and 29 Upper Road. This swale drains only a small portion of the site near the Upper Road entrance. The swale channel is downcut between a culvert discharging runoff from the development at 27 Upper Road to the culvert beneath Upper Road, where this stream merges with another that flows along the north side of Upper Road.

- Swan Swale, which drains the central area of the site. The swale has a watershed extending

several thousand feet to the west and draining much of the open space parcel owned by the Town above the Mudd subdivision. Swan Swale is deeply incised in some areas of the site and shows evidence of bank erosion in several locations. Swan Swale empties into Ross Creek at a location near the Lagunitas Road entrance gates to Natalie Coffin Green Park.

- Frog Swale drains much of the site above the Upland Ridge and Greenbelt boundary. It has a small watershed, almost entirely contained on the site. The upper boundary follows the ridgeline that marks the property line between the site and the adjoining MMWD watershed lands, above Worn Springs Road (Donaldson 2006).

Several wooded acres at the site's southeastern corner are part of another, predominately off-site watershed, which also drains to Ross Creek in Natalie Coffin Green Park. No part of this watershed would be affected by the grading or infrastructure proposed in the project.

The Ross Creek watershed downstream from Phoenix Lake dam contains an estimated 1,620 acres. The runoff from a one hundred year rainstorm flows in Ross Creek downstream of the dam are estimated at 1,100 cubic feet per second (cfs). Runoff from the 35.97 acre project site is estimated to be about 24.8 cfs in a 100 year storm and about 20.67 cfs in a 25 year storm (Donaldson 2006). Ross Creek is a tributary to the San Anselmo/Corte Madera Creek system, which drains much of the Ross Valley area.

The water quality of rainfall runoff from the site is expected to be good to excellent. The site is essentially private, undisturbed open space and adjoins lands that are also open space and protected watershed. There is evidence of downcutting and bank erosion in some locations along the Swan Swale channel, which would add to the sediment load of runoff during the larger storm events.

Discussion:

a) ***Potentially Significant Impact***. A significant impact could occur if the project discharged pollutant-laden stormwater runoff or dry weather flows into Swan and Frog Swale and eventually into Ross Creek during the construction or post-construction phase. Project construction, which would include activities such as removing existing vegetative cover and excavating and grading soil, could cause erosion of on-site soils, which could result in the discharge of sediment-laden runoff into Ross Creek. The discharge of excessive sediment in runoff could adversely affect surface water quality due to increased loading of suspended sediments. In addition, sediment can also be a carrier for other pollutants, such as heavy metals, nutrients, pathogens, oil and grease, fuels other petroleum products, and other constituents originating from the historical use of the property, which could adversely affect the water quality of Ross Creek. In addition to sediment, other pollutants associated with construction, such as trash, paint, solvents, and sanitary waste from portable restrooms, could discharge into and impair Ross Creek, if released during construction.

Except for the existing approximately 800 foot long, 20 foot driveway, the project site in the existing condition is unpaved and covered with vegetation, and the only impervious areas are the roofs of the existing buildings. Implementation of the project would increase the imperviousness of the site, which could increase pollutant loading into Ross Creek and adversely affect water quality. The increased pollutant loading would result from increases in stormwater runoff volumes compared to the existing condition, and from the discharge of pollutants (e.g., sediment, metals, and fuels) that would be deposited on impervious surfaces and mobilized in stormwater runoff. Impacts to the quality of surface water and groundwater that could result in a violation of water quality standards or waste discharge requirements are ***potentially significant*** and will be further addressed in the SEIR.

b) ***Less Than Significant Impact.*** A significant impact would occur if the project depleted groundwater supplies through extraction and use of groundwater for water supply, and if the project substantially interfered with groundwater recharge by reducing recharge through the construction of impervious surfaces.

The project would not use groundwater during the construction or post-construction phases. During construction, excavations may require dewatering; however, this would only result in a temporary effect on the local uppermost water-bearing zones related to near-surface excavations. The project proposes to install infrastructure under new roads and construction of a drainage basin within Swan Swale.

The project would not use groundwater for water supply during the operational phase. Although the project would increase impervious area compared to the existing condition, the impervious area would be limited to the new homes and driveways, leaving a substantial portion of the site as undeveloped open space. Also, swale corridors are considered primary recharge areas; project development, with the exception of the detention basins, would be set back from and would not encroach on the riparian corridor of Swan or Frog Swales, thus maintaining groundwater recharge. Therefore, impacts related to the potential for the project to deplete groundwater supply or substantially interfere with groundwater recharge would be ***less than significant***.

c) ***Potentially Significant Impact.*** A significant impact would occur if the project altered the site drainage pattern through grading during construction, and through alteration of the rate, volume, and/or duration of stormwater runoff during the operational phase resulting from an increase in impervious surfaces. Earthwork during construction could potentially cause erosion on-site and result in off-site siltation. Operation of the project has the potential to alter the rate, volume, and duration of stormwater discharges into Ross Creek, which could contribute to stream channel hydromodification downstream of the project site. Hydromodification (also referred to as hydrograph modification) causes streambank erosion, channelization, increased flood flows and other changes in the flow regime, and other physical modifications that can adversely impact aquatic ecosystems due to increased sedimentation and reduced water quality (e.g., higher water temperatures, lower dissolved oxygen concentrations). Stream channel hydromodification could potentially affect habitat for steelhead trout. Erosion and siltation, including stream channel hydromodification caused or exacerbated by the project is considered a ***potentially significant impact*** and will be further addressed in the SEIR.

