

**MARIN COUNTY COMMUNITY DEVELOPMENT AGENCY**  
**PLANNING DIVISION**

**INITIAL STUDY**

***Alta Way Extension***

**I. BACKGROUND**

- A. Project Sponsor's Name and Address:** Daniel Chador, Mitch Brown, Adam Cummings, Greg O'Donnell  
30 North San Pedro Road Suite 195,  
San Rafael, CA 94903
- B. Lead Agency Name and Address:** Marin County Public Works Department  
Land Use Division  
3501 Civic Center Dr., Suite 304  
San Rafael, CA 94903
- C. Agency Contact:** Jason Wong, Associate Civil Engineer  
(415) 473 6192  
[jwong@marincounty.org](mailto:jwong@marincounty.org)

**II. PROJECT DESCRIPTION**

- A. Project Title:** Alta Way Extension  
(Project ID [GP 16-003])
- B. Type of Application(s):** Grading Permit
- C. Project Location:** Alta Way, Tamalpais Valley  
Assessor's Parcel Numbers 049-041-38,  
049-041-44  
049-041-42, 049-041-43, 049-041-48, one  
lot with three parcel numbers(049-044-07,  
049-044-08, 049-042-01) 049-044-30, 049-  
044-29, 049-044-31,049-044-14
- D. General Plan Designation:** SF6-Low Density Residential
- E. Zoning:** R1-B1
- F. Description of Project:**

The Project is a grading permit to allow the extension of Alta Way, an existing residential street in unincorporated Mill Valley. The extension of Alta Way would provide access and utility extensions to ten undeveloped legal lots of record. Build-out of the ten lots is considered a part of the Project for the purpose of this Initial Study

## **PROJECT DESCRIPTION**

The Marin County Department of Public Works has received an application for a grading permit to allow the extension of Alta Way, an existing residential street in unincorporated Mill Valley. The extension of Alta Way would provide access and utility extensions to ten undeveloped legal lots of record. The applicants for the permit are Daniel Chador, Mitch Brown, Adam Cummings, and Greg O'Donnell, referred to collectively in this document as "the applicants." The grading permit is a discretionary permit that may be issued by the Marin County Public Works Director, and therefore qualifies as a "project" under the California Environmental Quality Act (CEQA). CEQA is a California State law that requires environmental review of certain projects subject to discretionary approval by local or State agencies. Because the grading permit, if approved, would allow access to undeveloped residential lots, the development of these lots is considered a reasonably foreseeable consequence of permit approval, and therefore a part of the Project. Therefore, the Project, for the purpose of this Initial study, consists of the proposed extension of Alta Way and the future development of the ten lots.<sup>1</sup>

This Project Description is based primarily on documents provided by the applicant, as listed in the reference section at the conclusion of the section.

## **PROJECT LOCATION AND SETTING**

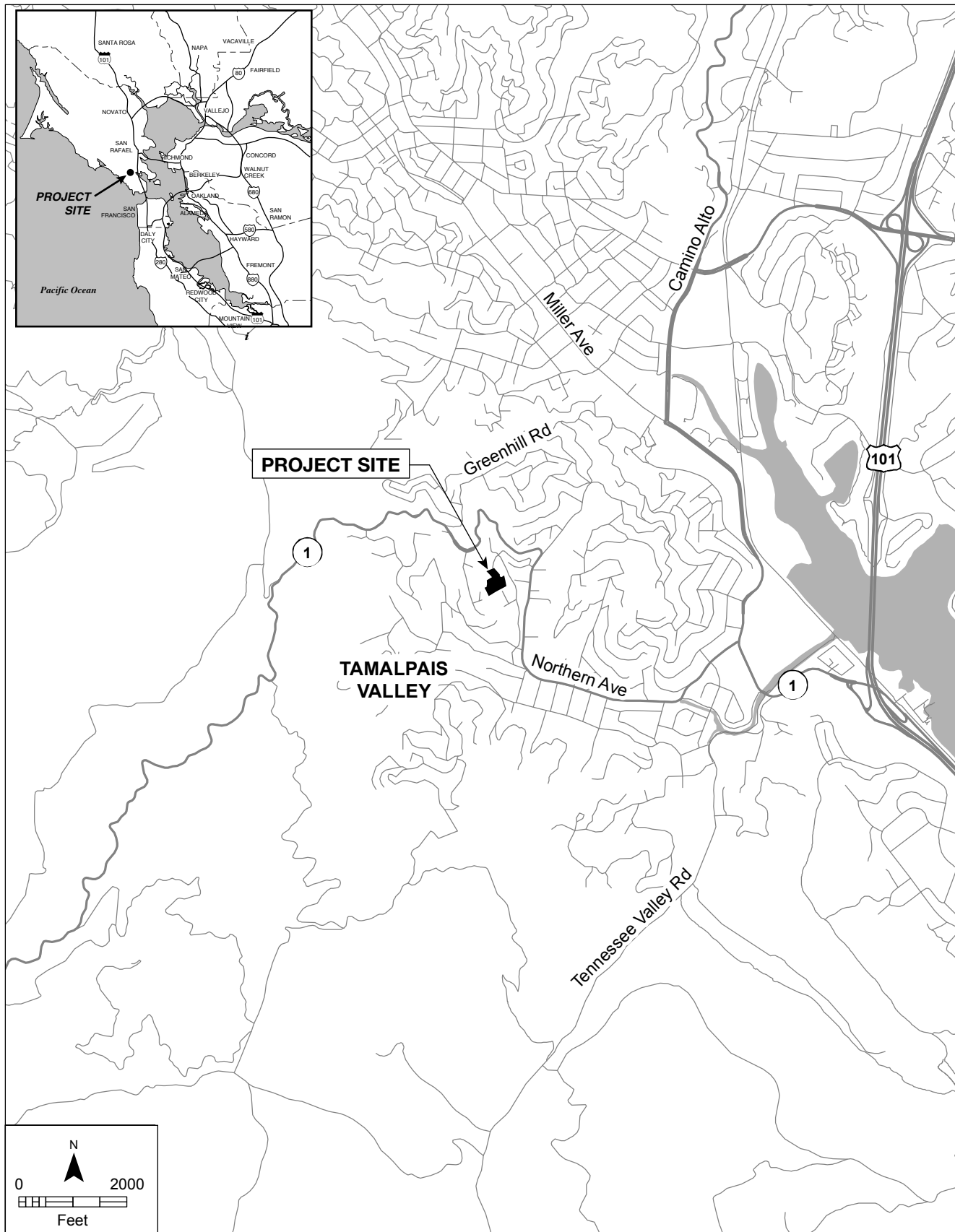
The Project site is located in the Tamalpais Valley, an unincorporated area of Marin County, just south of the City of Mill Valley (Figure 1, Project Location). The Project site is accessed via Shoreline Highway (State Highway 1), Sunnybrook Lane, and the existing improved portion of Alta Way. The area is hilly and wooded, and is largely developed with single-family homes. Like many areas in the surrounding community, Alta Way is part of an historic (early 20th century) subdivision. Streets in the area tend to be narrow and winding, with most streets lacking sidewalks. The Project site (Figure 2, Project Site) is undeveloped, except for an existing unpaved road that is overgrown, and a footpath. The Project site is covered with native and non-native trees, shrubs, and grasses. The site drains to an unnamed tributary of Coyote Creek, which flows into San Francisco Bay about one mile east. The site is bordered by single family homes to the north, east, and south. To the west of the Project site there are several additional undeveloped lots. The Project site is located on a hill with slopes from about five to fifty percent (Figure 3, Project Site: Topographic Map). The upper lots – those uphill of the proposed roadway – extend to the hilltop and are generally less steep than the lower, downhill lots.

## **PROPOSED EXTENSION OF ALTA WAY**

The Project would include the extension of Alta Way starting from its existing southern terminus and extending an additional 512 feet to the southeast, south, and southwest (Figure 4, Proposed Roadway Extension). The extension would be within an existing 40-foot wide right-of-way that has never been developed. This portion of Alta Way is therefore referred to as a "paper street." The proposed road width is 20 feet, with a two-foot wide shoulder on the downhill (outboard) edge and a three-and-a-half-foot wide concrete-lined

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<sup>1</sup> Section V.2, Population and Housing, considers whether the project could result in or enable additional development in the area.



SOURCE: Marin County GIS Data Base

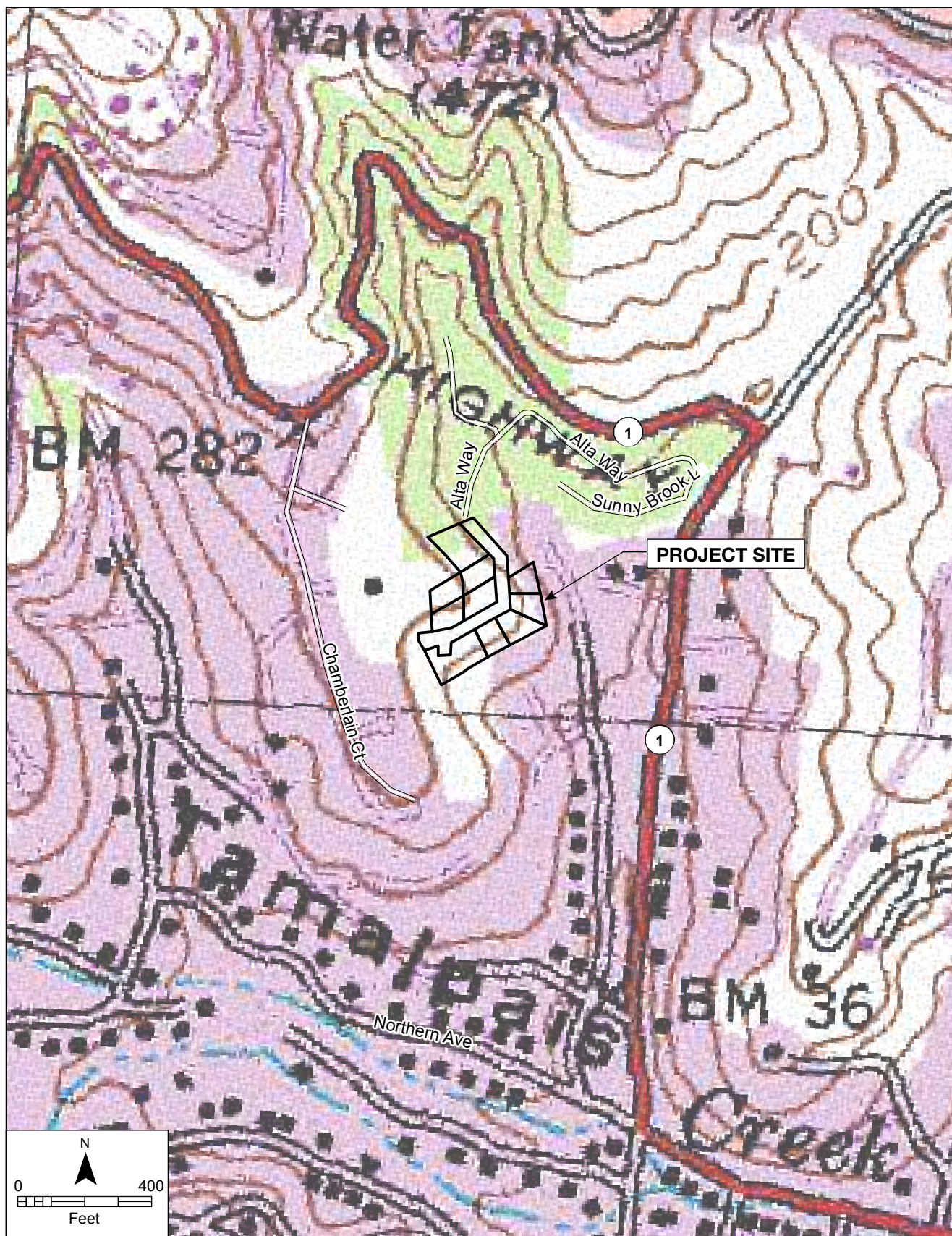
**Figure 1**  
Project Location



SOURCE: CSW-ST2; ESRI

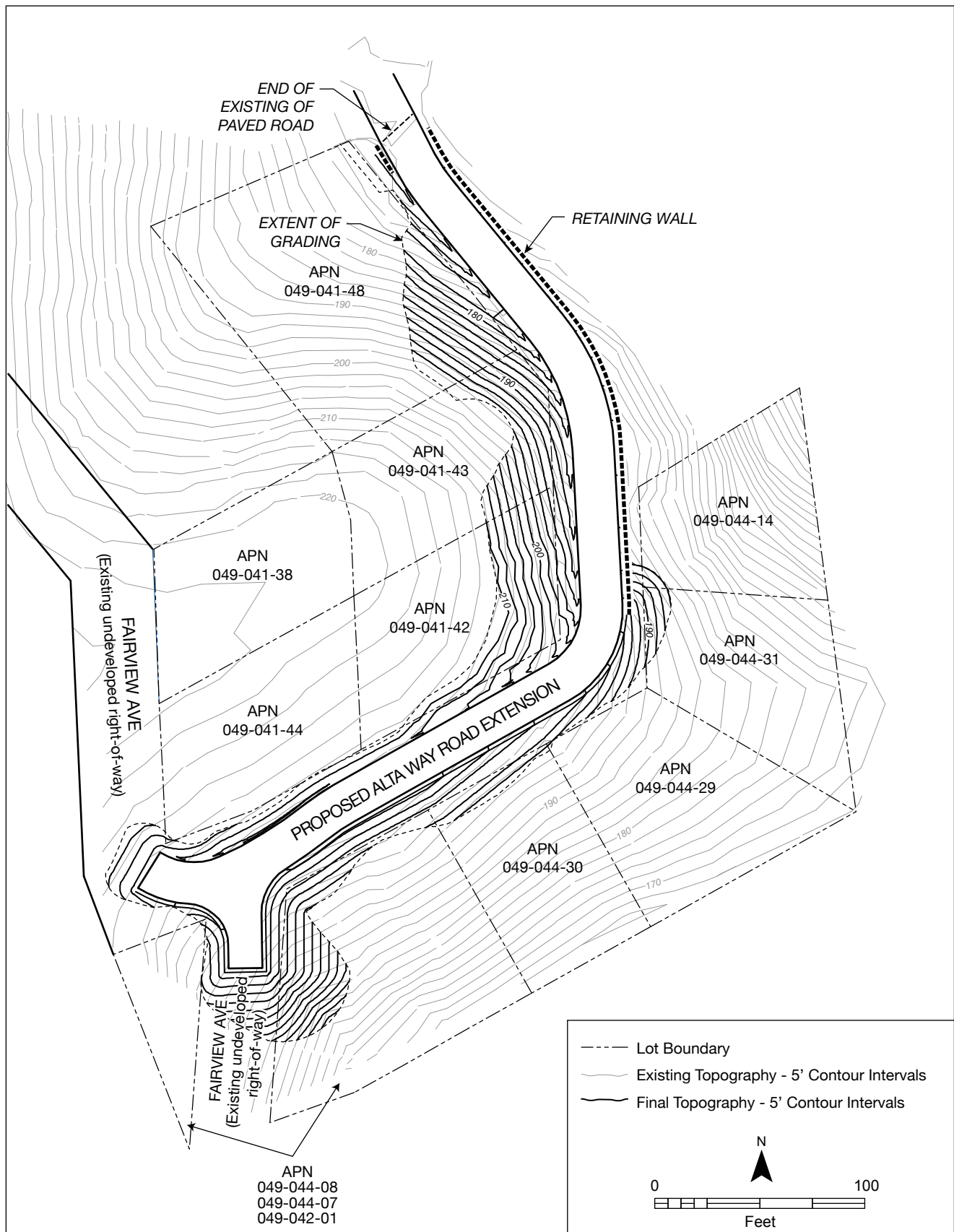
**Figure 2**  
Project Site (Aerial Photo)





SOURCE: CSW-ST2; USGS

**Figure 3**  
Project Site - Existing Topography



SOURCE: CSW-ST2

**Figure 4**  
Proposed Road Extension



drainage ditch on the uphill (inboard) edge (Figure 5, Proposed Road Cross-Section and Profile). Street parking would not be allowed, and no sidewalk is proposed. The maximum grade of the proposed road is 15 percent (Figure 5). The road would include curbs and would be paved with asphaltic concrete.

The proposed extension would terminate in a turn-around designed for fire engines (Figure 4). At its terminus, Alta Way would intersect with another paper street, Fairview Avenue (Figure 4). The undeveloped Fairview Avenue right-of-way leads to West Fairview Avenue, a developed street which terminates approximately 600 feet to the south of the Project site. The Project does not include development of Fairview Avenue or extension of West Fairview Avenue.<sup>2</sup> One of the lots (APN 049-041-38) fronts on an undeveloped section of Fairview Avenue (Figure 4), but would take its access via a driveway from Alta Way and through another of the project lots (parcel APN 049-041-44; Figure 6, Lot Access). The project does not include development of any of the other lots along Fairview Avenue.

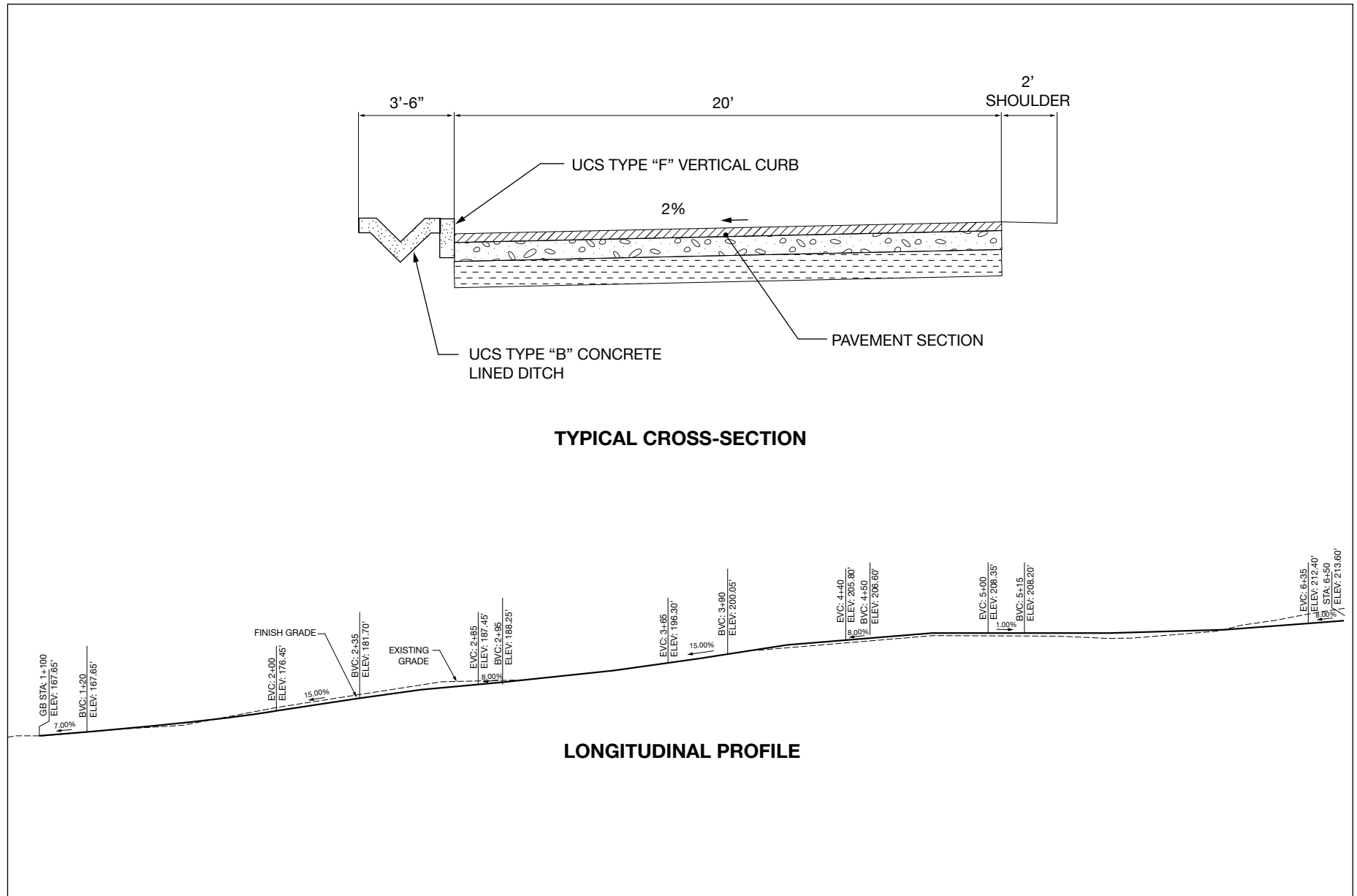
Construction of the Alta Way extension would involve grading of the road alignment to achieve a consistent grade and suitable surface for roadway development. Estimated volume of earth that would be moved is 1,100 cubic yards of cut and 1,100 cubic yards of fill; no export or import of soil is anticipated for roadway construction. Graded slopes above the roadway would be 2H:1V (two feet horizontal to one foot vertical, equivalent to 50 percent). Due to the slope of the hill across which the road would be developed, some grading would occur outside of the right-of-way, on several of the adjoining lots included in the Project site (Figure 4). Portions of the roadway crossing steeper slopes would be supported by retaining walls up to six feet high (Figure 4). Total area disturbed for the roadway extension would be approximately 35,600 square feet (about 4/5 of an acre).

Included in the Project is extension of existing utilities to serve the ten residential lots. Utility connections, including water, sanitary sewer, electricity, telephone, and cable, would be made at or near the current terminus of Alta Way. A portion of the existing roadway would be excavated to access existing utility lines and make connections. In addition, a new storm sewer, consisting of a twelve-inch PVC pipe, would be installed beneath the existing roadway, and connected to the existing storm sewer at the intersection of Alta Way and Blue Jay Way. This would involve trenching of the existing roadway, installation of the pipe, and backfilling of the trench. The new storm sewer would terminate at the beginning of the roadway extension in a drop inlet, which would capture stormwater runoff from the new roadway and the lots above it.

A portion of one of the lots (APN 049-041-44; see Figure 4) would be used as a temporary staging area for construction of the road extension. The staging area would be used for parking for construction workers and for equipment and material storage.

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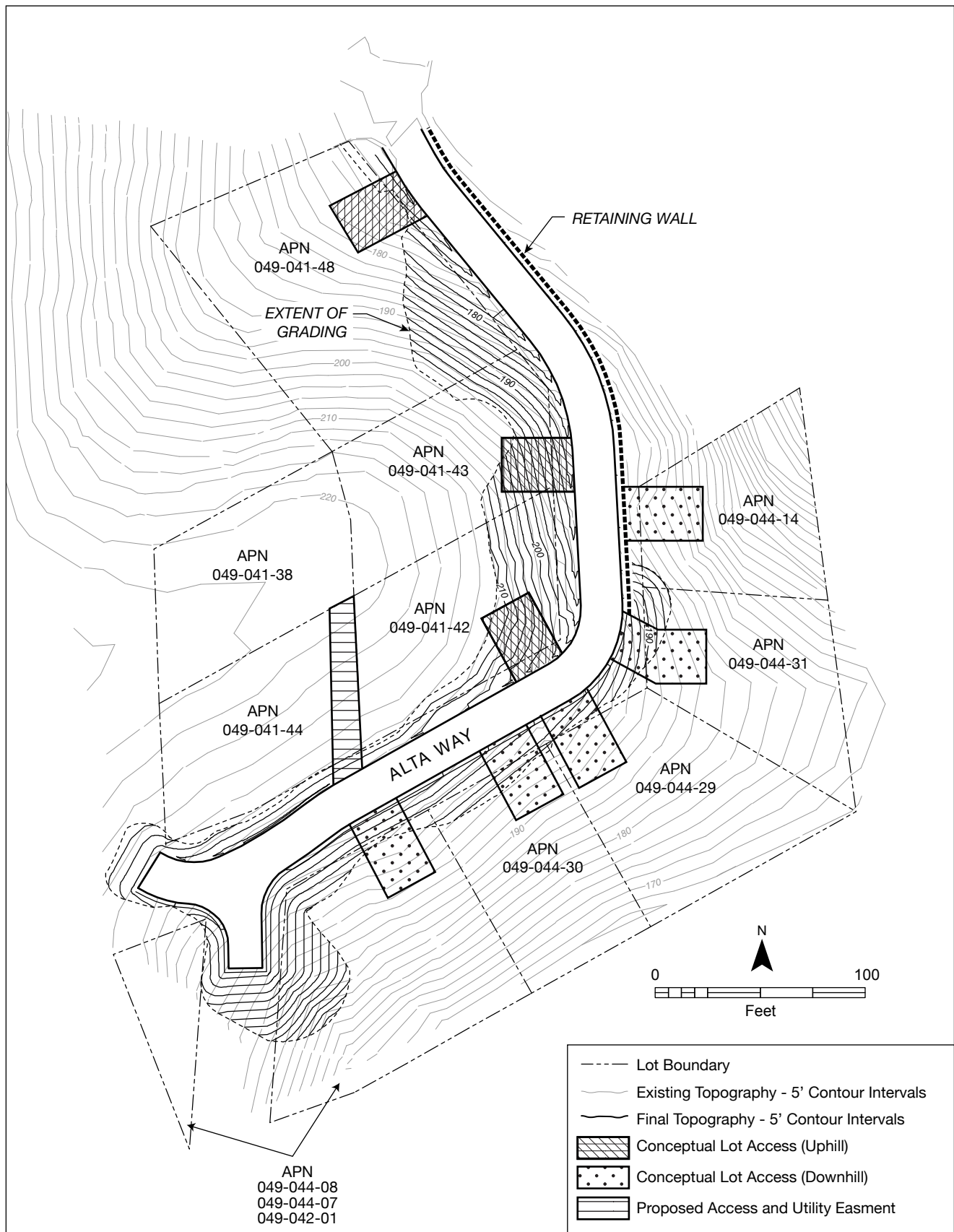
<sup>2</sup> The potential for the project to induce additional growth, including development of Fairview Avenue and its currently undeveloped lots, is considered below in Section V.2, Population and Housing.



SOURCE: CSW-ST2

**Figure 5**  
Proposed Road Cross-Section and Profile





SOURCE: CSW-ST2, Marin County Assessor

**Figure 6**  
Proposed Lot Access (Conceptual)

## RESIDENTIAL DEVELOPMENT

The ten lots, their Assessor's Parcel Numbers (APNs)<sup>3</sup>, their size, their average slope, their Marin Countywide Plan land use designation, and their zoning are shown in Table 1. The lots range in size from 6,300 square feet (.14 acre) to 13,296 square feet (0.31 acre). Five of the lots are uphill of the road alignment, and five are downhill. Slopes range from an average of 3.4 percent to 39.1 percent. None of the lots are currently developed.

While there are not yet plans for development of the lots, the zoning provides guidance on the type, size, and mass of the residences that may be developed. All of the ten lots have a land use designation of SF6 (Single-Family 6) in the Marin Countywide Plan. The SF6 designation is one of several low-density residential land use categories for areas where public services and some urban services are available. Areas designated SF6 have minimum lot sizes of 10,000 square feet or less, 4-7 dwelling units per acre, and a Floor Area Ratio (FAR) of 10-30 percent.<sup>4</sup>

**Table 1: Lot Information**

APN(s)	Lot Size (acres)	Lot Size (square feet)	Uphill or Downhill of Road	Avg. Slope (%)	Countywide Plan Land Use Designation	Zoning	Maximum FAR	Maximum size of Residence (square feet)	Requires Design Review? <sup>1</sup>
049-041-44	0.17	7,590	Uphill	14.2	SF6	R1-B1	0.3	2,277	No
049-041-42	0.17	7,560	Uphill	22.1	SF6	R1-B1	0.3	2,268	Yes
049-041-43	0.17	7,245	Uphill	28.8	SF6	R1-B1	0.3	2,174	Yes
049-041-48	0.31	13,296	Uphill	31.3	SF6	R1-B1	0.24	3,191	Yes
049-041-38	0.18	7,704	Uphill	3.4	SF6	R1-B1	0.3	2,311	No
049-044-08, 049-044-07, 049-042-01	0.29	12,700	Downhill	39.1	SF6	R1-B1	0.26	3,302	Yes
049-044-30	0.15	6,500	Downhill	37.8	SF6	R1-B1	0.3	1,950	Yes
049-044-29	0.18	8,046	Downhill	31.7	SF6	R1-B1	0.3	2,414	Yes
049-044-31	0.16	6,808	Downhill	25.3	SF6	R1-B1	0.3	2,042	Yes
049-044-14	0.14	6,300	Downhill	36.7	SF6	R1-B1	0.3	1,890	Yes
<b>TOTAL</b>	<b>1.92</b>	<b>83,749</b>		<b>27.0</b>				<b>23,819</b>	

Notes: <sup>1</sup> This is a preliminary determination. Actual determination of requirement for Design Review will be made at time of submittal of building permit application for each lot.

Sources: CSW-ST2– Grading Permit Plans, Drawing C2.0; Marin County Assessor; Marin Countywide Plan; Marin County Zoning Ordinance

The ten lots are all zoned R1-B1, one of several zoning designations compatible with the SF6 land use designation. The R1-B1 district has a minimum lot size of 6,000 square feet,

<sup>3</sup> Pursuant to a decision of the Marin County Planning Commission on July 10, 2017, three Assessor's Parcels, 049-044-08, 049-044-07, and 049-042-01 were merged into one legal lot of record. As shown in Figure 4, the Fairview Avenue right-of-way runs through this lot.

<sup>4</sup> FAR is the ratio of floor space to lot size. For example, a 2,000 square foot structure on a 10,000 square foot lot results in a FAR of 0.20 or 20 percent.

minimum setback of 25 feet (front), five feet (sides), and 20 percent of lot depth to 25 feet maximum (rear). Maximum building height is 30 feet and 15 feet for accessory buildings. The maximum FAR is 30 percent. Development of the ten lots is also subject to the particular provisions of Marin County Code §22.30.060, which contains the Tamalpais Planning Area Community Standards. For lots on steep ground where development requires Design Review, the maximum FAR is reduced, as shown in Table 1.

For the purpose of this initial study, it is assumed that the houses developed on the ten lots would be built to the maximum FAR, as shown in Table 1, resulting in houses of about 1,900 – 3,300 square feet (per the Tamalpais Planning Area Community Standards, square footage includes garages over 400 or 480 square feet, depending on lot size, and out buildings over 120 square feet). The average size would be about 2,400 square feet. For the purpose of the environmental impact analysis, it is assumed that the houses would be two stories in height, each with a detached garage, and that they would meet the setback requirements and height limits established in zoning.

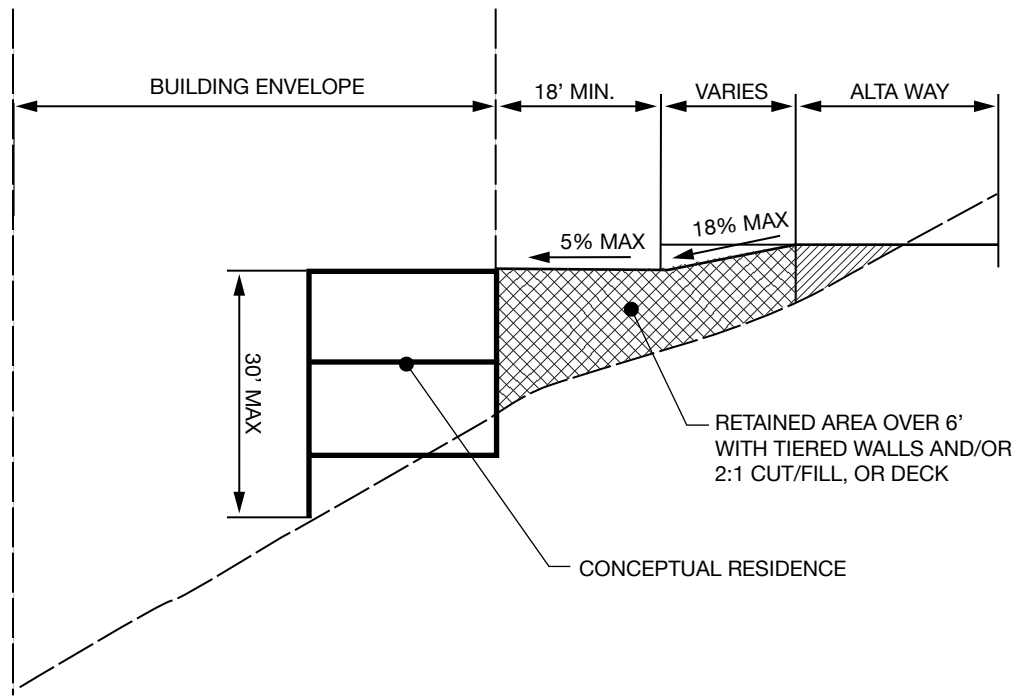
### **Lot Access, Development, and Drainage**

Access to the ten lots would consist of driveways cut into the hillslope for the five uphill lots, and built onto fill placed on the downhill lots (Figure 6). A 16-foot wide easement through parcel 049-041-044 would enable development of a driveway and utilities to parcel 049-041-038 from Alta Way (Figure 6).

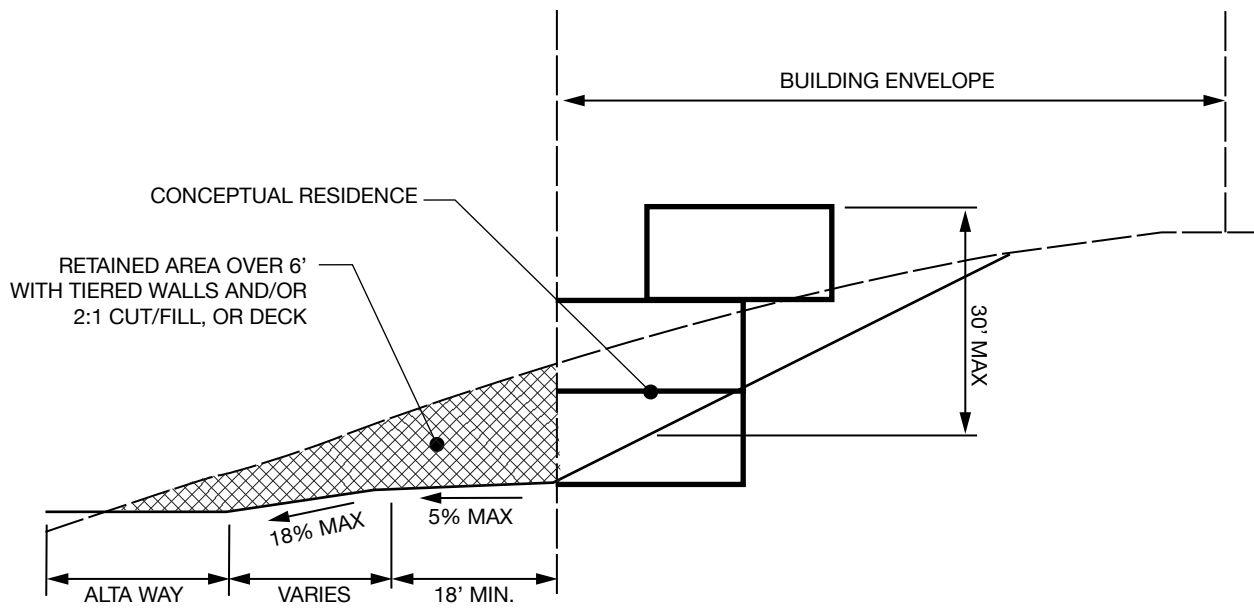
Where necessary, retaining walls would be used to retain cuts and fills, as shown in Figure 7, Typical Lot Access and Development. Retaining walls may be used to retain up to 17 vertical feet of slope. Where retained slopes exceed six vertical feet, tiered walls with maximum six-foot heights would be used, with 2H:1V slopes in-between. Additional cuts and fills would be required to achieve adequate building pads and site drainage. The applicants estimate that, overall, grading of the ten lots for lot access and building pad development would entail approximately 4,900 cubic yards of cut and 5,000 cubic yards of fill, resulting in the need to import approximately 100 cubic yards of fill material. Because not all of the lots are expected to be developed at once (which would enable the use of cut material for fill material across the Project site), the actual amount of soil import and export might exceed these estimates.