d) ***Potentially Significant Impact.*** A significant impact would occur if the project caused flooding on-site or off-site by changing the drainage patterns of the site, or increasing the rate of surface runoff. The increase in impervious surfaces could increase the stormwater runoff discharge rate, which could potentially cause flooding. Although the project proposes the construction of detention basins on-site, this impact is considered ***potentially significant*** and will be further addressed in the SEIR.

e) ***Potentially Significant Impact.*** A significant impact would occur if the project increased the peak discharge rate of surface runoff such that it exceeded the capacity of the Town's stormwater drainage system and if the construction and operation of the project would provide substantial additional sources of polluted runoff. Surface runoff from most of the property collects in two small swales, known as Swan Swale and Frog Swale. A third, unnamed, drainage forms a part of the site boundary near Upper Road. All three drainages are tributaries to Ross Creek. The project, through construction of impervious surfaces, would increase the peak discharge rates of surface runoff. The proposed project includes two detention basins that capture most project run-off and reduce post project runoff to less than the existing condition in compliance with Town code. In addition, construction phase and operational activities could result in the discharge of

sediment, pollutants associated with sediment, and other constituents such as trash into the Town's stormwater drainage system or directly into Ross Creek, if not properly controlled. Impacts to the Town's stormwater drainage system and the introduction of additional polluted runoff into the stormwater drainage system/Ross Creek are considered ***potentially significant*** and will be further addressed in the SEIR. This effort will include a peer review of the applicant's preliminary hydrology study prepared for the proposed project.

f) ***Potentially Significant Impact.*** A significant impact would occur if the project would otherwise substantially degrade water quality. As discussed above under Question 9a, this impact is considered ***potentially significant*** and will be further addressed in the SEIR.

g) ***Less Than Significant Impact.*** A significant impact would occur if the project located housing in a Special Flood Hazard Area[12] as designated by the Federal Emergency Management Agency (FEMA). Portions of the project site contain the riparian corridor of Ross Creek; these areas are designated on FEMA's Flood Insurance Rate Map (FIRM)[13] as Special Flood Hazard Area (SFHA) Zone A.[14] The remainder of the project site is located in Zone X (shaded),[15] which is not a SFHA as designated by FEMA. Because the on-site Zone A area is contained within the creek channel, and the project would not encroach on the creek channel, the potential for the project to place housing within a SFHA would be ***less than significant***.

h) ***Less Than Significant Impact.*** A significant impact would occur if the project placed structures, including fill material within a designated SFHA, which resulted in an increase in the base flood elevation such that flooding occurred on-site or off-site. As discussed above (see Impact "9g"), portions of the site that contain the riparian corridor of Ross Creek are designated by FEMA as SFHA Zone A. All project development would be set back from the floodplain, including access roads and buildings. No fill would be placed in the floodplain. Therefore, the potential for the project to impede or redirect flood floods via floodplain encroachment would be ***less than significant***.

i) ***Potentially Significant Impact.*** A significant impact would occur if the project was located in an area that could be inundated, including inundation due to failure of a levee or dam. There are no levees in the project vicinity, which could put people and structures at risk. However, the project is located within a dam failure inundation hazard area as determined by the California Office of Emergency Services and mapped by the Association of Bay Area Governments.[16] Therefore, this is considered a ***potentially significant impact*** and will be further addressed in the SEIR.

j) ***No Impact.*** A significant impact would occur if the project would be exposed to coastal hazards such as sea level rise and tsunamis, and/or at risk from inundation from a seiche. Tsunami and seiche hazards result from the impact of large waves and associated flood waters on land areas adjacent to open water (tsunamis) or closed water bodies (seiches). Tsunamis and seiches are not a significant hazard at the project site because the property is protected from any potential

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[12] *The Federal Emergency Management Agency (FEMA) defines a Special Flood Hazard Area (SFHA) as the land area covered by the floodwaters of the base flood on National Flood Insurance Program (NFIP) maps. The SFHA is the area where the NFIP's floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies.*

[13] *FEMA, National Flood Insurance Rate Map, Marin County, California, Community Panel Number 0454, effective date, May 9, 2009.*

[14] *Zone A is defined by FEMA as an area subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations or flood depths are shown on the Flood Insurance Rate Map.*

[15] *Zone X (shaded) is defined by FEMA as an area of the 0.2 percent annual chance flood (i.e., 500-year flood).*

[16] *Association of Bay Area Governments, "Bay Area Dam Inundation Hazards," http://www.abag.ca.gov/bayarea/eqmaps/damfailure/damfail.html, Accessed September 19, 2012.*

direct impact from Phoenix Lake by two ridges, and the proposed construction will be located more than 100 feet above the adjacent canyon (Ross Creek). ***No impact*** associated with tsunamis and seiches is anticipated as a result of the proposed project.

The potential for the project site to be inundated by mudflows is addressed in the Geology & Soils section of this Initial Study.

10. Land Use and Planning. Would the project:

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				✓

Discussion:

a) ***No Impact***. A significant impact may occur if a project were to physically divide an established community. The land use designation is defined has an average of 0.3 to 3.0 persons per acre and is consistent with R-1:B-A, R-1:B-5A and R-1:B-10A zoning, with lots one acre or more in size (Town of Ross 2007). The site is zoned R-1:B-10A, Single Family Residential, 10-acre minimum lot size.

Four residential parcels abut the site. The smallest is 1.0 acre; the others are 2.1, 2.8, and 4.0 acres respectively. Of these, the site shares 769 feet of common boundary with the 7 Upper Road parcel, 383 feet with 31 Upper Road, 233 feet with 27 Upper Road, and 191 feet of common boundary with 25 Upper Road. The proposed project would not divide an established community. ***No impact*** would occur.

b) ***Potentially Significant Impact***. A significant impact may occur if a project conflicted with any applicable land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The proposed project would require a Hillside Lot Permit pursuant to Town of Ross Municipal Code section 18.38.020. However, zoning or General Plan conflicts in and of themselves are not considered environmental impacts pursuant to CEQA Guidelines Section 15126.2(a). CEQA requires consideration be given to whether a proposed project may conflict with any applicable land use plans, policies, or regulations including, but not limited to, the General Plan, Specific Plan, or Zoning Ordinance. This environmental determination differs from the larger policy determination of whether a proposed project is consistent with a jurisdiction's General Plan. The former determination (that intended for consideration in a CEQA document) is limited to a review and analysis, and is made by the preparers of the CEQA document. The later determination by comparison, is made by the decision-making body of the jurisdiction and is based on a jurisdiction's broad discretion to assess whether a proposed project conforms to the policies and objectives of its General Plan as a whole. The determination that the proposed

project is consistent or inconsistent with the General and Area Plan policies is ultimately the decision of the Town of Ross. The project's consistency with individual General Plan policies will be addressed in the SEIR.

c) ***No Impact***. A significant impact may occur if a project conflicted with any applicable habitat conservation plan or natural community conservation plan. The project site is not subject to a Habitat Conservation Plan, Natural Community Conservation Plan, or any other habitat plan. Therefore, development of the proposed project would not conflict with any habitat conversion plan. Thus, ***no impact*** would occur.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
11.	**Mineral Resources.** Would the project:				
a.	Result in the loss or availability of a known mineral resource that would be of value to the region and the residents or 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?				✓

Discussion:

a) ***No Impact***. There are no known mineral resources at or near the project site. Mineral resources in the Town of Ross are limited to gravel and stone. Some abandoned quarries are mapped in the vicinity, but none are in operation and none are known to have significant commercial value. Therefore, the proposed project would not result in any adverse impacts to these resources.[17] Thus, the proposed project would not result in the loss or availability of a known mineral resource that would be of value to the region and the residents or the state. ***No impact*** would occur.

b) ***No Impact***. See answer to 11a above. No locally-important mineral resource recovery sites are delineated in the General Plan or other land use plans. ***No impact*** would occur.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	✓			

[17] *Town of Ross, Initial Study for the Town of Ross Housing Element 2009-2014. Included as part of Town Council Agenda Item No. 14; available at: http://www.townofross.org/pdf/staff_reports_council/agenda-item-14-housing-element-staff-report.pdf. Accessed September 17, 2012.*

12. Noise. Would the project result in:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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?				✓

Fundamentals of Environmental Acoustics

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its loudness. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales, which are used to describe noise in a particular location. *A decibel (dB)* is a unit of measurement, which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10-decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level or dBA.* This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called L_{eq}. The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer

models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night - because excessive noise interferes with the ability to sleep - 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise Equivalent Level, CNEL*, is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 pm - 10:00 pm) and a 10 dB addition to nocturnal (10:00 pm - 7:00 am) noise levels. The *Day/Night Average Sound Level, DNL or L_{dn},* is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

Town of Ross General Plan

The Town of Ross General Plan quantifies noise level limits for new residential construction. The noise standard for exterior use areas (such as backyards) in residential areas is 55dB (decibels) Ldn (a day-night weighted 24-hour average noise level). All areas of Ross meet this standard except for those properties located along Sir Francis Drake Boulevard. General Plan Policy 5.7 requires that any new residential construction meet this standard. Furthermore, General Plan Policy 5.10 requires mitigation of construction and traffic noise impacts on the ambient noise level in the Town. The proposed project would also be subject to the Town of Ross Municipal Code, Title 9, Chapter 9.20 Section 9.20.030(b).