The five uphill lots would drain to the roadway. Stormwater running off of the uphill lots would flow down the inboard ditch to the drop inlet at the beginning of the proposed roadway extension, near where it intersects with the existing portion of Alta Way. From there, stormwater would flow through a proposed new storm sewer, consisting of a 12-inch PVC pipe that would connect to the existing storm sewer at the northwest corner of Alta Way and Blue Jay Way. The existing storm sewer crosses underneath Alta Way and drains into an unnamed tributary to Coyote Creek, just downstream of the Alta Way bridge. Stormwater flowing into the proposed new storm sewer would first pass through a filter designed to treat the first flush of stormwater. Higher flows would bypass the filter directly into the storm sewer.





**TYPICAL DOWNHILL LOT ACCESS**



**TYPICAL UPHILL LOT ACCESS**

SOURCE: CSW-ST2

**Figure 7**  
Typical Lot Access and Development

The applicants state that drainage from the five downhill lots would be managed in accordance with State Water Board NPDES Phase II Post-Construction requirements. Methods for controlling runoff proposed by the applicants include the following:

- Directing runoff to vegetated areas;
- Utilizing pervious surfaces for site landscape and driveway;
- Adding cisterns or rain barrels;
- Utilizing planter boxes as bio-retention areas;
- Limiting disturbed areas;
- Minimizing soil compaction and protecting slopes.

### Construction Phasing and Scheduling

The Project would be constructed in two phases. Phase 1 would include the construction of the roadway extension, and Phase 2 would include the development of residences on the ten lots served by the roadway extension. The applicants have prepared a construction management plan that indicates that Phase 1 would take place over a five- to six-month period. Grading and excavation would be conducted between April 16 and September 30 of the year of construction, currently anticipated to be 2018 or 2019. Grading and excavation would only occur outside of these dates (i.e., during the wet season) if authorized by the County Engineer, and with erosion control measures specified by the County. The proposed Phase 1 construction schedule, including anticipated number of workers and equipment that would be used for each activity, is shown in Table 2. Each of the five tasks or activities associated with Phase 1 are described below.

**Table 2: Phase I Construction Schedule**

Task/Activity	Duration	# of Construction Workers	Equipment
<b>Phase 1: Roadway Extension</b>			
1. Site Preparation	2 weeks	4	
2. Grading	2 months	5	bulldozer, scraper, motor grader, water truck, chain saws, truck to haul debris, transportation for workers
3. Utilities	3 weeks	5	trenching machine, backhoe, material trucks, motor grader, water truck
4. Road Paving	3 weeks	5	backhoe, material trucks, paving machine, water truck, bulldozer, compactor, motor grader
5. Planting and Clean-up	3 weeks	5	
<b>TOTAL</b>	<b>5-6 months</b>		

Source: Marin County Department of Public Works, 2016.

**1. Site Preparation** would involve developing a staging area to place a construction trailer, parking for construction vehicles, equipment maintenance area, and material

storage. The staging would be developed on one of the uphill lots, AP# 049-041-44 (Figure 4).

Site preparation would require vegetation removal, including removal of native and non-native trees, shrubs, and grasslands. Twenty-five trees that would be removed have been identified by the applicants as protected under Marin County Code §22.27 - Native Tree Protection and Preservation. Several additional trees within the Project site have been identified by the applicants as exempt from protection, because of disease or poor condition. As described below under task 5, Planting and Cleanup, the applicants have proposed a replanting program following construction.

**2. Grading** would include cut and fill operations for extension of the roadway. This would involve the use of bulldozers, compactors, motor graders, scrapers, a water truck, and transportation for workers. Prior to grading, the contractor would define the limits of grading, install construction barriers around sensitive trees and vegetation that would not be removed, and remove vegetation within the limits of grading. Small bulldozers, chainsaws, and trucks to haul debris would be required. As previously noted, estimated cut and fill volumes for grading the roadway in Phase 1 are 1,100 cubic yards cut and 1,100 yards fill; therefore, no soil export or import is anticipated for Phase 1.

**3. Utilities** would involve installation of water lines, a sanitary sewer pipeline, and conduits beneath the roadway alignment. Utility connections to existing facilities would occur at the end of the existing portion of Alta Way, where utility lines currently terminate. A portion of the end of the existing portion of Alta Way would be demolished and excavated to access existing utility lines. In addition, a new storm sewer would be laid beneath the existing portion of Alta Way, from the beginning of the proposed roadway extension to the existing drop inlet located at the intersection of Alta Way and Blue Jay Way. This would involve trenching of the existing roadway for a length of approximately 275 feet, placement and connection of the new storm sewer, and backfilling and repairing the pavement. A trenching machine, backhoe, material trucks, water truck, and motor grader would be used for these activities.

**4. Road Paving** would involve building retaining walls, installing curbs, gutters, and drop inlets, and paving roadways. A backhoe, material trucks, paving machine, bulldozer, compactor, motor grader and water truck would be used.

**5. Planting and Cleanup.** The applicants have proposed to replant removed protected trees at a three-to-one (3:1) ratio, which would result in the planting of 75 replacement trees. If adequate space is not available on-site, the applicants have proposed making an in-lieu payment of \$500 to the Marin County Tree Preservation Fund for every tree below the 75. Areas disturbed by grading would be restored with native trees, shrubs, and herbaceous species. A native seed mix would be used for erosion control and ground cover, which would include native grass and herbaceous species found within the Project site, including purple needlegrass (*Stipa pulchra*).

## **Phase 2**

The applicants have provided only general parameters for development of residences on the ten lots, which would occur in Phase 2 of Project construction. The details that have been provided include the following:



- The ten lots are owned by several different owners. Therefore, development of the lots is not expected to occur at once or in a coordinated fashion, but rather individually or several in a group.
- All grading and excavation would be conducted between April 16 and September 30 of any year in which construction takes place, unless wet season grading is specifically authorized by the County Engineer, and with erosion control measures specified by the County. Grading would include earth moving for development of driveways, grading of the easement for access to parcel 049-041-38, and grading of building pads. As noted above, anticipated cut and fill volumes for Phase 2 are 4,900 cubic yards cut and 5,000 cubic yards fill, resulting in a net deficit of about 100 cubic yards. Because construction of the ten lots would not occur at once or on a coordinated basis, the actual amount of soil export or import may be more than 100 cubic yards.
- Development of the ten lots is expected to result in the removal of an additional 39 trees subject to the County's Native Tree Preservation and Protection Code, as well as additional native and non-native trees, shrubs, and grasslands. The planting program described above for Phase 1 would also be applied to Phase 2, resulting in the planting of 117 trees to replace the 39 protected trees removed, as well as replanting of other native trees, shrubs, and grasses.

There is no schedule for the development of the ten lots. Assuming that each house would take about one year to build, and that up to three houses would be constructed in any given year, lot development may occur over an approximately four-year period. Assuming that lot development may begin the first year after completion of the extension of Alta Way, Phase 2 may begin in 2019 or 2020, and continue at least until 2023, but likely later.

## **PROTECTION FOR SENSITIVE RESOURCES**

To protect sensitive resources from potential harm associated with construction activities, the applicants have proposed the following protective measures as part of the Project. These measures would apply to both phases of Project construction.

### **Equipment Maintenance**

Equipment fueling, lubrication, and other maintenance that could result in spillage and contamination of soils would be conducted on level areas within designated staging areas in order to prevent spillage onto soil. If a spill were to occur, it would be properly cleaned and contaminated materials would be properly disposed.

### **Trash Management**

All trash and debris would be removed from the Project site and disposed of properly.

### **Erosion Control**

Areas of disturbed soil not permanently covered by a structure would be landscaped and planted with native shrubs and ground covers and additionally protected from potential erosion by planting a native seed mix or other stabilizing methods, such as mulching, no later than September 30 of each year construction occurs. If any grading or excavation

work were to occur prior to April 15<sup>th</sup> or after October 15<sup>th</sup>, a siltation control plan would be developed by a civil engineer and implemented.

### **Nesting Birds**

The planned construction period falls within nesting bird season, defined as March 1 to July 31 in the Marin Countywide Plan. The applicants have therefore proposed that a qualified biologist conduct a pre-construction nesting bird survey of the Project site within 14 days of the start of work. If no active nests were present, construction could begin. If one or more active nests were found in proximity to the work area, the start of work would be delayed until all young had fledged the nest or the nest was otherwise determined inactive by the qualified biologist. If an active nest were found that was determined by a qualified biologist to be far enough away from the work area that it would not be disturbed, work could begin without delay.

If construction dates were shifted and initial grubbing and grading were to occur between August 1 and February 28, which would be considered outside the nesting bird season, work could be performed without the need to conduct a nesting bird survey.

### **CONSTRUCTION MANAGEMENT PLAN**

The applicants have proposed a Construction Management Plan (CMP), which would apply to both phases of Project construction. The proposed CMP includes the following "Best Management Practices for Construction," intended to reduce inconvenience to neighbors and to protect public safety:

#### **1. Disturbance Coordinator**

Designate a Disturbance Coordinator for the duration of applicant-implemented construction. The Disturbance Coordinator shall:

- a. Receive and act on complaints about construction disturbances during infrastructure installation, landslide repair, road building, residential construction, and other construction activities.
- b. Determine the cause(s) and implement remedial measures as necessary to alleviate significant problems.
- c. Clearly post his/her name and phone number(s) on a sign at each construction site.

#### **2. Traffic Control Measures**

- a. Coordinate access routes with the County of Marin.
- b. Notify area residents of construction activities, schedule, and impacts. Post signs on streets to prohibit parking on street during project construction hours.
- c. Develop a comprehensive traffic control plan to limit daily construction vehicle trips. For example, workers' meals may be brought to the site by a vendor rather than having workers leave for lunch.

- d. Accelerate grading and site preparation to the greatest extent possible for those portions of the project which require access through the existing residential neighborhood. Condense grading operations to the shortest period feasible.
- e. Schedule delivery of construction materials and arrival of construction workers to avoid AM and PM peak hour traffic times. Station flag persons at intersections along truck routes to ensure safe truck passage.
- f. Parking for construction workers will be provided on site. Parking may also be provided in a nearby location, such as Tam Junction, with a shuttle provided to the project site. Construction workers will also be encouraged to carpool to the site.
- g. Provide on-site parking for all construction vehicles. Store all building materials on-site.
- h. Coordinate construction phases in order to consolidate the delivery of materials and the use of construction vehicles to the greatest extent possible. For example, once construction equipment is on-site, it should remain on-site until all uses for such equipment are complete in order to avoid bringing equipment in and out of the site for each task.
- j. Based on a before-and-after roadway evaluation conducted by County Public Works, if project construction and development damages streets, repairs will be made of any pavement deterioration which is proven to result from construction vehicle activity.

### **3. Noise Control Measures**

- a. Muffle and maintain all equipment used on site. All internal combustion engine-drive equipment shall be fitted with mufflers which are in good condition. Good mufflers shall result in non-impact tools generating a maximum noise level of 80dB when measured at a distance of 50 feet.
- b. Schedule construction activities to have the least impact on noise-sensitive receptors (existing residents) in the area. This shall be accomplished by limiting construction activities, including grading, excavating, and paving, to weekdays between 7:30 AM and 5:30 PM. Allowable construction hours shall be posted clearly on a sign at each construction site.

### **4. Air Quality Control Measures**

- a. Prevent dust clouds from extending beyond construction sites by watering all active sites twice daily, or more during windy periods.
- b. Cover all haul trucks, or maintain two-foot freeboard.
- c. Maintain unpaved and graded areas with nontoxic soil stabilizers or hydro-seed within ten days of disturbance.
- d. Limit construction vehicle traffic speeds on-site to 15 miles per hour.
- e. Suspend grading activity during strong wind to avoid dust plumes, or increase watering to control plumes visible to nearby residential areas.



f. Have the Disturbance Coordinator manage and ensure proper disposal of construction waste.

## **5. Water Quality Control Measures**

a. Revegetate all disturbed areas at the onset (October) of the first winter rainy season following completion of any phase of construction during a year and at a similar time during the next one to two years as required to fully revegetate the site.

b. Install biodegradable surface erosion protection (such as natural mulch, jute netting, erosion control blankets, punched straw) to reduce the erosive energy of incoming raindrops for the first couple of winter months.

c. Install silt fencing along the construction perimeter before the start of construction and retain in-place until that particular phase of construction is complete and erosion control winterization measures are implemented.

## **REQUIRED APPROVALS**

Approvals required for the Project and the agency responsible for each approval include the following:

- Grading permit for roadway extension (Marin County Public Works Department);
- Building permits for construction of residences on each of the ten lots (Marin County Community Development Agency, Building and Safety Division);
- Pipeline Extension Agreement (Marin Municipal Water District);
- Agreement for extension of sanitary sewer (Tamalpais Community Services District);

In addition to those approvals listed above, discretionary planning permits will also be required. Master Plan approval will not be required for future development because the properties' governing R1:B1 zoning is a conventional rather than a planned district. However, the future development of the vacant lots that take access from the proposed roadway would require Design Review and Tree Removal Permit in some cases, as summarized below.

**Design Review.** There are numerous potential triggers for Design Review for the future development of the lots taking access from the new roadway. However, in the case of the properties in question, the most important of these triggers relates to minimum lot size. Pursuant to Marin County Code §22.42.020, the development of vacant lots that are less than half the minimum lot size is subject to Design Review, and the normal setbacks do not apply. The determination of the minimum lot size for this trigger is based on the minimum lot sizes established for new lots created by subdivisions. Specifically, Marin County Code §22.82.050 contains Table 6-1, which shows that minimum lot size increases with the steepness of the average slope of the lot. Under this table, all but two of the vacant lots accessed from the new roadway would be subject to Design Review because they would be less than half the minimum lot size. The two lots that would not necessarily be subject to Design Review are labeled as Assessor's Parcel 049-041-44 and Assessor's Parcel 049-041-38. Design Review focuses on issues such as site

improvements, architecture, and impacts to the light, views, and privacy enjoyed on surrounding properties.

**Tree Removal Permit.** Tree Removal Permits will be required for the removal of all healthy, mature, native trees as defined in the Marin County Code as “protected” or “heritage” trees unless the general health or structural integrity of a tree is seriously compromised. These permits will be required as development proceeds and applications to develop the individual lots are submitted. Tree Removal Permits normally require that all removed trees be replaced at a two to one ratio. In cases where defensible space or other requirements prevent the full two to one replacement, a fee of \$500 per unplanted replacement tree is levied and applied towards forest health activities carried out by the Marin County Parks and Open Space Department.

## REFERENCES

CSW/Stuber-Stroeh Engineering Group, 2016a. Civil Design Improvement Plans for Grading Permit Submittal. May 26, 2016.

CSW/Stuber-Stroeh Engineering Group, 2016b. Hydrology and Hydraulic Study for Alta Way Improvements (Design Review), Mill Valley, CA. May 26, 2016.

PJC and Associates, 2016. Geotechnical Investigation, Proposed Residence and Roadway, Alta Way Lot 42, Mill Valley, CA. January 20, 2016.

Marin County Department of Public Works, 2016. Application for Excavating, Grading, or Filing Permit. Submitted by Daniel Chador, Mark Brown, Adam Cummings, and Greg O'Donnell, June 1, 2016. Application number GP16-003.

WRA, Inc., 2016. Biological Site Assessment for Alta Way Road Extension and Residential Development at 42 Alta Way, Mill Valley, California. February 23, 2016.

## III. CIRCULATION AND REVIEW

As stated in Section VIII, Determination, the Project has the potential for a significant impact, and an Environmental Impact Report (EIR) will be prepared. Therefore, this Initial Study will not circulate for public review as a stand-alone document, but rather will be appended to the forthcoming EIR. The Draft EIR will circulate for a 45-day review and comment period pursuant to CEQA Guidelines Section 15105. It will be circulated to all agencies that have jurisdiction over the subject properties or the natural resources affected by the Project and to consultants, community groups, and interested parties to provide opportunity for comment on the completeness and adequacy of the information contained in the Draft EIR and this Initial Study.

Marin County Agencies:

- Marin County Department of Public Works (DPW)
- Southern Marin Fire Protection District
- Tamalpais Valley Design Review Board
- Tamalpais Community Services District
- Marin Municipal Water District

State Agencies:

- Caltrans

#### **IV. EVALUATION OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Pursuant to Section 15063 of the State CEQA Guidelines, and the County EIR Guidelines, Marin County will prepare an Initial Study for all projects not categorically exempt from the requirements of CEQA. The Initial Study evaluation is a preliminary analysis of a project which provides the County with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR) or Negative Declaration. The points enumerated below describe the primary procedural steps undertaken by the County in completing an Initial Study checklist evaluation and, in particular, the manner in which significant environmental effects of the project are made and recorded.

- A.** The determination of significant environmental effect is to be based on substantial evidence contained in the administrative record and the County's environmental data base consisting of factual information regarding environmental resources and environmental goals and policies relevant to Marin County. As a procedural device for reducing the size of the Initial Study document, relevant information sources cited and discussed in topical sections of the checklist evaluation are incorporated by reference into the checklist (e.g. general plans, zoning ordinances). Other sources used or individuals contacted may also be cited in the discussion of topical issues where appropriate.
- B.** In general, a Negative Declaration shall be prepared for a project subject to CEQA when either the Initial Study demonstrates that there is no substantial evidence that the project may have one or more significant effects on the environment. A Negative Declaration shall also be prepared if the Initial Study identifies potentially significant effects, but revisions to the project made by or agreed to by the applicants prior to release of the Negative Declaration for public review would avoid or reduce such effects to a level of less than significance, and there is no substantial evidence before the Lead County Department that the project as revised will have a significant effect on the environment.
- C.** All answers to the topical questions must take into account the whole of the action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Significant unavoidable cumulative impacts shall be identified in Section VI of this Initial Study (Mandatory Findings of Significance).
- D.** A brief explanation shall be given for all answers except "Not Applicable" answers that are adequately supported by the information sources the Lead County Department cites in the parenthesis following each question. A "Not Applicable" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "Not Applicable" answer shall be discussed where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

- E. "Less Than Significant Impact" is appropriate if an effect is found to be less than significant based on the project as proposed and without the incorporation of mitigation measures recommended in the Initial Study.
- F. "Potentially Significant Unless Mitigated" applies where the incorporation of recommended mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The Lead County Department must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
- G. "Significant Impact" is appropriate if an effect is significant or potentially significant, or if the Lead County Department lacks information to make a finding that the effect is less than significant. If there are one or more effects which have been determined to be significant and unavoidable, an EIR shall be required for the project.
- H. The answers in this checklist have also considered the current State California Environmental Quality Act Guidelines and Appendix G contained in those Guidelines.

**V. ISSUES (and Supporting Information Sources):**

**1. LAND USE AND PLANNING.**

*Would the proposal:*

a) Conflict with applicable Countywide Plan designation or zoning standards?	Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	Not Applicable
	[ ]	[ ]	[X]	[ ]

The parcels within the Project area that would be developed under the Project are governed by the land use designation contained in the Marin Countywide Plan (CWP) and by zoning standards contained in Title 22 of the Marin County Code.

**Marin Countywide Plan (CWP)**

The Project site is located within the City-Centered Corridor, as delineated in the CWP. All of the ten lots that would be developed under the Project have a land use designation of SF6 (Single-Family 6) in the CWP. The SF6 designation is one of several low-density residential land use categories for areas where public services and some urban services are available, and where properties are not typically limited by physical hazards or natural resources. Areas designated SF6 have minimum lot sizes of 10,000 square feet or less, 4-7 dwelling units per acre, and a Floor Area Ratio (FAR) of 10-30 percent.<sup>5</sup> The lots that would be developed under the Project range from 6,300 square feet to 13,296 square feet. The ten lots total just under two acres,

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<sup>5</sup> FAR is the ratio of floor space to lot size. For example, a 2,000 square foot structure on a 10,000 square foot lot has a FAR of 0.20 or 20 percent.

and therefore the density for the project is about 5 dwelling units per acre. It is assumed that residences developed on the lots would comply with the FAR limits. The Project would therefore be in substantial conformance with the CWP land use designation.

### **Tamalpais Area Community Plan**

In addition to the Countywide Plan, the Marin County Board of Supervisors have adopted several Community Plans and other area plans, which contain policies for land use and development related specifically to a local unincorporated area. They are intended to reflect the unique character of local communities and are used to evaluate discretionary planning applications. The Tamalpais Area Community Plan (TACP) was adopted in 1992 and, in addition to goals and policies, contains special development standards specific to the Tamalpais area, including the Tamalpais Valley where the Project is located. These standards are also contained in Marin County Code §22.30.060. The TACP states that the primary land use goal for the Tamalpais Planning Area is the conservation of the semirural small town residential and commercial character and scale of the community, and its close relationship with the natural beauty of its setting.

### **Marin County Development Code**

The ten lots are all zoned R1-B1, one of several zoning designations compatible with the SF6 land use designation. The R1-B1 district has a minimum lot size of 6,000 square feet, minimum setback of 25 feet (front), five feet (sides), and 20 percent of lot depth to 25 feet maximum (rear). Maximum building height is 30 feet and 15 feet for accessory buildings. Maximum FAR is 30 percent.

Special development standards that were established by the TACP and that are contained in Marin County Code §22.30.060 would apply to development of those lots that require Design Review. For the two lots over 10,000 square feet with average slopes over 25 percent, these standards include a reduction of the maximum FAR, as shown in Table 1 in the Project Description.

For the purpose of this initial study, it is assumed that the houses developed on the ten lots would be built to the maximum allowable FAR calculated using the special development standards for the Tamalpais area. This would result in houses of about 1,900 – 3,300 square feet, as shown in Table 1 in the Project Description, plus garages and outbuildings. The average size of the houses developed would be about 2,400 square feet. It is assumed that the houses would be two stories in height, each with a detached garage, and that they would meet the setback requirements and height limits established in the Marin County Code. With these specifications, the Project would be consistent with the conventional zoning district standards and special development standards for the Tamalpais Area contained in the Marin County Code.

Marin County Code §22.27 establishes regulations for Native Tree Protection and Preservation, and requires a Tree Removal Permit for removal of “Protected Trees” and “Heritage Trees,” as defined, except under certain circumstances. As described in the Project Description, the applicants have provided documentation of the number of Protected and Heritage trees within the Project area and have proposed a plan for the replacement planting of trees that would be removed. Section V.8, Biological

Resources, discusses this issue and finds that the applicants' proposal would not meet Code requirements. Mitigation Measure BIO-2 requires the applicants to submit and implement a Native Tree Protection and Replacement Plan to minimize and avoid indirect impacts to protected trees during Project construction. With implementation of the applicants' proposed tree replacement and Mitigation Measure BIO-2, the Project would be consistent with Marin County Code §22.27.

<b>b) Conflict with applicable environmental plans or policies adopted by Marin County?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ X ]</b>	<b>[ ]</b>	<b>[ ]</b>	<b>[ ]</b>

The considerations of the Project's consistency with relevant County policies discussed below represent County staff interpretation. This Initial Study does not, however, determine policy consistency. The County decision-makers make the formal policy consistency determinations.

Policy inconsistencies may not necessarily indicate significant environmental effects. The State CEQA Guidelines Section 15358(b) states that "effects analyzed under CEQA must be related to a physical change [in the environment]." Therefore, only those policy inconsistencies that would lead to a significant effect on the physical environment are considered significant impacts pursuant to CEQA. Other policy issues not pertaining to physical changes will be addressed as part of the County's review of the merits of the Project. Many of the policies discussed in this section pertain to environmental topics evaluated elsewhere in this Initial Study. Where this is the case, the reader is directed to the relevant section.

The foremost plans adopted by Marin County that pertain to the Project are the 2007 CWP and the 1992 Tamalpais Area Community Plan (TACP). Both contain numerous goals, objectives, policies, and programs intended to protect the environment. Many of the land use provisions of the TACP were incorporated into the 2007 CWP Update. The TACP, however, is still in effect and still provides important and fine-grained guidance on future development in the Tamalpais area.

The TACP states that its goals are to maintain the semi-rural character of the community as defined by its small town residential and commercial nature and the quality of its natural environment. Accordingly, the TACP states that new development shall be integrated harmoniously into the neighborhoods and geographic areas of the community in order to maintain their distinctive characters.

The TACP states that its guiding philosophy places a strong emphasis on protecting public safety and preserving the natural resources of the community, while still permitting individual property owners to realize reasonable development potentials.

The environmental protection policies contained in the CWP and TACP that pertain to the proposed Project are considered below. Policies are grouped where appropriate to facilitate the policy analysis. Countywide Plan policies are designated "CWP" and Tamalpais Area Community Plan policies are designated "TACP."



**CWP Policy AIR-1.2:** *Seek to attain or exceed the more stringent of federal or State Ambient Air Quality Standards for each measured pollutant.*

**CWP Policy AIR-1.3:** *Require projects that generate potentially significant levels of air pollutants, such as quarry, landfill operations, or large construction projects, to incorporate best available air quality mitigation in the project design.*

Consistent with Incorporation of Mitigation. As discussed below in Section V.5, Air Quality, the Project would result in potentially significant impacts to air quality from construction-related emissions. Implementation of Mitigation Measures AQ-1 and AQ-2, as described in Section V.5, Air Quality, would reduce the identified impacts to less than significant and ensure consistency with the identified policies.

**CWP Policy AIR-4.1 Reduce Greenhouse Gas Emissions.** *Adopt practices that promote improved efficiency and energy management technologies; shift to low-carbon and renewable fuels and zero emission technologies.*

Consistent. As discussed in Section V.6, Greenhouse Gas Emissions, all residences constructed under the Project would be required to comply with the Marin County Green Building Ordinance and California Title 24 building codes, which would ensure that construction and use of the residences minimizes greenhouse gas emissions. Section V.6 finds that the Project would not result in significant increases in greenhouse gas emissions, nor would it conflict with existing plans to reduce such emissions.

**CWP Policy WR-1.3 Improve Infiltration.** *Enhance water infiltration throughout watersheds to decrease accelerated runoff rates and enhance groundwater recharge. Whenever possible, maintain or increase a site's predevelopment infiltration to reduce downstream erosion and flooding.*

**CWP Policy BIO-4.19 Maintain Channel Stability.** *Applicants for development projects may be required to prepare a hydraulic and/or geomorphic assessment of on-site and downstream drainageways that are affected by project area runoff. This assessment should be required where evidence that significant current or impending channel instability is present, such as documented channel bed incision, lateral erosion of banks (e.g., sloughing or landsliding), tree collapse due to streambank undermining and/or soil loss, or severe in-channel sedimentation, as determined by the County.*

**CWP Policy BIO-4.20 Minimize Runoff.** *In order to decrease stormwater runoff, the feasibility of developing a peak stormwater management program shall be evaluated to provide mitigation opportunities such as removal of impervious surface or increased stormwater detention in the watershed.*

**TACP Policy LU16.1** *The County shall regulate new or altered development and vegetation removal to ensure that site preparation and construction do not contribute to erosion or slope failure, with resulting loss of life or property, loss of soils, sedimentation in streams, damage to downslope properties, downstream flooding, or siltation of wetlands. Development shall be located in the most accessible, least environmentally sensitive, and most geologically-stable area or areas of a*

*development site, as balanced by considerations of open space and visual resource values.*

**TACP Policy LU17.1 Vegetation Removal.** *All new developments in the Planning Area should be designed to minimize vegetation removal, soils compaction and site coverage.*

*Potentially Inconsistent.* All of these policies pertain to reduction of stormwater runoff and its adverse effects resulting from alteration of the land. As discussed in detail in Section V.4, Water, the Project could result in an increase in stormwater runoff, potentially resulting in exceedance of the capacity of drainage facilities, destabilization of stream channels, siltation of streams and wetlands, and exacerbation of flooding. Section V.4 concludes that additional information and analysis is required to determine whether the project would result in a significant impact of this kind.

**CWP Policy WR-1.4 Protect Upland Vegetation** *Limit development and grazing on steep slopes and ridgelines in order to protect downslope areas from erosion and to ensure that runoff is dispersed adequately to allow for effective infiltration.*

**CWP Policy WR-2.3 Avoid Erosion and Sedimentation.** *Minimize soil erosion and discharge of sediments into surface runoff, drainage systems, and water bodies. Continue to require grading plans that address avoidance of soil erosion and on-site sediment retention. Require developments to include on-site facilities for the retention of sediments, and, if necessary, require continued monitoring and maintenance of these facilities upon project completion.*

**TACP Policy LU16.1** *The County shall regulate new or altered development and vegetation removal to ensure that site preparation and construction do not contribute to erosion or slope failure, with resulting loss of life or property, loss of soils, sedimentation in streams, damage to downslope properties, downstream flooding, or siltation of wetlands. Development shall be located in the most accessible, least environmentally sensitive, and most geologically-stable area or areas of a development site, as balanced by considerations of open space and visual resource values.*

*Consistent with Incorporation of Mitigation.* All of these policies address the potential for development in geologically unstable locations to result in erosion and slope failure. Section V.3, Geophysical, finds that the Project could contribute to erosion and slope failure, but includes Mitigation Measure GEO-1, requiring geotechnical investigations at the time each lot is considered for development. Furthermore, the Project would be required to implement standard measures for minimizing erosion per Marin County Code Title 24 and Marin County Code §23.08, *Excavation, Grading and Filling*. With adherence to Code requirements and incorporation of Mitigation Measure GEO-1, impacts related to erosion and slope stability would be reduced to less than significant, and the Project would be consistent with these policies.

**CWP Policy NO-1. Protection from Excessive Noise.** *Ensure that new land uses, transportation activities, and construction do not create noise levels that impair human health or quality of life.*

Consistent. The Project would result in new noise sources during Project construction and also following construction, with the ongoing use of the proposed ten new single family residences. Section V.11, Noise, concludes that the noise associated with construction activities and the proposed residential uses would be less than significant, ensuring compliance with the identified policy.

**CWP Policy BIO-1.3 – Protect Woodlands, Forests, and Tree Removal.** *The County shall strive to protect large trees, trees with historical importance, and oak woodland habitat, and prevent the untimely removal of trees through implementation of tree preservation ordinance.*

**TACP Policy LU12.1 Native Vegetation.** *Native trees (native to the ecosystem of the area), and the habitats that they support, shall be protected from destruction or removal. However, should development or land improvements result in the loss of any trees the County should require either replacement with similar size trees or 2-3 new native trees for each tree removed where physically feasible.*

Consistent with Incorporation of Mitigation. As described in Section V.8, Biological Resources, the Project would result in the removal of numerous trees subject to review under Marin County Code §22.27 (Native Tree Protection and Preservation). The applicants have proposed to replant the protected trees which are removed at a three-to-one (3:1) ratio. Mitigation Measure BIO-2 requires the applicants to submit and implement a Native Tree Protection and Replacement Plan to minimize and avoid indirect impacts to protected trees during Project construction. With implementation of the applicant's proposed tree replacement and Mitigation Measure BIO-2, the Project would be consistent with the referenced policies.

**CWP Policy BIO-4.1 – Restrict Land Use in Stream Conservation Areas.** *A SCA is established to protect the active channel, water quality and flood control functions, and associated fish and wildlife habitat values along streams. Development shall be set back to protect the stream and provide an upland buffer, which is important to protect significant resources that may be present and provides a transitional protection zone. Best management practices shall be adhered to in all designated SCAs. Best management practices are also strongly encouraged in ephemeral streams not defined as SCAs.*

**TACP Policy LU11.1 Stream Setbacks.** *Maintain a setback from stream courses adequate to accommodate anticipated storm water flows, and to protect associated riparian habitat from removal or destruction.*

Consistent. There are no designated SCAs or mapped or observed streams within the Project site. Therefore the Project is consistent with these policies.

**CWP Policy BIO-1.4 Support Vegetation and Wildlife Disease Management Programs.** *Support agency programs and proven methods to limit the impacts of Sudden Oak Death syndrome and any other diseases harmful to native vegetation and wildlife in Marin County, while addressing any potential adverse effects on sensitive resources.*

**CWP Policy BIO-1.5 Promote Use of Native Plant Species.** Encourage use of a variety of native or compatible nonnative, non-invasive plant species indigenous to the site vicinity as part of project landscaping to improve wildlife habitat values.

**CWP Policy BIO-1.6 Control Spread of Invasive Exotic Plants.** Prohibit use of invasive species in required landscaping as part of the discretionary review of proposed development.

**CWP Policy BIO-1.7 Remove Invasive Exotic Plants.** Require the removal of invasive exotic species, to the extent feasible, when considering applicable measures in discretionary permit approvals for development projects unrelated to agriculture, and include monitoring to prevent re-establishment in managed areas.

Consistent. All of these policies seek to protect and enhance native vegetation. As discussed in Section V.8, Biological Resources, the Project applicants have proposed replacing trees that would be removed by the Project at a ratio of 3:1. Because the Project site is within the Wildland-Urban Interface (WUI), new landscaping for each developed lot would be required to comply with Marin County Fire Department Fire Protection Standard 220, Vegetation Management. Compliance would include development, submittal, and approval of a Vegetation Management Plan. This rule requires establishment of a defensible space zone around structures that must be planted with fire-resistant plants and irrigated if necessary. Standard 220 requires property owners to use fire resistant plants, and to select native or domesticated plants that best suit the architectural and planning design of the proposed Project. Standard 220 includes a list of prohibited plants, which includes many common invasive species. Adherence to Standard 220 will ensure that the Project does not result in introduction or spread of invasive plant species, and thus will ensure consistency with these policies.

**CWP Policy BIO-2.1 Include Resource Preservation in Environmental Review.** Require environmental review pursuant to CEQA of development applications to assess the impact of proposed development on native species and habitat diversity, particularly special-status species, sensitive natural communities, wetlands, and important wildlife nursery areas and movement corridors. Require adequate mitigation measures for ensuring the protection of any sensitive resources and achieving “no net loss” of sensitive habitat acreage, values, and function.

**CWP Policy BIO-2.4 Protect Wildlife Nursery Areas and Movement Corridors.** Ensure that important corridors for wildlife movement and dispersal are protected as a condition of discretionary permits, including consideration of cumulative impacts. Features of particular importance to wildlife for movement may include riparian corridors, shorelines of the coast and bay, and ridgelines. Linkages and corridors shall be provided that connect sensitive habitat areas such as woodlands, forests, wetlands, and essential habitat for special-status species, including an assessment of cumulative impacts.

**CWP Policy BIO-2.5 Restrict Disturbance in Sensitive Habitat During Nesting Season.** Limit construction and other sources of potential disturbance in sensitive riparian corridors, wetlands, and baylands to protect bird nesting activities. Disturbance should generally be set back from sensitive habitat during the nesting season from March 1 through August 1 to protect bird nesting, rearing, and fledging activities.

*Preconstruction surveys should be conducted by a qualified professional where development is proposed in sensitive habitat areas during the nesting season, and appropriate restrictions should be defined to protect nests in active use and ensure that any young have fledged before construction proceeds.*

**TACP Policy LU1.1 Protect Natural Habitats.** *All land use decisions within the Planning Areas neighborhoods will take into consideration the protection and preservation of the area's hillsides, ridges, water courses, wetlands, woodlands and any other unique natural habitats.*

**TACP Policy LU15.1 Wildlife Corridors.** *Development permits should include provisions to protect corridors for wildlife movement and dispersal where feasible.*

Potentially inconsistent. As stated in Section V.8, Biological Resources, the Project site contains only non-sensitive habitats and is not an important wildlife nursery area or wildlife movement corridor. Mitigation Measures BIO-1a and BIO-1b would ensure that nesting birds are not disturbed during Project construction, and Mitigation Measure BIO-2 would ensure that native trees are protected or replaced, according to the provisions of the Marin County Code. With implementation of these mitigation measures, biological resources within the Project site would be adequately protected. However, also as discussed in Sections V.4, Water and Section V.8, the Project could increase stormwater runoff, which could result in degradation of aquatic habitat in Coyote Creek. This could conflict with CWP and TACP policies adopted for the protection of sensitive biological resources. This issue should be further examined in an EIR.