Existing Noise Environment

Illingworth & Rodkin, Inc. (I&R) previously studied the noise environment on the project site and in the surrounding environs in September of 1990 for a noise study of a previously proposed residential use of the project site. For this previous study I&R conducted a continuous 24-hour noise measurement at 25 feet from the centerline of Upper Road in front of 7 Upper Road and a shorter-term (15 minute) spot noise measurement at the end of the existing access road on the project site near the end of the currently proposed private road. The results of the 1990 measurements at the average L_{dn} was 56 dBA at the long term location, varying from a high of 60 dBA L_{dn} during weekdays when a fair amount of construction traffic was present on Upper Road to 55 dBA on weekends and other days when construction and other traffic diminished. The average noise level at the short-term measurement location was 37 dBA.

Discussion:

a-d) ***Potentially Significant Impact***. A significant impact would occur if the project were to expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project would also be a significant impact. Construction activities generate considerable amounts of noise. Construction-related noise levels are normally highest during the demolition phase and during the construction of project infrastructure. These phases of construction require heavy equipment that normally generates the highest noise levels over extended periods of time. Typical hourly average construction generated noise levels are about 81 to 88 dBA L_{eq} measured at a distance of 50 feet from the center of the site during busy construction periods (e.g., earth moving equipment, impact tools, etc.). Construction-related noise levels are normally less during building erection, finishing, and landscaping phases. There would be variations in construction noise levels on a day-to-day basis depending on the actual activities occurring at the site. Generally,

construction generated noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor. The nearest existing residential receivers are about 50 feet from the proposed building envelopes. Hourly average noise levels would range from 81 to 88 dBA L_{eq} during the busiest construction periods along the perimeter of the site. Shielding by barriers or buildings (including existing buildings adjacent to the project site) would provide an additional 5 to 10 decibels of attenuation at distant receptors. This impact is ***potentially significant*** will be further addressed in the SEIR.

The proposed project is not anticipated to require the use of heavy equipment that would result in groundborne vibration (i.e. pile drivers). However, ground-borne vibration resulting from the project will be analyzed in the SEIR.

Eventually, the proposed project would generate an increase in vehicular traffic on the local roadway network. Although the proposed project requests approval of a Vesting Tentative Subdivision Map for three residential units, Design Review approvals for grading, and retaining wall construction and approvals for a common driveway to serve the site, the addition of project traffic would increase noise levels at receivers along roadway segments experiencing future project trips. While the proposed project is not likely to create a substantial permanent increase in ambient noise levels, this will be analyzed further in the SEIR.

e) ***No Impact***. The proposed project is not located near any public airport or public use airport. Therefore, ***no impact*** would occur.

f) ***No Impact***. The proposed project is not located near any private airstrip. Therefore, ***no impact*** would occur.

13. Population and Housing. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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?				✓

Discussion:

a) ***Less Than Significant Impact***. New residential uses as proposed would increase the Town's population. The proposed project requests approval of a Vesting Tentative Subdivision Map for three residential units, Design Review approvals for grading, and retaining wall construction and approvals for a common driveway to serve the site. Although no homes are being proposed at this time, full build out of the site could potentially house between 9-15 residents. The Town's

population is estimated at 2,370 in 2010,[18] up slightly from the 2,310 counted in the 2000 Census, and by 2025, the Town's projected population would be 2,550. [19] Under the conservative assumption that all residents generated by the proposed project are new to the Town, these 15 residents would account for 0.63 percent of the estimated 2010 population (2,370) and 0.59 percent of the projected population for the year 2025. Therefore, the project plus the projected 2010 population would be 2,385. Because the proposed project would not exceed the Town's 2025 population projections, impacts would be ***less than significant***.

b) ***No Impact***. There are no existing housing units on the project site. Therefore, the proposed project would not displace substantial numbers of existing housing and ***no impact*** would occur.

c) ***No Impact***. See answer to question 13b above. ***No impact*** would occur.

14. Public Services.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?			✓	

Discussion:

a.i) ***Less Than Significant Impact***. Fire protection services to the project site and area are provided by the Ross Valley Fire Department (RVFD). The RVFD is a consolidated fire agency protecting the communities of Ross, Fairfax, San Anselmo, and Sleepy Hollow in Marin County. Consolidated on July 1, 1982, the full-time, professional fire department employs one Fire Chief, one Administrative Assistant, 34 full time Firefighters, one Fire Inspector and fifteen active volunteer Firefighters. Nine of the Department's Firefighters are Paramedics and all engine companies are equipped with Advanced Life Support (ALS) medical equipment.[20] The proposed development would be served by Station 18, located at 33 Sir Francis Drake Boulevard in Ross. The historic Ross Fire Station was built by the Town of Ross in 1926. Housing Engine 18 and the Ross Valley Paramedic Authority transport ambulance Medic 18, Station 18 became part of Ross

[18] *Town of Ross Housing Element 2009-2014. Adopted November 4, 2010; Page 20.*
[19] *Town of Ross General Plan 2007-2025; Page 5.*
[20] *Ross Valley Fire Department. Website: http://www.rossvalleyfire.org/. Accessed: September 17, 2012.*

Valley Fire Department in 2012 with the consolidation of the Town of Ross Fire Department. The daily on-shift suppression staff consists of a Fire Captain, an Engineer, and an Apprentice Firefighter. The station houses one first due Type 1 (structural firefighting) engine.