**CWP Policy EH-2.1 Avoid Hazard Areas.** *Require development to avoid or minimize potential hazards from earthquakes and unstable ground surfaces.*

**CWP Policy EH-2.3 Ensure Seismic Safety of New Structures.** *Design and construct all new buildings to be earthquake resistant. The minimum level of design necessary would be in accordance with seismic provisions and criteria contained in the most recent version of the State and County Codes. Construction would require effective oversight and enforcement to ensure adherence to the earthquake design criteria.*

Consistent with Incorporation of Mitigation. As discussed in Section V.3. Geophysical, the Project site is not located within the Alquist-Priolo Zone and is located 5.3 miles west of the site is the San Andreas Fault. It is therefore not subject to surface rupture during an earthquake. Like the entire Bay Area, the Project site is subject to strong ground shaking during an earthquake. The California Building Code (CBC), as adopted by Marin County, requires design and construction of buildings intended for human occupancy to withstand the anticipated ground motion generated during a large earthquake with minimal damage and without structural collapse. While earthquakes are unavoidable and the Project would expose new home owners to the ground shaking hazards in this region, seismic design parameters required through enforceable building codes would reduce the risk of injury and the loss of life during an earthquake. The Project site is within a Zone 3 slope stability area, as determined by the California Geological Survey (CGS). Zone 3 areas are those where the steepness of the slope approaches the stability limits of the underlying geological materials. As identified in Section V.3, slope instability, which includes the potential for localized

landslides, debris flows, and slumping of the near-surface colluvial soils, is considered a significant impact of the Project. While geotechnical investigations are required by law through the CBC and the Marin County Building Code, Mitigation Measure GEO-1 further defines the minimum requirements necessary for investigation of the individual lots on the Project site so that each lot would be evaluated at an equal level of effort and standard of care. With incorporation of Mitigation Measure GEO-1, the Project would not expose new or current residents to geologic hazards, and the Project would be consistent with CWP Policies EH-2.1 and EH-2.3.

***CWP Policy EH-4.1 Limit Risks to Structures.*** *Ensure that adequate fire protection is provided in new development and when modifications are made to existing structures.*

***CWP Policy EH-4.5 Regulate Land Uses to Protect from Wildland Fires.*** *Land use regulations, including but not limited to subdivision approvals and denials, as means of protecting people and property from hazards associated with wildland fires.*

***Potentially inconsistent.*** As discussed in Section V.10, Hazards, the Project site is located within the Wildland-Urban Interface (WUI). Furthermore, emergency escape routes and emergency access are limited in the Tamalpais Valley. As discussed in Section V.12, Public Services, the Project site is within the Southern Marin Fire Protection District and is served with adequate fire protection. Fire risk reduction measures are required by the Building Code and have been specified for the Project by the Fire Marshall. These measures include road design adequate to accommodate emergency vehicles and provision of a secondary means of vehicle egress for emergency vehicles and residents. The applicants have not demonstrated how they would meet these requirements. These issues should be further examined in an EIR to ensure consistency with these policies.

***CWP Policy CD-1.1 Direct Land Uses to Appropriate Areas.*** *Concentrate urban development in the City-Centered Corridor, where infrastructure and facilities can be made available most efficiently. Protect sensitive lands in the Baylands Corridor. Emphasize agricultural uses in the Inland Rural Corridor, along with preservation of resources, habitat, and existing communities. Focus on open space, recreational, and agricultural land uses, as well as preservation of existing communities, in the Coastal Corridor.*

***CWP Policy CD-5.1 Assign Financial Responsibility for Growth.*** *Require new development to pay its fair share of the cost of public facilities, services, and infrastructure, including but not limited to transportation, incremental water supply, sewer and wastewater treatment, solid waste, flood control and drainage, schools, fire and police protection, and parks and recreation. Allow for individual affordable housing projects to be exempted from the full cost of impact fees, subject to meeting specified criteria.*

***CWP Policy CD-5.2 Correlate Development and Infrastructure.*** *For health, safety, and general welfare, new development should occur only when adequate infrastructure is available, consistent with the following findings:*

- a. Project-related traffic will not cause the level of service established in the circulation element to be exceeded.*



- b. Any circulation improvements or programs needed to maintain the established level of service standard have been programmed and funding has been committed.*
- c. Environmental review of needed circulation improvement projects or programs has been completed.*
- d. The time frame for completion of the needed circulation improvements or programs will not cause the established level of service standard to be exceeded.*
- e. Wastewater, water (including for adequate fire flows), and other infrastructure improvements will be available to serve new development by the time the development is constructed.*

**Consistent.** These CWP policies all direct development to areas deemed suitable for the type of development proposed and already served by essential infrastructure. As previously noted, the Project site is within the City-Centered Corridor and the proposed Project is consistent with the site's land use designation and zoning. As discussed in Section V.12, Public Services and V.13, Utilities and Service Systems, the Project site is adequately served with infrastructure and essential services. These services are funded through property tax assessments or fees, and so property owners within the Project site would pay their fair share of the cost of public facilities, services, and infrastructure. As discussed in Section V.7, Transportation/Circulation, the Project would not cause a reduction in intersection level of service, and no circulation improvements are required. The Project would therefore be consistent with CWP Policies CD-1.1, CD-5.1, and CD 5.2.

**CWP Policy DES-1.1, Address Design at the Community Level.** *Use community plans to regulate building design and protect key resources. Encourage cities and towns to address design issues.*

**CWP Policy DES-4.1 Preserve Visual Quality.** *Protect scenic quality and views of the natural environment — including ridgelines and upland greenbelts, hillsides, water, and trees — from adverse impacts related to development.*

**TACP Policy LU1.3 Compatible Design.** *New residential and commercial development shall be comparable and compatible with the scale (bulk, mass and height) and appearance (colors, materials and design) of the particular neighborhood and shall be integrated with and subordinate to the area's natural setting.*

**TACP Policy LU 1.4 Size, Height, Setbacks.** *The size, height, and building setbacks of all new or expanded residential development shall be carefully regulated to maintain the existing character of residential neighborhoods and to protect the exposure to sun light, views and privacy of adjacent homes.*

**Consistent.** As discussed in Section V.14, Aesthetics/Visual Resources, the residences developed under the Project are expected to be consistent with the surrounding neighborhood, and are not expected to block views or degrade important visual resources. The development of the ten proposed single family residences would be consistent with the Project site's CWP land use designation and zoning. The Project would therefore be consistent with the referenced policies.

**TACP Policy LU3.1 Historic Lots.** *Promote resubdivision, where feasible, of historic lots of record to insure that future development is responsive to the inherent physical constraints and environmental amenities of the site.*

**TACP Policy LU4.1 Lot Mergers.** *The County shall encourage owners of historic substandard legal lots of record to merge them to create new lots which conform. to the current required minimum lot size, including the minimum lot sizes required by the County's Slope Ordinance.*

**TACP Policy T11.1** *To require the dedication or provision through easements of additional land for roadway construction when an existing paper street does not have adequate width or alignment to serve proposed development.*

**TACP Policy T11.2** *To provide for adequate access, particularly emergency vehicles on private roads through the enforcement of parking standards.*

**Potentially Inconsistent.** All of these TACP policies are intended to limit and condition development in historic subdivisions where access and lot configuration do not meet current standards. At its July, 2017 meeting, the Marin County Planning Commission approved mergers of several lots in the subdivision in which the Project site is located. This action reduced the number of lots that could be developed in the future. With regard to TACP Policy LU7.2, once Alta Way is developed, it will no longer be a paper street. Subsequent development of the lots accessed by the development of Alta Way (phase II of the project) may however, be subject to Tree Removal Permit and/or Design Review for other reasons (see discussion of Tree Removal Permit and Design Review triggers in the Project Description). As discussed in Section V.7, Transportation/Circulation, the Project as proposed may not provide adequate access for emergency vehicles, nor would it provide a secondary means of egress for emergency vehicles and residents. This could result in an inconsistency with TACP Policies T11.1 and T11.2. This issue should be further examined in an EIR.

**CWP Policy TR-1.2 Maintain Service Standards.** *Establish level of service standards for vehicles on streets and highways and performance standards for transit, bicycles, pedestrians, and other modes of transportation.*

**CWP Policy TR-1.5 Require Necessary Transportation Improvements.** *Require necessary transportation improvements to be in place, or otherwise guaranteed to result in their timely installation, before or concurrent with new developments. In evaluating whether a transportation improvement is necessary, the County shall consider alternatives to the improvement consistent with Policy TR-1.1, Manage Travel Demand, and the extent to which the improvement will offset the traffic impacts generated by proposed and expected development and restore acceptable traffic levels of service.*

**TACP Policy T2.3** *The County shall improve traffic circulation along Shoreline Highway/State Route 1 from Flamingo Road to Loring Avenue.*

**TACP Policy T2.4** *The County shall prohibit, whenever possible, additional roadways and driveway accessing directly onto Shoreline Highway.*

Consistent. As discussed in Section V.7, Transportation/Circulation, Project-related traffic, both during and after construction, is not expected to reduce intersection level of service. Improvements to the Shoreline Highway-Almonte Boulevard intersection in Tam Junction, specified in the TACP, have already been completed. The Project would take its access from Shoreline Highway via an existing street. The Project would therefore be consistent with referenced policies.

**Conclusion:** Because the Project is potentially inconsistent with CWP and TACP policies regarding control of stormwater and emergency access, this impact could be significant, and these issues should be further examined in an EIR to determine whether they can be avoided or mitigated, and if so, whether the Project would then be consistent with CWP and TACP policies.

<b>c) Affect agricultural resources, operations, or contracts (e.g. impacts to soils or farmlands, impacts from incompatible land uses, or conflicts with Williamson Act contracts)?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	[ ]	[ ]	[ ]	[ X ]

The Project site is not in an agricultural area and is not zoned for agriculture. None of the parcels that would be developed under the Project are under Williamson Act contracts, and the project site is not mapped as Prime Farmlands Soil or Farmland Soil of State Importance by the California Department of Conservation (MarinMap, 2017). Therefore, the Project would not adversely affect agricultural resources, operations, or contracts, and there would be no impact of this kind.

<b>d) Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	[ ]	[ ]	[ X ]	[ ]

The project would extend an existing roadway, enabling the development of ten currently undeveloped legal lots of record. The lots are contiguous with each other and with the roadway, with the exception of lot 38, which would be accessed via an easement for ingress and egress over lot 44. The design of the extended roadway would be similar in scale to the existing developed portion of Alta Way and to other roads in the neighborhood. The development of the ten lots would likely result in the loss of accessibility of these lots to casual recreational use (see following issue discussion), and would convert these lots from their current unoccupied, undeveloped state to active residential use. This use is, however, compatible with the surrounding uses, and would therefore not disrupt the existing established community. Neither would the development of the Project physically divide the existing neighborhood, but rather would fill existing unoccupied land with the same single family residential land use as the surrounding community. The lots in this historic subdivision have a similar

arrangement as the surrounding developed neighborhood. No impact of this kind would result from the Project.

<b>e) Result in substantial alteration of the character or functioning of the community, or present or planned use of an area?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	[ ]	[ ]	[ X ]	[ ]

The Project site consists of vacant lots and the undeveloped road right-of-way. As previously noted, the proposed development of the ten lots is compatible with the site's Countywide Plan land use designation, TACP land use designation, and zoning. Currently, the project site appears to function informally as open space, with informal trails and dirt bike paths providing evidence of regular recreational use, presumably by residents of the surrounding neighborhood. The site is not designated nor zoned for open space, parks, or recreational uses. Development of the roadway and the ten lots would preclude these informal uses of the site, replacing them with residential uses. Adjacent undeveloped lots may, however, remain available for this use. Because the current recreational and open space uses are informal, unplanned, and not designated in any planning documents such as the Countywide Plan or TACP for acquisition and/or use as a park or recreation area; because the Project would replace these uses with residential development that is compatible with the site's Countywide Plan and TACP designation and the County's zoning ordinance; and because the proposed development would be similar to and compatible with the surrounding residential uses, the impact related to change in community character and functioning of the surrounding community would be less than significant.

<b>f) Substantially increase the demand for neighborhood or regional parks or other recreational facilities, or affect existing recreational opportunities?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	[ ]	[ ]	[ X ]	[ ]

As noted in the previous discussion, the Project site currently serves as informal open space, providing recreational opportunities for the surrounding neighborhood. Development of the ten lots may disrupt or displace this recreational use, potentially increasing demand for use of parks and recreation areas in the vicinity. Furthermore, the addition of ten single family residences would incrementally increase demand for parks and other recreational facilities in the area.

The Tamalpais Valley is well served with parks and recreation areas. The Tamalpais Community Services District (TCSD), within which the Project site is located, has four recreational facilities, all within about 1.5 miles of the Project site (TCSD, 2018). These include Eastwood Park and Kay Park. Eastwood Park, located approximately 1 mile west of the Project site, and accessible on foot from the Project site via neighborhood streets, provides picnic tables (which may be reserved only by residents of the TCSD), a children's play area, tennis courts, trails, restrooms, and grass fields. Kay Park,

located about 1.2 miles east of the Project site, and also accessible on foot via residential streets, provides a children's play area, picnic tables (also may be reserved by TCSD residents), and barbeque facilities. Other TCSD recreational facilities available for use by TCSD residents include the Log Cabin and Tamalpais Community Center, both located within about 1.5 miles of the Project site.

At slightly greater distance from the Project site there are extensive open space and recreational facilities, including Golden Gate National Recreational Area, Mt. Tamalpais State Park, Muir Woods National Monument, coastal beaches, and the Point Reyes National Seashore. These facilities provide a wide array of recreational opportunities.

In summary, there are ample recreational facilities located within close proximity to the Project site and surrounding neighborhood. While the Project may displace some existing informal recreational uses of the Project site and may incrementally increase demand for parks and recreational areas, this increase in demand will easily be met by existing facilities. Therefore, the Project would have a less-than-significant impact on recreational facilities and opportunities.

## References

Marin County, 1992. Tamalpais Area Community Plan. Adopted by the Board of Supervisors September 21, 1992.

Marin County, Marin Countywide Plan. Adopted by the Board of Supervisors November 6, 2007.

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<http://www.marinmap.org/dnn/> Accessed December 15, 2017.

Tamalpais Community Services District, 2018. Tamalpais Community Services District Park and Recreation Department Facilities. <http://www.tamcsd.org/index.aspx?page=3> Accessed April 6, 2018.

## 2. POPULATION AND HOUSING.

### *Would the proposal:*

a) Increase density that would exceed official population projections for the planning area within which the project site is located as set forth in the Countywide Plan and/or community plan?	Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	Not Applicable
	[ ]	[ ]	[ X ]	[ ]

The Project would add ten single family residences, resulting in a population increase in the area of about 24 people, assuming the County-wide average of 2.4 persons per dwelling unit (California Department of Finance, 2017). The density of the proposed

development (approximately five dwelling units per acre) is consistent with the Countywide Plan land use designation, TACP, and County Zoning. Therefore, the Project's density and additional population would be consistent with Countywide Plan and Community Plan population projections and density for the planning area, and there would be no impact of this kind.

<b>b) Induce substantial growth in an area either directly or indirectly (e.g. through projects in an undeveloped area or extension of major infrastructure)?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

The project proposes to extend Alta Way to its intersection with another paper street, Fairview Avenue (Figure 2-1, Vacant Parcels on Fairview Avenue Paper Street). A portion of Fairview Avenue (West Fairview Avenue) southwest of the Project site is already developed. There are up to nine vacant parcels along Fairview Avenue north of the intersection with Alta Way that could be accessed through future development of Fairview Avenue (lots 45 and 46 were merged by action of the Marin County Planning Commission on July 10, 2017); all of the lots to the south have been developed (these take their access from Browning Court and Chamberlain Court (Figure 2-1). Lots 504, 508, and 509 are already developed and accessed via Blue Jay Way. The size, average slope, zoning, CWP land use designation, and maximum FAR for the nine parcels is shown in Table 2-1.

**Table 2-1: Undeveloped Lots on Fairview Avenue Paper Street**

<b>APN</b>	<b>Lot Size (square feet)</b>	<b>Avg. Slope (%)<sup>1</sup></b>	<b>Countywide Plan Land Use Designation</b>	<b>Zoning</b>	<b>Maximum size of Residence (square feet; FAR = 30%)<sup>2</sup></b>
049-012-61	2,931	42.1	SF6	R1-B1	879
049-012-62	5,339	37.2	SF6	R1-B1	1,602
049-041-47	8,076	33.0	SF6	R1-B1	2,423
049-041-31	3,598	33.8	SF6	R1-B1	1,079
049-041-30	6,783	29.7	SF6	R1-B1	2,035
049-041-29	3,255	28.3	SF6	R1-B1	976
049-041-28	3,342	26.6	SF6	R1-B1	1,003
049-041-27	6,723	27.6	SF6	R1-B1	2,017
049-041-49	21,886	26.8	SF6	R1-B1	6,566
<b>TOTAL</b>	<b>61,933</b>	<b>31.7</b>			<b>18,580</b>

Notes:

<sup>1</sup> Average slope of lots based on preliminary data.

<sup>2</sup> FAR may be reduced per Tamalpais Area special development standards.

Source: MarinMap. Accessed March 12, 2018





By extending the road network and utilities to the intersection of Alta Way with Fairview Avenue, the Project would facilitate future development of Fairview Avenue north of the intersection, which would then provide access to the vacant parcels, potentially enabling their development. Alternatively, the proposed easement across Lot 44 to access Lot 38 could be extended further north to access other parcels on Fairview Avenue. All of these parcels share the same CWP land use designation, TACP land use designation, and zoning as the Project lots.

There are several constraints to development of the Fairview Avenue parcels north of the intersection with Alta Way. Three are smaller than the minimum lot size of 6,000 square feet required by the area's zoning; most are on steep land; and several are within the grove of large eucalyptus trees which may provide nesting habitat for raptors (see Section V.8, Biological Resources). Proposed development on at least some of the parcels would likely be subject to Design Review. Development of the roadway itself would likely require a County Grading Permit.

These constraints, however, are similar to the constraints for the Project, and are typical of the Tamalpais Valley's historic subdivisions. It is reasonably foreseeable that these constraints could and would be overcome, and that many or most of the parcels would be developed. It is also reasonable to expect that future development of these parcels would be consistent with the existing CWP land use designation and Zoning (and therefore, consistent with the TACP), and would be required to comply with the provisions of the Marin County Code and other applicable regulations, including requirements for limiting increases in stormwater runoff, tree protection, and control of air emissions and noise during construction.

In conclusion, while the Project is likely to induce growth by facilitating the development of the currently undeveloped portion of Fairview Avenue, the development that may occur would be limited to up to nine undeveloped parcels, all of which are zoned for residential development. Furthermore, it is likely that some of the developments would be subject to Design Review, and development of the roadway itself would be subject to a Grading Permit. These permitting processes would allow for close scrutiny of proposed developments, including CEQA review, and imposition of mitigation measures and conditions of approval. Therefore, the growth-inducing potential of the Project is considered not substantial, and therefore less than significant.

<b>c) Displace existing housing, especially affordable housing?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>

No housing currently exists within the Project site. Therefore, the Project would not displace any housing.

## References

California Department of Finance, Demographic Research Unit, 2017. Report E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2017, with 2010 Benchmark. Released: May 1, 2017. Available at: <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/>

Marin County, 1992. Tamalpais Area Community Plan. Adopted by the Board of Supervisors September 21, 1992.

### 3. GEOPHYSICAL

#### Geophysical Setting

The Project site is on a low northwest-trending spur ridge that slopes downward to the north, east and south. The upper-most portion of the site is 224 feet above mean sea level (msl) and the lowest elevation is 132 feet above msl. The grades of the slopes flanking the spur ridge range from about 8 percent near the ridge crest to 52 percent on the eastern facing slopes below the proposed Alta Way road extension (see Project Description, Figure 4). The spur ridge, which includes the Project site, is underlain by the Franciscan Complex, a chaotic mix of tectonically disrupted sedimentary and metamorphic rocks, which make up large portions of the northern Coast Ranges in California. The tectonic source was the convergence of the North American and Pacific plates that jammed oceanic rocks under continental crust during the Jurassic period [145 and 208 million years ago (mya)] leading to the eventual rise of the coastal mountains during the Cretaceous period (145 to 65 mya). In much of Marin County, the Franciscan Complex is identified and mapped as *mélange*, a disorderly accumulation of sandstones, shales, altered volcanic rocks, ancient seafloor sediment (chert), and serpentine. *Mélange* rocks underlie the Project site and consist primarily of sandstone and shale, which in some locations show evidence of shearing caused by ancient tectonic forces (USGS, 2000, CGS, 1976). Test pits completed during the geotechnical investigation conducted for the proposed Alta Way Road extension and Lot 42 found that the sandstone and shale bedrock was weathered, soft, and easily fractured (i.e. friable) at and near the contact with overlying soil but increased in strength with depth (PJC, 2016).

Overlying the sandstone and shale bedrock on the Project site is colluvium (mapped as Qc), which is unconsolidated soil material and rock fragments that have accumulated on or at the base of the slopes. These deposits are derived from the weathering and decomposition of the underlying bedrock and are eventually transported down slope by gravity and water processes (CGS, 1976). The geotechnical investigation conducted for the proposed Alta Way Road extension and Lot 42 completed 3 soil borings and 4 test pits that revealed the colluvium ranged in depth between 1.5 feet to 2.0 feet. The investigation also reported an isolated area containing artificial fill (surficial material that is not characteristic of the naturally-occurring surface materials) in a test pit near the western portion of the Project site (Lot 38). The artificial fill was described as low plasticity sandy clay with some manmade debris extending from the surface to about two feet in depth. The source of this material is unknown although there could have been fills placed along the outboard side of the existing dirt access road during grading. The investigation concluded that the fill materials would be unsuitable for engineered fills, foundations or pavements and would need to be completely removed or removed and recompacted (PJC 2016).

***Would the proposal result in or expose people to potential impacts involving:***

<b>a) Location in an area of geologic hazards, including but not necessarily limited to:</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
<b>1) active or potentially active fault zones;</b> <b>2) landslides or mudslides;</b> <b>3) slope instability or ground failure;</b> <b>4) subsidence;</b> <b>5) expansive soils;</b> <b>6) liquefaction; 7) tsunami;</b> <b>or 8) similar hazards?</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>	<b>[ ]</b>

**(a) 1) Active or potentially active fault zones.**

This area of Marin County is in a seismically active region of California that has experienced moderate to strong ground shaking throughout recorded history. The largest earthquake to impact this region was the 1906 earthquake on the San Andreas fault. The 1989 Loma Prieta Earthquake also subjected this region to substantial ground shaking. Based on recently updated earthquake probability modeling, over the next 30 years, there is a 100 percent likelihood that the San Francisco Bay region will experience a magnitude 5 to 6 earthquake and a 72 percent chance it will experience a magnitude 6.7 to 7 earthquake. The percent likelihood decreases with greater magnitude earthquakes resulting in a 4 percent likelihood of a magnitude 8 or greater (USGS, 2015). The degree of earthquake ground shaking that the Project site will experience depends on the causative fault, the distance to the epicenter, the earthquake magnitude, and the response of the underlying geologic materials to the seismic waves. There are no active earthquake faults extending through the Project site so the site is not within an Alquist-Priolo Earthquake Fault study zone and the closest active fault trace to the site is the San Andreas Fault located 5.3 miles to the west (PJC, 2016). Therefore, the potential for surface ground rupture at the Project site during an earthquake is nil. However, during an earthquake on any of the San Francisco Bay region's active faults, the Project site would likely be subjected to moderate to strong ground shaking. The California Building Code, as adopted by Marin County, requires design and construction of buildings intended for human occupancy to withstand the anticipated ground motion generated during a large earthquake with minimal damage and without structural collapse. While earthquakes are unavoidable and the Project would expose new home owners to the ground shaking hazards in this region, seismic design parameters required through enforceable building codes would reduce the risk of injury and the loss of life during an earthquake. Impacts associated with fault rupture and earthquake ground shaking are less than significant.

**(a) 2, 3: Landslides or mudslides, slope Instability and ground failure.**

The Project site is within a Zone 3 slope stability area, as determined by the California Geological Survey (CGS). Zone 3 areas are those where the steepness of the slope

approaches the stability limits of the underlying geological materials (CGS, 1976). If active or ancient landslide deposits are identified in Zone 3, they are typically in more stable positions than those in the less stable Zone 4 areas. Zone 4 represents the most naturally unstable areas and slopes are subject to failure with or without human intervention. There are no Zone 4 areas located in the Project site vicinity. The upper portions of the spur ridge above the developable lots and including Lot 38 is in Zone 2, which is described as areas underlain by relatively competent bedrock but that are flanked by potentially unstable slopes (CGS, 1976). No landslides, shallow debris flows, or excessive downslope erosion are shown on published geological maps of the Project site nor were these features observed during the Project site reconnaissance, indicating that historically, the ridge and slopes that flank it have remained generally stable.

The geotechnical investigation completed for the Alta Way roadway extension and Lot 42 concluded that there were no obvious signs of slope instability. However, the investigation did conclude that the topsoil could be prone to erosion, debris flows, or slumps from rainfall events and that drainage control would be necessary during and after construction to reduce those risks, and that artificial fill found within lot 42 is unsuitable for engineered fills, foundations or pavements and would need to be completely removed or removed and re-compacted (PJC, 2016). Changes to drainage patterns from site development could also increase the potential for slope instability as discussed in Section V.4, Water.

If not properly managed, temporary slope instability and localized slope failure is possible while the Project site is undergoing road construction, upslope grading work, and construction of the retaining wall along the outside of the Alta Way road extension. However, unstable slope conditions during construction would present a short-term potential hazard, which would be identified during site work observation performed by the geotechnical engineer and immediately corrected during grading. Over the long term, the overall risk of slope failure at the project site would likely decrease due to site improvements such as graded and compacted engineered slopes, keying and benching of fills, permanent drainage controls, and retaining walls to buttress steep slope sections.

However, due to orientation of the Project site on a spur ridge flanked by potentially unstable slopes, and considering the proposed development of parcels on 30 percent to 50 percent slopes, slope instability, which includes the potential for localized landslides, debris flows, and slumping of the near-surface colluvial soils, is considered a significant impact of the Project. The scope of the geotechnical study conducted for development of Lot 42 and the Alta Way roadway extension is adequate to address preparation, rough grading, foundation placement, and home construction on Lot 42 and appropriately addresses the challenges of developing the proposed extension of Alta Way. As with Lot 42 and the road extension, development of the other lots on the Project site would require site-specific geotechnical investigation to ensure the proposed foundation design would not exacerbate slope instability or trigger slope failure during construction or after development is complete. This is especially important because the lots would not be developed at one time and individual site construction could extend over several years.

While geotechnical investigations are required by law through the CBC and the Marin County Building Code, **Mitigation Measure GEO-1** further defines the minimum

requirements necessary for investigation of the individual lots on the Project site so that each lot would be evaluated at an equal level of effort and standard of care. As the proposed Project would be developed over an extended period of time with no established schedule, a meaningful geotechnical analysis for the individual lots cannot be completed until each lot is proposed for development, and the design and proposed development features are established.

## **Mitigation Measures**

**Mitigation Measure GEO-1: Required Geotechnical Investigations.** At the time lots APN-049-041-38, -43, -44, -48, and APN-049-044 -(07,08), -14, -29, -30, -31 are considered for development and permitting commences, the lot owner or other applicant applying for a building permit shall engage a licensed geotechnical engineer to conduct a geotechnical investigation. The geotechnical investigation must include but is not necessarily limited to:

- A detailed surface reconnaissance that includes a review of seismic and geologic literature and review of previous geotechnical investigations.
- If determined necessary by the licensed geotechnical engineer, subsurface exploration consisting of at least three exploratory borings into the underlying bedrock and at least three test pits. Soils samples shall be collected at the surface and at depth and submitted for laboratory observation and testing of engineering properties (e.g. expansivity, moisture content and bearing strength). Groundwater depth and depth of seeps shall be recorded. Test pits shall be observed and logged to determine the presence or absence of chaotic soils, slickensides, artificial fill, and weak clay zones.
- An engineering analysis that evaluates the subsurface geologic conditions and potential seismic response as necessary to develop feasible, industry-accepted recommendations and design criteria for earth work and grading, foundations, slope stability, concrete slab-on-grade pavement, retaining walls, drainage, asphalt work. Recommendations shall provide, but are not limited to, site-specific design criteria for: maximum allowable temporary and permanent slope inclinations; use of fill; fill slopes; removal of weak or expansive soils; minimum relative compaction; benching and keying; lateral foundation loads; allowable earth pressures for retaining structures; seismic design criteria; surface and slab drainage; and asphalt thickness.
- The geotechnical investigation, laboratory and field testing methods, seismic design criteria, and recommendations must be consistent with standard geotechnical engineering standards of care typical for this region of California, American Society of Testing and Materials (ASTM) standards, and shall comply with the CBC as adopted by the Marin County Code.

## **Significance with Mitigation**

Implementation of **Mitigation Measure GEO-1** would ensure that geotechnical design on each lot, regardless of when that lot is developed, would undergo an equal level of site investigation that considers the geologic conditions, seismic risk, and topography, thereby further reducing the risk of future slope instability. With mitigation, the impact would be less than significant.



**(a) 4, 5, 6: Subsidence, expansive soils and liquefaction.**

Subsidence is the gradual, differential lowering or sudden sinking of the ground surface due to changes in the subsurface or movement of earth materials. In Marin County, subsidence could be caused by the removal of groundwater from a shallow aquifer overlain by clay or the collapse of a localized subsurface void (soil piping or tunnel). The Project site is underlain by competent sandstone and shale bedrock. No groundwater extraction is proposed as part of the Project. Therefore there is no potential for subsidence.

Laboratory testing of the overlying colluvial soils during the geotechnical investigation for the Alta Way roadway extension and development of Lot 42 indicated that Project site soils had a low plasticity index (PI=12) and low expansion potential (PJC, 2016). The underlying bedrock was determined to have a medium plasticity index (PI=22), which can indicate a moderate expansion potential. However, the sandstone and shale rock types do not generally contain minerals that are prone to substantial shrink-swell behavior (PJC, 2016). In accordance with Mitigation Measure GEO-1, laboratory analysis would determine expansivity of clay materials for each lot proposed for development. If there are localized expansive soils in areas of proposed development, they would be identified and removed during general grading and site preparation. Risks related to expansive soils would therefore be less than significant.

Liquefaction occurs when saturated, well-graded sands or gravels are subjected to ground shaking, which causes them to transform to a liquid state and lose bearing strength. The seismic hazards associated with liquefaction include lateral spreading, loss of bearing strength/collapse, densification, and settlement. The conditions for liquefaction are not present on the site as the geologic materials consist of poorly sorted colluvium overlying deep competent bedrock with no groundwater present. Risks related to liquefaction and related hazards are not considered an impact of the Project.

**(a) 7, 8: Tsunami; or 8) similar hazards?**

Tsunamis and seiches can present a hazard to developments located along the shoreline of the ocean or San Francisco Bay. The Project site is situated on an inland spur ridge at a minimum elevation of 134 feet above msl and about 1 mile from the closest open water (Richardson Bay). Therefore, Tsunami and seiche hazards would not pose a risk to the Project and the impact would be less than significant.

<b>b) Substantial erosion of soils due to wind or water forces and attendant siltation from excavation, grading, or fill?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

The Project could result in erosion of exposed soils and downgradient siltation during the rough construction grading phase for the Alta Way roadway extension and individual lot development. During the grading phases, vegetation would be removed exposing the soil to rainfall and wind. Soil stockpiles would also be exposed to

potential erosive forces. Section V.4, Water discusses the details of construction runoff, erosion, and the requirements for control and management. As described in Section V.4, the Construction General Permit requires construction sites to comply with the requirement set forth in a Storm Water Pollution Prevention Plan (SWPPP) that is designed to reduce erosion and sedimentation during and after site construction. In addition, Project-related roadway and lot construction would not take place during the winter months (October through April), unless authorized by the County Engineer, and with erosion control measures specified by the County, thereby further reducing the potential for wind and water erosion. The Project would also be required to implement standard measures for minimizing erosion per the Marin County Code Title 24 and in Marin County Code §23.08, *Excavation, Grading and Filling*. Considering the controls in place to reduce the erosion and siltation caused during construction excavation, grading or fill soil management (i.e. stockpiling), erosion by wind and water is considered less than significant.

<b>c) Substantial changes in topography from excavation, grading or fill, including but not necessarily limited to:</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
<b>1) ground surface relief features; 2) geologic substructures or unstable soil conditions; and 3) unique geologic or physical features?</b>	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

The project would involve grading a roadway along a mid-slope contour resulting in an interruption of the continuity of the existing slopes that flank the spur ridge. However, the roadway extension would not substantially alter the overall topographic character of the ridge. The proposed lot developments would consist of single family homes that are designed to accommodate the existing slopes and the foundations would be excavated into the hillside to follow the natural slope and relief of the spur ridge. Foundation excavations would not alter the overall character of the spur ridge or its slopes.

While the project would result in upper and lower slope grading associated with the Alta Way roadway extension and would require grading and soil disturbance on the individual lots, the work would not change the overall site relief and topography and therefore, the impact would be less than significant.

## References

California Geological Survey (CGS) 1976. [formerly the California Department of Conservation, Division of Mines and Geology (CDMG)]. *Geology for Planning: Central and Southeast Marin County*, CDMG Open File Report 76-2.

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## **4. WATER**

### **Water Setting**

The Project site is located to the west of Shoreline Highway on an undeveloped hillside bounded on all sides by residential developments and covered with grasses, brush, and trees. An existing unpaved cut and fill road was previously graded across the site that connects at the terminus of Alta Way (PJC, 2016). Slopes on the site range from 5 percent to 50 percent (PJC, 2016). No creeks, drainage swales, or surface water bodies (including ponds or marshes) are present on the site. An unnamed tributary of Coyote Creek flows from north to south below the east boundary of the site. Rainfall infiltrates into the site soils and sheetflow runoff is induced when soil infiltration capacity is exceeded. The existing unpaved road intercepts runoff from the five upgradient, undeveloped lots and directs a portion of sheetflow toward the current terminus of Alta Way. Surface water runoff downgradient of the unpaved road and the five lower lots flows east and southeast toward existing developments and the unnamed tributary. Stormwater runoff from existing residential developments, Alta Way, and a portion of the upgradient unpaved earthen road currently flows downhill along Alta Way and into an existing storm drain near the intersection of Alta Way and Blue Jay Way, which then directs flows into the unnamed tributary.

Public scoping comments expressed concerns that existing stormwater infrastructure is insufficient to accommodate stormwater from the proposed Project, due to the age, condition, and conveyance capacity of the system. Additionally, concerns were raised that increased runoff from the site could increase flooding and flood risk downgradient for roads, creeks, and residential properties. Concerns were raised that impacts could not be adequately assessed without a hydrologic and hydraulic assessment of the proposed Project that examines pre- and post-project runoff, drainage, and stormwater conveyance capacity to determine potential drainage and flooding impacts on- and off-site. Comments outline that current stormwater infrastructure is insufficient to accommodate flows from existing development under baseline conditions and that stormwater runoff has caused flooding and erosion locally as a result. These concerns are considered in the impact assessment presented below. For a discussion of the potential for the proposed Project to result in significant impacts related to new or substantially altered local or regional stormwater drainage facilities see also Section 13, Utilities and Service Systems.