The project area is also served by the Kentfield Fire Protection District (KFPD). The KFPD is a special district formed under the authority of the California Health and Safety Code. The District has an excellent Class 3 ISO (Insurance Services Office) rating. Eleven full-time professional firefighters and 20 volunteer firefighters are employed by the District. All District personnel are State certified to their classification and rank. The District's daily staffing is four firefighters. Available within minutes are four neighboring automatic aid engines, twenty immediate need mutual-aid engines, and eight immediate need "wildland" mutual-aid engines and four truck companies.

The District is a member of the California Inter-County Mutual-Aid Plan and the Marin County Automatic and Mutual-Aid Plan, covering emergencies and disasters such as fires, floods, mass-casualty incidents, and earthquakes. All District personnel are Hazardous Materials First Responder Certified. The Kentfield Fire Protection District provides paramedic service through the Ross Valley Paramedic Authority Joint Powers Agreement. All District personnel are Emergency Medical Technician Certified.[21]

Both RVFD and the KFPD would respond to wildfires in the project area. The threat of wildfire is described under question 8g above and will be addressed in the SEIR. Buildout of the proposed project would result in the addition of three new homes in the Town as well as approximately 9-15 new residents. Although the proposed project could result in increased service call responses for Station 18, due to the project size, it is not anticipated that it would necessitate the expansion of existing or construction of new fire protection facilities, and service time targets of less than six minutes would still be attainable. Also, the Town or Ross' Initial Study for the General Plan 2007 - 2025 states that the Fire Department does not anticipate the need for new or expanded facilities to serve new development allowed under the General Plan since the maximum amount of new development that may occur is limited and will be located within the existing coverage area. Therefore, project impacts related to fire protection services would be ***less than significant***.

a.ii) ***Less Than Significant Impact***. The proposed project site would be served by the Town of Ross Police Department (RPD) which is located at 33 Sir Francis Drake Boulevard and currently has eight sworn officers. Department equipment includes four marked patrol cars, one investigator's car, and one four-wheel pick-up truck. The Town or Ross' Initial Study for the General Plan 2007 - 2025 states that Primary police-related concerns in the Town include traffic accidents, some criminal activity and noise. The Department responds to about three to four motor vehicle accidents per month. Criminal activity in Ross consists mainly of domestic disagreements, petty theft, vandalism, and disturbing the peace. Noise complaints generally involve construction, and operation of landscape maintenance equipment.

Although the proposed project could result in increased service call responses from the RPD, due to the project size and associated residential population (approximately 9-15 residents), it is not anticipated that the project would necessitate the expansion of existing or construction of new police protection facilities. The Initial Study for the General Plan 2007 - 2025 also states that the Police Department does not anticipate the need for new or expanded facilities to serve new development allowed under the General Plan since the maximum amount of future development

[21] *Kentfield Fire Protection District. Website: http://kentfieldfire.org/component/content/article/2. Accessed: September 17, 2012.*

is limited and will be located within the existing coverage area. Therefore, project impacts related to police protection services would be ***less than significant***.

a.iii) ***Less Than Significant Impact***. The project site is served by the Ross School District (RSD) and the Tamalpais Union High School District. The Ross School (grades K through 8) and Redwood High School (grades 9 through 12) would serve the project site. RSD currently has 346 students (260 K-6; 86 7-8) and Redwood High School currently has 1,456 students.[22] The Branson School is a private, coeducational, college preparatory school (Grades 9 -12) located in Ross that could also serve the project area.

The number of students a proposed project may generate is usually estimated by multiplying the number of students per dwelling unit (the student yield factor) by the number of dwelling units in the project. Student yield factors are set by the California State Allocation Board Office of Public School Construction. Currently, student yield factors are 0.5 students for grades K through 6th and 0.2 students for grades 7th through 12th.[23] To calculate project impacts on the RSD, the statewide average student yield factor per dwelling unit may be expressed as 0.43 elementary school students and 0.14 middle school students, and 0.13 high school students. By conservatively applying the statewide average student yield factor, the three new homes associated with the project could generate approximately 2.1 new students - approximately 1.29 elementary school students, 0.42 middle school students, and 0.39 high school students.

Pursuant to California Education Code Section 17620(a)(1), the governing board at any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities. As such, the project applicant would be required to pay the required developer fees to offset any impacts the project could have to schools. Provided in Section 65996 of the California Government Code, the payment of such fees is deemed to fully mitigate the impacts of new development on schools services. Therefore, project impacts related to school services would be ***less than significant***.

a.iv) ***Less Than Significant Impact***. Project implementation could result in increased use of the Town parks and recreational facilities. There are four town parks in Ross. Ross Common, a 4.3 acre town park, is located in the center of town and provides playing fields for soccer, baseball, and other sports. Approximately three acres of additional parkland stretches along Corte Madera Creek and provides a walking and biking trail for residents. Two Town tennis courts and a paddle tennis court are located in the Frederick S. Allen Park. The largest Town park, Natalie Coffin Greene Park, is 27.36 acres and provides picnic facilities and trail access to adjacent Marin Municipal Water District land, which provides miles of hiking and biking trails. Playground facilities are also available at Ross School.

Parks in Ross total over 34 acres, which translates into about 14.5 acres of parkland per 1,000 residents (Town of Ross 2007a). The current population of Ross is approximately 2,415[24] which equates to 14.1 acres of parkland per 1,000 residents. Given the 2025 General Plan build out population is projected to be 2,550 residents by 2025 (Town of Ross 2007a) which includes build out of the project site, there would be approximately 13.3 acres of parkland per 1,000 residents. This amount of parkland is far in excess of the Quimby Act guideline of three acres of parkland

[22] *California Department of Education, Educational Demographics Unit. Website: http://dq.cde.ca.gov/dataquest/Enrollment/GradeEnr.aspx?cType=ALL&cGender=B&cYear=2011-12&Level=School&cSelect=Redwood+High--2165482-2132587&cChoice=SchEnrGr. Accessed: September 17, 2012.*

[23] *Title 2, Cal. Code Regs., § 1859.2; California State Allocation Board Office of Public School Construction, "Enrollment Certification Projection," (Form SAB 50-01, Part H. rev. May 2009) http://www.documents.dgs.ca.gov/opsc/Forms/SAB_50-01.pdf. Accessed September 17, 2012.*

[24] *U.S. Census Bureau 2010 Census data for Town of Ross. Website: http://factfinder2.census.gov/rest/dnldController/deliver?_ts=366313386458. Accessed: September 21, 2012.*

per 1,000 residents. In addition, the applicant will be required to pay a parkland in-lieu fee per Chapter 17.44 of the Town's Municipal Code. Therefore, any increase in use of existing facilities would be ***less than significant*** and no further analysis is required.

a.v) ***Less Than Significant Impact***. The Town or Ross' Initial Study for the General Plan 2007 - 2025 states that there are only a few other public facilities within the Town that are not discussed under the other sections of that Initial Study. These facilities include the Town Hall and the Corporation Yard. The proposed project would not 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. Ross does not have a town library but instead utilizes library services provided by the Marin County Free Library (MCFL) and the San Anselmo Library. Both the Corte Madera and the Fairfax branch libraries are utilized by residents of Ross in addition to the San Anselmo library. The Marin County Free Library has a network of 10 branches throughout the County and a Bookmobile. The library served more than 1,170,000 visitors in 2011 that checked out more than 1,744,470 books, audio books, and DVDs.[25] Any increase in use of existing facilities would be minimal since the project is anticipated to increase the Ross' population only by approximately 9 - 15 residents. Potential impacts to library services in Ross would be minimal with implementation of the proposed project, and the existing libraries would not need to expand or construct new library facilities. Impacts would be ***less than significant***.

15. Recreation.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?			✓	

Discussion:

a) ***Less Than Significant Impact***. Town parks in Ross total over 34 acres, which translates into about 14.5 acres of parkland per 1,000 residents. This amount of parkland is far in excess of the Quimby Act guideline of three acres of parkland per 1,000 residents. Besides the Town parks, additional private recreational facilities are available at the Lagunitas Country Club. Town residents also have access to nearby County recreational facilities, including a public pool in the adjacent town of Kentfield, and to state parks and Marin County Open Space District lands (Town of Ross 2007a). Project implementation could result in increased use of the Town's parks and recreational facilities. The proposed project would provide on-site open space for recreational opportunities. Nevertheless, any increase in use of existing facilities, such as Natalie Coffin Greene Park would be minimal since the project is anticipated to increase the Town's population only by approximately 9 - 15 residents. Any additional needs would be served by existing facilities. Impacts would ***be less than significant***.

[25] *Marin County Free Library About Us Webpage. Website: http://www.marinlibrary.org/about-the-library. Accessed: September 19, 2012.*

b) ***Less Than Significant Impact***. See response to 15a above. Impacts would ***be less than significant***.

16. Transportation/Traffic. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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?			✓	

Existing Road Conditions

The proposed project would be accessed from Upper Road, west of Glenwood Avenue. Upper Road is a local collector street providing access to Glenwood Avenue and Lagunitas Road and to Oak and Bolinas Avenues along the Ross/San Anselmo town limits. Upper Road is narrow with a hairpin curve at the project entrance. Street design reflects Town standards with no sidewalks, no centerline or edge line stripe, and one-lane roadways serving low-volume local traffic. Pedestrians are required to walk in the travelway, as the shoulders are narrow and uneven. The alignment is winding, relatively steep, and varies with terrain and locations of mature trees. The pavement width is generally between 12 and 16 feet.

Motorists generally travel slowly on Upper Road and may have to pull to the side in wider roadway areas to allow oncoming vehicles to pass. This is more difficult with trucks; occasionally one truck may have to back down the road to a wide spot.