***Would the proposal result in:***

<b>a) Substantial changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ X ]</b>	<b>[ ]</b>	<b>[ ]</b>	<b>[ ]</b>

Project site development would not involve the alteration of a stream or river and would not substantially alter on-site drainage patterns (although stormwater runoff volumes directed to the unnamed tributary would increase; discussed under [d], below). Stormwater runoff during construction and following completion of the Alta Way extension and ten single-family homes would continue to flow downgradient to the southeast and northeast ultimately entering the unnamed tributary of Coyote Creek. Runoff from the Alta Way roadway extension and impervious surfaces on the five residential lots above the roadway would be collected in a V-ditch along the roadway and then be conveyed under Alta Way via a new 12-inch PVC pipe to the existing storm sewer at the intersection of Alta Way and Blue Jay Way. Stormwater flow from the five residential lots downgradient of the Alta Way extension would continue to flow downhill east and southeast toward the unnamed tributary of Coyote Creek.

In general, development of the type proposed can be expected to decrease natural ground cover and increase impervious surfaces (such as paved areas and buildings). Additional impervious surfaces reduce rainfall infiltration rates and increase downgradient runoff. The applicant's engineering consultant completed a hydrologic and hydraulic study (Study) of the proposed grading, drainage, and development plan to assess the increase in stormwater flows and potential drainage impacts (CSW/ST2, 2016a). The supporting Study was peer-reviewed by the County's environmental consultant and by Marin County Department of Public Works, Land Development staff for accuracy and verification that methodologies and assumptions employed were defensible and appropriate and that the results were valid. Where applicable, the results and findings of the Study are incorporated into the assessment of impacts, as discussed below.

The Study finds that the Project would increase impervious surface area and increase stormwater flows (CSW/ST2, 2016a). However, the area of impervious surface is not defined in the study area in a manner consistent with potential development of the project site. Based on the proposed drainage plan for the Project (CSW/ST2, 2016b), the Study estimated pre- and post-project runoff from the five proposed upgradient lots (lots 38, 42, 43, 44, and 48) and the proposed extension of Alta Way based on an assumed increase in the runoff coefficient<sup>6</sup>, comprising an area of 1.9 acres.<sup>7</sup> The 1.9-

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<sup>6</sup> The runoff coefficient is a value that relates to the amount of rainfall runoff generated from an area of land based on infiltration capacity. It is a larger value for areas with low infiltration and high runoff (pavement, steep gradient), and lower for permeable, well vegetated areas (forest, flat land).

<sup>7</sup> The five upper lots are estimated to cover an area of approximately one acre and the Alta Way extension right of way is conservatively assumed to be a 0.9-acre area)

acre area was the focus of the study as all stormwater within this contributing area would be collected by the proposed stormwater system and conveyed to the unnamed tributary of Coyote Creek (for discussion of impacts related to increased flows in surface waters, see [d] below).

The Study considered a design storm defined as a 100-year event with a 10-minute duration of approximately 4.1 inches per hour intensity, based on local rainfall data. Pre-project runoff during the design storm from the 1.9-acre area was estimated to be 3.6 cubic feet per second<sup>8</sup> (cfs), based on existing conditions relating to slope, soil characteristics, and vegetation cover (CSW/ST2, 2017). Following development, and considering the estimated addition of impervious surfaces associated with the Project, the Study calculated a post-project runoff of 5.5 cfs during the design storm, representing a net stormwater increase of 34 percent (1.9 cfs). The Study determined that the proposed stormwater system, with capacity of up to 6.2 cfs, is appropriately sized to accommodate a design storm, thereby ensuring on- and off-site surface runoff impacts do not occur as a result of exceeding the proposed stormwater conveyance system.

However, the Study did not assess the potential for the net increase in stormwater runoff to exceed the capacity of the conveyance culvert directing existing and proposed stormwater to the tributary. More critically, the Study did not assess the capacity of the tributary to accommodate the estimated increases in runoff volume and rate without increasing off-site flooding or other impacts relating to channel stability and hydromodification (e.g., bank erosion within the tributary or further downstream). Further, the Study did not assess changes to runoff rates and volumes from the five residential lots downgradient of the proposed Alta Way extension. The Study estimated that the five residential lots downgradient of the proposed Alta Way extension (about 0.9 acres) would have a net decrease in stormwater runoff because the upgradient runoff would be intercepted by the proposed stormwater collection system. For the five downgradient lots the Study assumed that onsite stormwater on these five lots would be managed on-site through the application of design features required in Marin County Code §24.04.627, as described below.

During construction the Project applicants would be required to comply with Marin County Code §24.04.625 and apply for coverage under the State of California Construction General Permit because the Project site exceeds one acre in size. Under the Construction General Permit, the Project would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must include site-specific erosion and sedimentation control practices and would limit the amount of runoff that may be directed offsite during construction (for additional discussion of Construction General Permit requirements, see [c], below). Further, as described in the Project Description, the applicants have prepared a construction management plan that indicates that all grading and excavation would take place over a five- to six-month period between April 16 and September 30 when rainfall is minimal.

Following the completion of construction (post-construction), the Project would be subject to compliance with the Phase II Stormwater NPDES Permit for small municipal

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<sup>8</sup> One cubic foot of water is equivalent to about 7.5 gallons. A flow rate of 1 cfs is equal to about 450 gallons per minute. For context, the average garden hose has a flow rate of 10 gallons per minute.

separate storm sewer systems (MS4s) covering Marin's cities, towns and unincorporated areas. Provision E.12 of the MS4 Permit, the "Post-Construction Stormwater Management Program," is administered locally under Marin County Code §24.04.627. Under Marin County Code §24.04.627, any development would be required to complete an approved Stormwater Control Plan consistent with the Bay Area Stormwater Management Agencies Association (BASMAA) post-construction manual (BASMAA, 2014), which specifies design guidance for stormwater treatment and control for projects in Marin. As such, the Project would be required to include design features that incorporate stormwater management guidelines and incorporate measures such as limiting clearing, grading and soil compaction; minimizing impervious surfaces; reducing runoff by dispersing runoff to landscaping or using pervious pavements; conserving natural areas of the site as much as possible; and protecting slopes and channels against erosion. For example, the five downgradient lots could be required to manage onsite drainage and runoff in accordance with the BASMAA requirements through use of measures such as directing runoff to vegetated areas; adding cisterns or rain barrels; utilizing planter boxes as bio-retention areas; and utilizing pervious surfaces for site landscape and driveway areas. At a minimum, the proposed Project would be required to adhere to the BASMAA requirements, which would require source controls of stormwater volumes and implementation of BMPs for stormwater quality management (discussed further under [c] below), including implementation of Low Impact Design (LID) stormwater measures.

Furthermore, because the Project would exceed 5,000 square feet of impervious surface and is part of a larger plan of development, it would be considered a Regulated Project per the BASMAA manual.<sup>9</sup> Regulated Projects are subject to more stringent stormwater permit requirements for post-development typically required of larger developments. BASMAA requirements specify that site designs for new developments that are defined as Regulated Projects, or where otherwise required by the local agency, must minimize the area of new roofs and paving. Where feasible, it is required that pervious surfaces be used instead of paving so that runoff can infiltrate to the underlying soil. Remaining runoff from impervious areas must be captured and used or treated using bioretention. Regulated Projects must also incorporate pollutant source control best management practices (BMPs) into the site design.

Compliance with the Construction General Permit, adherence to BASMAA requirements, application of BASMAA design guidelines and implementation of required LID stormwater quality features would ensure that new development associated with the extension of Alta Way would reduce the amount of runoff that would be directed offsite. However, the Project, as currently proposed and assessed in the Study, would result in a substantial increase in the amount or rate of runoff from stormflows, and has not been designed as a Regulated Project. Impacts related to flooding and streambank erosion in the tributary and farther downstream have not been assessed.

Additionally, as proposed, the Project would be inconsistent with the Marin Countywide Plan (CWP) Policies Bio-4.19 and 4.20. These CWP policies are specifically designed to reduce, minimize, and avoid potential impacts to flooding and stream/creek bed and

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<sup>9</sup> A Regulated Project is one that creates or replaces 5,000 square feet or more of impervious surface. Single-family homes are exempt from Regulated Project requirements unless they are part of a larger plan of development.

bank stability that can occur as a result of development projects substantially increasing stormwater volume and runoff rates. As specified in the CWP, as a project subject to discretionary review under CEQA, the applicants may be required to submit to the County a detailed hydrology and hydraulic report (Report) detailing the amount of new impervious surface area and accompanying surface runoff from all improvement areas, including driveways. Using LID design features as described above, the goal of the CWP policies is to achieve zero increase in runoff (no net increase in peak off-site runoff) and minimization of flood hydrograph peak flow or flood volume increases into drainage courses.

Because the Project, as proposed, is inconsistent with Regulated Project requirements for post-construction stormwater management, and because the applicants have not submitted a detailed hydrologic and hydraulic study that demonstrates how stormwater management would be consistent with CWP goals and policies, the Project has the potential to result in a significant impact related to insufficient stormwater management. This issue should be further studied in an EIR.

<b>b) Exposure of people or property to water related hazards, including, but not necessarily limited to: 1) flooding; 2) debris deposition; or 3) similar hazards?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ X ]</b>	<b>[ ]</b>	<b>[ ]</b>	<b>[ ]</b>

For a detailed discussion of Project related changes to drainage patterns, increases in the rate and volume of storm water runoff, and construction sedimentation and erosion, please see the discussion under (a) and (c). Based on that discussion, the Project could result in increased stormwater runoff, which could add incrementally to stream flows in the unnamed Coyote Creek tributary that receives runoff from the Project site, as well as Coyote Creek itself. This could exacerbate flooding, as further discussed below under item (d), and debris deposition, which could cause a significant increase in water-related hazards. Therefore, this impact could be significant, and this issue should be further examined in an EIR.

Public scoping comments expressed concerns over the potential for the proposed Project to result in slope or soil instability and increased risk of landslide both on- and off-site. For a detailed discussion of the potential for the proposed Project to increase the risk of landslides, mudslides, exacerbate on-site issues relating to slope instability, or to result in substantial changes to existing topography in a manner that results in unstable soil conditions, please see Section V.3, Geophysical.

The Project site is located outside the 100-year flood zone designated by the Federal Emergency Management Agency (FEMA) and is not in an area subject to current or projected future coastal flooding (MarinMap, 2017). The Project site is not located near levees or dams and would not be exposed to flooding from failure of one of these structures (MarinMap, 2017). Surface waters, including ponds and marshes, are not present on or upgradient of the Project site (CSW/ST2, 2016a). Therefore, hazards related to flooding of the Project site would be less than significant.

<b>c) Discharge of pollutants into surface or ground waters or other alteration of surface or ground water quality (e.g. temperature, dissolved oxygen or turbidity)?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

Project construction would include earthwork such as the stripping of surface vegetation, grading, excavation of soils, and potentially placement of imported engineered soils in the construction area and use of concrete and associated concrete wash-out areas. Activities that cause vegetation removal and ground disturbance, especially on undeveloped slopes, can render soils and sediments more susceptible to erosion from stormwater runoff. Stormwater runoff from disturbed soils associated with construction activities is a common source of pollutants (mainly sediment) to receiving waters. Depending on the distance and ground slope, some portion of the eroded material could be delivered to a receiving stream channel, such as the downgradient unnamed tributary. In this case, increased erosion rates would likely lead to increased sediment concentrations and turbidity levels in the receiving stream channel.

In addition, hazardous materials associated with construction activities would likely involve paint, solvents, oil and grease, concrete, and petroleum hydrocarbons. If improperly handled during construction activities, these materials could enter the stream system and degrade water quality. Public scoping comments expressed concerns over the potential for stormwater runoff from the Project to transport sediment and other pollutants downgradient to local surface waters and/or residential properties and potentially cause significant impacts related to water quality and human health.

Because the Project site exceeds one acre in size, the Project applicants would be required to comply with federal NPDES regulations by applying for coverage under the State Construction General Permit and Marin County Code §24.04.625. Under the Construction General Permit, the applicants would be required to implement construction BMPs as set forth in a detailed SWPPP. SWPPPs are a required component of the Construction General Permit and must be prepared by a Qualified SWPPP Developer (QSD) and implemented by a Qualified SWPPP Practitioner (QSP). SWPPPs must describe the specific erosion control and storm water quality BMPs needed to minimize pollutants in storm water runoff, and detail their placement and proper installation. In addition to erosion control BMPs, SWPPPs also include BMPs for preventing the discharge of other NPDES pollutants other than sediment (e.g. paint, solvents, concrete, petroleum products) to downstream waters. Under the provisions of the Construction General Permit, the State-certified QSD is responsible for determining site risk level, developing the SWPPP, and managing its implementation. Under the direction of the QSD, the QSP is required to conduct routine inspections of all BMPs, conduct surface water sampling, when necessary, and report site conditions to the State and/or Regional Water Quality Control Board as part of Construction General Permit compliance monitoring and reporting using the Stormwater Multi-Application Reporting and Tracking System (SMARTS). Compliance with the Construction General Permit is required by law and has proven effective in protecting water quality at construction sites.



As described under (a), above, the Project would be subject to the requirements of the Phase II MS4 Permit, under Marin County Code §24.04.625. Under Marin County Code §24.04.625, projects that involve construction-related soil disturbance are required to submit an “Erosion and Sediment Control Plan”<sup>10</sup> (ESCP) for approval by the County prior to the issuance of grading or building permits. The ESCP must, at a minimum:

- Identify potential pollutant sources that may affect the quality of stormwater runoff discharges from the construction site;
- Document BMPs that would be implemented and placed in order to prevent, to the maximum extent practicable,<sup>11</sup> construction site pollutants from leaving the site and entering the storm drain system during all phases of construction;.
- Document erosion control, sediment control, and good housekeeping BMPs that must be implemented year-round as appropriate based on construction activities.

Following the completion of construction activities, as described under (a), site-specific Project plans would be required to adhere to Marin County Code §24.04.627. These provisions require source controls of stormwater volumes and BMPs for stormwater quality management, including implementation of LID stormwater treatment measures. Such LID design features use bio-retention areas, pervious surfaces, and direct runoff to vegetated areas to reduce stormwater runoff and capture stormwater pollutants before entering receiving waters. Additionally, as part of the Project design, stormwater runoff flowing into the proposed new storm sewer would first pass through a filter designed to trap first flush pollutants such as sediment, trash, oil, and grease. Further, as described in the Project Description, the applicants have proposed several protective measures to reduce the potential for water quality impacts during construction. These measures include stabilization of disturbed soils by September 30 of each year, management of trash on-site, use of biodegradable surface erosion protection to reduce erosive energy of rainfall during early winter, and the use of silt fencing to reduce the transport of sediment off-site or into storm drains.

Implementation of the actions required under the Construction General Permit as well as the construction and post-construction requirements of MCSTOPPP, would prevent the discharge of pollutants to surface waters or groundwater and minimize or eliminate potential degradation of surface water or groundwater quality; this would result in less-than-significant impacts to water quality.

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<sup>10</sup> In circumstances where a project disturbs more than one acre of soil, the SWPPP developed pursuant to the Construction General Permit may substitute for the ESCP.

<sup>11</sup> The Maximum Extent Practicable standard has been interpreted in detail by the State Water Resources Control Board as applying best management practices (BMPs) that are effective in reducing the discharge of pollutants in storm water runoff (SWRCB, 2017).

<b>d) Substantial change in the amount of surface water in any water body or ground water either through direct additions or withdrawals, or through intersection of an aquifer by cuts or excavations?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ X ]</b>	<b>[ ]</b>	<b>[ ]</b>	<b>[ ]</b>

The Project would not involve long-term groundwater extraction. Project construction of utilities and foundations would involve subsurface excavation, but it is unlikely that such excavations would intercept shallow groundwater as the site is characterized by steep slopes with shallow sandy clay soils of up to two feet in depth overlying bedrock (PJC, 2016). No shallow groundwater or subsurface seepage was encountered at the Project site during investigatory borehole drilling for the geotechnical investigation (PJC, 2016). Additionally, surface waters, including ponds and marshes, are not present on or upgradient of the Project site (CSW/ST2, 2016a), and no active springs or surface seepage was observed at or near the proposed residential lots or Alta Way extension (PJC, 2016). If shallow groundwater were encountered during excavation activities, it would have to be pumped out of the construction trench to create a dry work area. If construction dewatering was necessary, the applicants would be required to implement dewatering BMPs under MCSTOPPP to avoid discharging pollutants or sediment to surface water. Such dewatering activity would be short-term and temporary, occurring within the six-month construction window for Alta Way road construction or during excavations for single-family homes. Because of its short-term nature and because there is limited groundwater underlying the site, construction dewatering would not affect groundwater levels or volumes. Therefore, impacts relating to substantial changes in the amount of groundwater through direct additions or withdrawals or through intersection of an aquifer by cuts or excavations would be less than significant.

Surface water diversions are not proposed as part of the Project. Impacts related to substantial changes to surface water bodies resulting from direct withdrawals, or as a result of intercepting and diverting groundwater that replenishes surface water features (such as seeps, springs, or ponds), would be less than significant.

For detailed discussion of the potential for the Project to result in an increased rate of stormwater runoff which could be discharged to the unnamed tributary of Coyote Creek, please see Section (a), above. As described in Section (a), post-construction stormwater runoff during the 100-year design storm would increase 34 percent (1.9 cfs) and this runoff rate could be added to the unnamed tributary to Coyote Creek. Coyote Creek is a tributary to Richardson Bay, which flows into San Francisco Bay. Coyote Creek has approximately 5.2 miles of blue line stream within its catchment boundary and drains a watershed of approximately 2.34 square miles (CDFW, 2013). Elevations range from sea level at the mouth of the creek to 1,024 feet in the headwater areas. As discussed under (a), above, the addition of 1.9 cfs during peak runoff conditions associated with a 100-year storm event could result in a significant impact related to flooding and/or hydromodification within the tributary and farther downstream. Therefore, this issue should be further examined in an EIR.