Traffic Volumes and Intersection Level of Service

Traffic on Upper Road is generated by approximately 20 homes. In the middle of the day, service worker vehicles, such as contractors and landscapers account for much of the traffic. A traffic count on Upper Road will be conducted as part of the SEIR.

Discussion:

a) ***Potentially Significant Impact***. A significant impact may occur if a project would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. In order to analyze the potential traffic impact of the project, trip generation, distribution, and assignment will be conducted. Although previous reports indicate that project generated traffic would add minimally to the delay at some intersections, the creation of additional new vehicle trips and the potential for the project to impact local streets and intersections may be ***potentially significant*** and will be addressed further in the SEIR.

b) ***Potentially Significant Impact***. A significant impact may occur if the adopted California Department of Transportation (Caltrans) and Marin County Congestion Management Agency (CMA) thresholds for a significant project impact would be exceeded. To address the increasing public concern that traffic congestion is impacting the quality of life and economic vitality of the State of California, the Congestion Management Program (CMP) was enacted by Proposition 111. The CMP designated a transportation network including all State highways and some arterials within the County to be monitored by local jurisdictions. If the Level of Service (LOS) standard deteriorates on the CMP network, then local jurisdictions must prepare a deficiency plan to be in conformance with the CMP program. The Marin County Congestion Management Program has set Levels of Service standards for major roadways and intersections within the County. Sir Francis Drake Boulevard through Ross is a designated CMP roadway. Access to the project site is available via Sir Francis Drake Boulevard and associated arterials. While project trip generation would be minimal due to the size of the project, this issue will be addressed further in the SEIR.

c) ***No Impact***. This question would apply to the proposed project only if it were an aviation-related use. The project site does not contain any aviation-related uses, and the proposed project would not include the development of any aviation-related uses. Thus, the proposed project would have ***no impact*** on air traffic patterns.

d) ***Potentially Significant Impact***. A significant impact may occur if a project were to substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). The proposed project does not include any changes in circulation patterns, street design changes, or changes in local access. However, ingress and egress to and from the project site would be moved slightly from the existing access point on Upper Road. At this location the street is approximately 20 feet wide and is located adjacent to a hairpin curve. Access to the site may be a ***potentially significant*** impact that will be analyzed further in the SEIR, including if site distance visibility is adequate for motorists at the proposed project access location.

e) ***Potentially Significant Impact***. A significant impact may occur if a project were to result in inadequate emergency access. Existing emergency access along Upper Road to the project site is adequate from the project site to Glenwood Road and Lagunitas Road, which is the main route for vehicles between the site and downtown Ross. A common road would serve the three home sites and private driveways would connect each home to the common road. From the project

entrance at Upper Road, a 20-foot wide accessway would extend about 992 feet connecting Upper Road to 12-foot wide driveways for Parcels 1, 2 and 3. The curving entranceway will have a maximum slope of 18% compared to the 27% average slope of the existing topography at this location.

The hillside project site features moderate topography with an elevation change of approximately 220 feet from the Upper Road entrance to the area above the westerly boundary of Parcel 3. Accordingly, the road system climbs steadily uphill as it traverses the site. Compared to the previous version of the project analyzed in 2006, the project sponsor has substantially shortened the road length from 2,741 to 992 feet - a 63% improvement - and to lower the road grade from an average of 20-25% grade to an average of 15%. Parcel driveways would not exceed 18% in grade with more level transitions to building areas ranging from 2-8%.

While the project would improve access to the site compared to existing conditions and includes a hammerhead turnaround fire truck area at end of the common road, such plans have not yet been approved by the Ross Valley Fire Department. This is a ***potentially significant impact*** that will be analyzed in the SEIR.

f) ***Less Than Significant Impact***. A significant impact may occur if a project were to conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. The anticipated transit demand generated by the proposed project is expected to be accommodated by the existing transit routes. As stated previously, currently pedestrians are required to walk in the travelway, as the shoulders on Upper Road are narrow and uneven. Project generated traffic would add minimally to the delay at some intersections, which suggests that the proposed project would not require modification of an existing alternative transportation facility located on- or off-site. Therefore, impacts to alternative transportation policies, plans, or programs would be ***less than significant*** and no further analysis or mitigation is required.

17. Utilities & Service Systems. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			✓	
b. Require or result in the construction of a 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?			✓	

17. Utilities & Service Systems. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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?				✓

Discussion:

a) ***Less Than Significant Impact***. Wastewater from the project site would be treated according to the wastewater treatment requirements enforced by the Town, the Ross Valley Sanitary District, and the San Francisco Bay Regional Water Quality Control Board for disposal in the District's sewer system. Impacts of the proposed project related to exceeding wastewater treatment requirements would be ***less than significant***.

b) ***Potentially Significant Impact***. The Central Marin Sanitation Agency (CMSA) treats wastewater from the central Marin County area, including Ross Valley. The Agency owns and operates the wastewater treatment plant that provides advanced secondary treatment and disposes of the treated wastewater the central San Francisco Bay via a deep-water outfall pipeline. Wastewater is transported to the CMSA through two major pipelines from the City of San Rafael and the Ross Valley Sanitary District. The CMSA wastewater treatment plant operates in accordance with its San Francisco Bay Regional Water Quality Control Board discharge permit.

In 2007, the CMSA plant had a permitted dry weather treatment capacity of 10 million gallons per day (mgd), and flows of 7.5 mgd. The plant's wet weather capacity is 90 mgd, and the agency has planned expansions to the plant in 2007 to increase wet weather capacity to over 125 mgd. The agency utilizes development projections contained in the general plans of the cities, towns, and unincorporated areas of Marin County to plan for future growth-related demand. According to the Initial Study prepared for the Town of Ross General Plan 2007 - 2025, the facility most likely has sufficient capacity to accommodate build-out throughout the area served. In the unlikely event that significant land use changes occur, capacity at the existing plant could be increased through the permitting process with the Regional Water Quality Board (Town of Ross 2007a). The Initial Study prepared for the Ross General Plan also states that at some point in the future, the treatment facilities may need to be improved to reflect changes in treatment requirements or to support growth outside of Ross. Given that this information is approximately five years old, impacts related to waste water treatment capacity could be ***potentially significant*** and will be analyzed in the SEIR.

With respect to sewage distribution, a 6-inch diameter vitrified clay pipe gravity sewer mainline is located in Upper Road. However, the Ross Valley Sanitary District has indicated that the mainline system downstream to the trunkline may be required to be replaced to accommodate the

project's increased flows.[26] An analysis is required to determine the need, and size and extent of replacement, as well as to obtain a PSX Permit from the District. This is considered a ***potentially significant impact*** that will be addressed in the SEIR.

However, regarding potable water, MMWD has confirmed that there is adequate water supply and distribution capacity to accommodate the proposed project and no off-site upgrades would be required, such as new or expanded water treatment facilities.[27] Impacts related to potable water supply, distribution and treatment would be ***less than significant***.

c) ***Potentially Significant Impact***. Please refer to the discussion for 9e, above.

d) ***Less Than Significant Impact***. Please refer to the discussion for 17b, above.

e) ***Less Than Significant Impact***. Please refer to the discussion for 17b, above.

f) ***Less Than Significant Impact***. Ross contracts with Marin Sanitary Service (MSS) for waste and recycling collection and handling. Demolition and construction waste is handled by Marin Sanitary Service's Resource Recovery Center. MSS also owns and operates the Marin Recycling Center, which recycles 74% of solid waste. Marin Sanitary Service transports the Town's non-recyclable waste to Redwood Landfill located just north of Novato, which is the only permitted landfill operating in the county. The landfill's permitted capacity is 19,100,000 cubic yards with a remaining capacity of 8 million cubic yards.[28] Average daily intake at the landfill is approximately 2,300 tons per day.[29] RLRC is permitted to receive up to 2,310 tons per day of material including 1,390 tons per day of disposal material (as opposed to material for recycling or composting).[30] Future landfill demand is determined utilizing ABAG projections for future population growth. The solid waste generated by the proposed project was analyzed as part of the General Plan 2007 - 2025 build out scenario. Since the General Plan's proposed development was consistent with ABAG projections and was determined to have a less-than-significant impact on the capacity of the Redwood Landfill, the proposed project would not result in the landfill's capacity being exceeded and there will be adequate capacity to serve the proposed project. Therefore impacts would be ***less than significant***.

g) ***No Impact***. The construction and operation of the proposed project would be required to adhere to all applicable federal, State, and local statues and regulations related to solid waste. Therefore, ***no impact*** would result with regard to compliance with federal, state, and local statutes and regulations related to solid waste.

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[26] *Correspondence from Randell Y. Ishii, District Engineer, Ross Valley Sanitary District, October 19, 2012.*

[27] *Phone conversation with Dain Anderson, Environmental Services Coordinator, Marin Municipal Water District and WRA Staff on October 18, 2012.*

[28] *Phone conversation with Jessica Jones, District Manager, Redwood Landfill and Recycling Center and WRA Staff on September 28, 2011.*

[29] *ibid.*

[30] *Solid Waste Facility Permit, Facility # 21-AA0001, Permit Issue Date December 18, 2008, Accessed at: http://www.ciwmb.ca.gov/SWIS/21-AA-0001/Detail/, July 28, 2009.*

18. **Mandatory Findings of Significance.**		Yes	No
a.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of 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 will cause substantial adverse effects on human beings, either directly or indirectly?	✓	

Discussion:

a) ***Yes****.* As noted in this Initial Study, implementation of the proposed project could potentially degrade the quality of the environment. This issue will be further analyzed in the SEIR.

b) ***Yes***. As noted in this Initial Study, the proposed project could contribute to cumulative environmental impacts. This issue will be further analyzed in the SEIR.

c) ***Yes***. As noted throughout this Initial Study, implementation of the proposed project could cause substantial adverse effects on human beings, either directly or indirectly. This issue will be further analyzed in the SEIR.

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