<b>e) Substantial changes in the flow of surface or ground waters, including, but not necessarily limited to: 1) currents; 2) rate of flow; or 3) the course or direction of water movements?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	[ X ]	[ ]	[ ]	[ ]

As described in Sections (a) and (d) above, the Project would not result in substantial changes to groundwater volume, subsurface flow patterns, or availability. Additionally, as described in Section (a), above, post-construction stormwater runoff during the 100-year design storm would increase 34 percent (1.9 cfs) from 3.6 cfs to 5.5 cfs thereby contributing an additional 1.9 cfs to the unnamed tributary to Coyote Creek. As described above, this would add incrementally to flows in the tributary and in Coyote Creek itself, potentially resulting in a significant change to flow. This issue should therefore be further examined in and EIR.

<b>f) Substantial reduction in the amount of water otherwise available for public water supplies?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	[ ]	[ ]	[ X ]	[ ]

The proposed Project would not require a potable water supply from a private production well that extracts water from a multiple-user groundwater aquifer nor would it require a water supply that relies on a private or community-managed reservoir.

The proposed developments on the Project site are within the service area of the Marin Municipal Water District (MMWD). MMWD serves approximately 190,000 customers from a network of seven local, rain-fed reservoirs as well as water imported from the Russian River and purchased from the Sonoma County Water Agency (RMC, 2016). Water within the district's service area is largely used for single- and multi-family residential homes, which make up 75 percent of the district's total demand. Despite growth, district-wide water use has steadily decreased through MMWD programs for demand management and conservation (RMC, 2016). The Urban Water Management Planning Act requires that urban water suppliers providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 acre-feet (AF) of water annually, prepare and adopt an Urban Water Management Plan (UWMP). These Plans must report, describe, and evaluate water deliveries and uses, water supply sources, efficient water uses, and demand management measures. MMWD, as an urban water supplier, has prepared the 2015 UWMP, which assesses existing water supplies, and which projects water demands and supplies in the MMWD service area over the next 25 years (RMC, 2016). The UWMP considers reliability of the supply, current and planned water conservation activities, water shortage contingency analyses, and consideration of water supply in the context of varying hydrologic conditions (e.g., multiple dry years). Additionally, MMWD has completed a water resources plan that assesses supply reliability through the year 2040 under

conditions that severely threaten water supply reliability and resiliency, such as prolonged drought and climate change impacts on water supply, earthquakes, water quality events, and wildfires (RMC, 2017).

At full build-out, the proposed Project would add ten single family homes, and would increase potable water demand. Such an increase is considered as part of future water demand planning conducted by MMWD and is accounted for in future water resource supplies. As described in the 2015 UWMP, conservation and demand management form critical aspects of water supply management and sustainability strategies, and through working with the community, MMWD has successfully reduced demand while the population in Marin has increased.

Currently, as detailed by MMWD regarding water supply and availability for Residential Lot 049-041-42 (MMWD, 2016), and applicable to each of the ten residential lots on the project site, these parcels are currently not served by MMWD and no water is currently allocated for the Project. To meet the conditions for service by MMWD, properties are required to be fronted by a water main. Additionally, properties would only be eligible for water service upon fulfillment of the following requirements:

- Completion of a Water Service Application
- Submission of building permit along with fees and charges.
- Completion of structure's foundation within 120 days of the application date.
- Demonstration of compliance with MMWD rules and regulations applicable at time service is requested.
- Demonstration of Compliance with MMWD Code Title 13 – water conservation (described in detail below). This includes review and approval of landscape plan, irrigation plan, grading plan, and verification of indoor fixtures compliance.
- Demonstration of MMWD backflow prevention requirements.
- Demonstration of compliance with MMWD Ordinance No. 429 (described in detail below), which requires installation of gray water recycling systems when practicable for all projects required to install new water service.

The MMWD Code contains a water shortage ordinance (Ordinance No. 414 amending Title 13 of the MMWD Code) that applies during dry periods and includes provisions for water conservation plans, water waste prohibition, and water use budgets. The MMWD Code also contains several water conservation measures that would apply to the proposed Project under Title 13 of the MMWD Code. These required conservation measures include water pressure regulating valves, high efficiency interior plumbing fixtures, and requirements for landscaping that maximize the efficiency of irrigation. The MMWD Code pertaining to Water Efficient Landscape requirements, which would apply to the proposed Project, would require the applicants to submit a Landscape Design Plan that complies with requirements for soil amendments, mulching, and soil conditioning. The requirements also regulate plant selection and grouping, and require irrigation devices such as rain sensors and point source and low-volume irrigation controls. Landscape Design Plans must be accompanied by a calculated Maximum Applied Water Allowance worksheet, which helps determine a site-specific water budget and establishes a planting mix that, by design, would meet the water budget. Compliance with the MMWD's landscape requirements would be verified during the

building permit review for each residential lot. Upon installation of landscaping applicants would submit a Certificate of Completion and a final inspection would be conducted by district staff. Additionally, Ordinance 429 of the MMWD Code requires applicants for a new water service connection (or an enlarged water service associated with residential and commercial remodels), to install a gray water recycling system to reuse the maximum practicable amount of gray water on site. Ordinance 429 is a part of the on-going effort to reduce district wide water use and ensure supply reliability over the future, considering projected population growth in Marin.

The MMWD is pursuing multiple strategies to meet projected future water demand, with a priority to increase water conservation and minimize wasteful use. As described above, new residences constructed under the proposed Project, along with other existing and future residential uses within the district, would be required to comply with conservation measures and if necessary, mandated use reduction as described in the MMWD Code. Such measures have enabled MMWD to reduce demand over time.

Given that the project would be supplied by the MMWD and that the need for additional water supply to support future demand and growth has been considered in the District's UWMP, the Project would not result in a substantial reduction in the amount of water available for public water supplies and the impact is less than significant.

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## 5. AIR QUALITY.

Information in this section is based on the Marin County Alta Way Extension Air Quality Technical Report prepared for this proposed Project (RCH Group, 2017), which also includes additional background information, analysis methodology and assumptions, and detailed results.

### ***Would the proposal:***

<b>a) Generate substantial air emissions that could violate official air quality standards or contribute substantially to an existing or Projected air quality violation?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>	<b>[ ]</b>

Criteria air pollutants include carbon monoxide (CO), reactive organic compounds (ROG), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter equal to or less than 10 micrometers (coarse particulates or PM<sub>10</sub>), and particulate matter equal to or less than 2.5 micrometers (fine particulates or PM<sub>2.5</sub>). NO<sub>x</sub> and ROG are precursors to the formation of ozone.

The proposed Project is located in unincorporated Marin County within the San Francisco Bay Area (Bay Area) Air Basin. Air quality in the Bay Area Air Basin is governed by the Bay Area Air Quality Air Management District (BAAQMD). The Bay Area is currently designated nonattainment for state and national (1-hour and 8-hour) ozone standards, for the state PM<sub>10</sub> standards, and for state and national (annual average and 24-hour) PM<sub>2.5</sub> standards. The Bay Area is designated attainment or unclassifiable with respect to the other ambient air quality standards.

The BAAQMD has developed air quality plans to attain and maintain air quality standards within designated timeframes. The BAAQMD plans estimate future emissions in the San Francisco Bay Area Air Basin and contain strategies necessary for emissions reductions through regulatory controls. Emissions projections are based on population, vehicle, and land use trends typically developed by the BAAQMD, Metropolitan Transportation Commission (MTC), and the Association of Bay Area Governments (ABAG).

On January 10, 2017, the BAAQMD released the Draft 2017 Clean Air Plan (BAAQMD, 2017a). The Final 2017 Clean Air Plan was adopted in April of 2017 (BAAQMD, 2017b). The 2017 Clean Air Plan/Regional Climate Protection Strategy (CAP/RCPS) provides a roadmap for BAAQMD's efforts over the next few years to reduce air pollution and protect public health and the global climate. The CAP/RCPS includes the Bay Area's first-ever comprehensive RCPS, which identifies potential

rules, control measures, and strategies that the BAAQMD can pursue to reduce greenhouse gas (GHG) emissions in the Bay Area. Measures included in the 2017 Clean Air Plan that address the transportation sector are in direct support of Plan Bay Area, which was prepared by ABAG and MTC and includes the region's Sustainable Communities Strategy and the 2040 Regional Transportation Plan.

Any Project that would not support the 2017 Clean Air Plan goals would be considered inconsistent with the 2017 Clean Air Plan. The recommended measure for determining Project support of these goals is consistency with BAAQMD CEQA thresholds of significance (BAAQMD, 2017c). As presented in the subsequent impact discussions, the proposed Project would not exceed the BAAQMD significance thresholds; therefore, the proposed Project would support the primary goals of the 2017 Clean Air Plan.

The proposed Project would generate pollutant emissions during construction and operation. Construction-related emissions would result from off road, heavy equipment operating at the Project site to construct the new residence and from truck trips associated with deliveries and construction workers commuting to and from the Project site. Emissions associated with operation would include those from routine residential activities such as vehicle trips, energy usage, and routine maintenance activities.

To determine the significance of the Project impact that would be related to the potential for it to cause or contribute to an air quality standard violation, Marin County utilizes the significance criteria provided in the BAAQMD CEQA Air Quality Guidelines (BAAQMD, 2017c).

Intermittent (short-term construction emissions that occur from activities, such as site-grading, paving, and building construction) and long-term air quality impacts related to the operation of the proposed Project were evaluated. The analysis focuses on daily emissions from these construction and operational (mobile, area, stationary, and fugitive sources) activities. The California Air Resources Board (CARB) Emissions Estimator Model (CalEEMod), Version 2016.3.1 (CAPCOA, 2016) was used to quantify construction-related and operational pollutant emissions.

**Table 5-1** provides the estimated short-term construction emissions that would be associated with Phase 1 (roadway extension) of the Proposed Project. **Table 5-2** provides the estimated short-term construction emissions that would be associated with Phase 2 (construction of ten homes; assuming three to four homes would be constructed per year) of the proposed Project.

The construction emissions are compared to the BAAQMD's significance thresholds for construction exhaust emissions. As the construction phases (i.e., grading, building construction, paving, etc.) are sequential, the average daily construction period emissions (i.e., total construction period emissions divided by the number of construction days) were compared to the BAAQMD significance thresholds. All construction-related emissions would be below the BAAQMD significance thresholds.

**Table 5-1: Estimated Daily Construction Emissions (pounds) – Phase 1**

Condition	ROG	NOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO
<b>Unmitigated</b>					
<b>Construction</b>	<b>1.70</b>	<b>18.5</b>	<b>0.87</b>	<b>0.81</b>	<b>10.3</b>
Significance Threshold	54	54	82	54	---
Significant (Yes or No)?	No	No	No	No	No
<b>Mitigated</b>					
<b>Construction</b>	<b>0.68</b>	<b>11.4</b>	<b>0.17</b>	<b>0.16</b>	<b>11.4</b>
Significance Threshold	54	54	82	54	---
Significant (Yes or No)?	No	No	No	No	No

Source: CARB CalEEMod Version 2016.3.1.

**Table 5-2: Estimated Daily Construction Emissions (pounds) – Phase 2**

Condition	ROG	NOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO
<b>Unmitigated</b>					
<b>Construction</b>	<b>1.92</b>	<b>9.79</b>	<b>0.57</b>	<b>0.53</b>	<b>7.42</b>
Significance Threshold	54	54	82	54	---
Significant (Yes or No)?	No	No	No	No	No
<b>Mitigated</b>					
<b>Construction</b>	<b>1.26</b>	<b>6.29</b>	<b>0.06</b>	<b>0.06</b>	<b>7.79</b>
Significance Threshold	54	54	82	54	---
Significant (Yes or No)?	No	No	No	No	No

Source: CARB CalEEMod Version 2016.3.1.

BAAQMD's CEQA Air Quality Guidelines recommend the implementation of all Basic Construction Mitigation Measures whether or not construction-related emissions exceed applicable thresholds of significance. The BAAQMD measures are also required by Marin County Code §22.20.040 (B). The applicants have expressed their commitment to implementing some, but not all, of these measures, as described in the Project Description. Not implementing some of these measures would conflict with the standards established by BAAQMD for construction projects and by the County Code, which would be a significant impact.

Emissions of VOC due to the use of architectural coatings are regulated by the limits contained in BAAQMD Regulation 8: Organic Compounds, Rule 3: Architectural Coatings (Rule 8-3). Rule 8-3 was revised on January 1, 2011 to include more stringent VOC limit requirements. The revised VOC architectural coating limits specify that the use of paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required.

Upon build-out of the ten single-family residences under the Project, daily motor vehicle trips would increase by an estimated 95 daily trips or 9.5 daily trips per dwelling unit.



CalEEMod was also used to estimate emissions that would be associated with motor vehicle use, space and water heating, and landscape maintenance expected to occur after the proposed Project construction is complete and operational. The proposed Project land use types and size and other Project-specific information were input to the model. CalEEMod provides emissions for transportation, areas sources, electricity consumption, natural gas combustion, electricity usage associated with water usage and wastewater discharge, and solid waste land filling and transport. Fireplaces, if proposed for installation in the proposed homes shall use natural gas only.<sup>12</sup>

Estimated daily and annual operational emissions that would be associated with the proposed Project are presented in **Tables 5-3 and 5-4** and are compared to BAAQMD's thresholds of significance. As indicated, the estimated proposed Project operational emissions would be below the BAAQMD's significance thresholds and would therefore be less than significant.

**Table 5-3: Estimated Daily Project Operational Emissions (pounds)**

Condition	ROG	NOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO
Area	0.58	0.04	<0.01	<0.01	0.84
Energy	0.01	0.11	<0.01	<0.01	0.05
Mobile	0.18	0.49	0.49	0.14	1.77
<b>Total Proposed Project</b>	<b>0.77</b>	<b>0.65</b>	<b>0.51</b>	<b>0.15</b>	<b>2.66</b>
Significance Threshold	54	54	82	54	---
Significant Impact?	No	No	No	No	No

Source: CARB CalEEMod Version 2016.3.1.

**Table 5-4: Estimated Annual Project Operational Emissions (tons)**

Condition	ROG	NOx	PM <sub>10</sub>	PM <sub>2.5</sub>	CO
Area	0.10	<0.01	<0.01	<0.01	0.07
Energy	<0.01	0.02	<0.01	<0.01	<0.01
Mobile	0.03	0.09	0.08	0.02	0.30
<b>Total Proposed Project</b>	<b>0.13</b>	<b>0.11</b>	<b>0.08</b>	<b>0.02</b>	<b>0.38</b>
Significance Threshold	10	10	15	10	---
Significant (Yes or No)?	No	No	No	No	No

Source: CARB CalEEMod Version 2016.3.1.

<sup>12</sup> On July 9, 2008, the BAAQMD adopted Regulation 6, Rule 3: Wood-Burning Devices to reduce the harmful emissions that come from wood smoke. The Rule requires cleaner-burning (e.g., natural gas) USEPA-certified stoves and inserts in new housing construction.

## **Mitigation Measures**

The following measures shall be implemented by the construction contractor or contractors throughout Phase I and Phase II of Project construction:

**Mitigation Measure AQ-1: BAAQMD Basic Fugitive Dust Control Measures.** The construction contractor shall reduce construction-related air pollutant emissions by implementing BAAQMD's basic fugitive dust control measures. These measures are also required by Marin County Code §22.20.040 (B) and include the following:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

*BAAQMD Basic Exhaust Emissions Reduction Measures.* The construction contractor shall implement the following measures during construction to reduce construction-related exhaust emissions:

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

## **Significance with Mitigation**

With implementation of BAAQMD's Basic Fugitive Dust Control Measures and Basic Exhaust Emissions Reduction Measures, which are also contained in Marin County Code §22.20.040 (B), the Project would be compliant with BAAQMD recommendations for construction-related emission reduction measures, and the impact would therefore be reduced to less than significant.

b) Expose sensitive receptors to pollutants, such as noxious fumes or fugitive dust?	Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	Not Applicable
	[ ]	[ X ]	[ ]	[ ]

The proposed Project would constitute a new emission source of diesel particular matter (DPM) and PM<sub>2.5</sub> (particulate matter less than 2.5 microns diameter) due to construction activities. These emissions could impact nearby residences. Studies have demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk.

Health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. Individual cancer risk is the likelihood that a person exposed to air toxic concentrations over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. The maximally exposed individual (MEI) represents the worst-case risk estimate, based on a theoretical person continuously exposed for a lifetime at the point of highest compound concentration in the air. This is a highly conservative assumption, since most people do not remain at home all day and on average, Americans change residences every 11 to 12 years. In addition, this assumption assumes that residents are experiencing outdoor concentrations for the entire exposure period.

A Health Risk Assessment (HRA) was performed for the proposed Project.<sup>13</sup> The HRA analyzes the incremental cancer risks to sensitive receptors (nearby residences) in the vicinity of the proposed Project, using emission rates (in pounds per hour) from CARB's CalEEMod emission model. DPM (reported as exhaust of PM<sub>2.5</sub>) emission rates were input into the USEPA's AERMOD atmospheric dispersion model to calculate ambient air concentrations at receptors in the proposed Project vicinity. The HRA is intended to provide a worst-case estimate of the increased exposure by employing a standard emission estimation program, an accepted pollutant dispersion model, approved toxicity factors, and conservative exposure parameters.

The HRA was conducted following methodologies in California Office of Environmental Health Hazard Assessment (OEHHA)'s *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA, 2015). This was accomplished by applying the highest estimated concentrations at the receptors analyzed to the established cancer risk estimates and acceptable reference concentrations for non-cancer health effects. A full description of methodologies and assumptions is included in the Air Quality, Greenhouse Gas, and Health Risk Assessment Technical Report (RCH Group, 2017), available in the County's Project file.

As shown in **Table 5-5**, the maximum cancer risk from unmitigated proposed Project construction emissions for a residential-adult receptor would be 4.3 per million and for a residential-child receptor would be 28.0 per million. The modeled cancer risk due to

<sup>13</sup> See RCH Group, 2017 for more details.

unmitigated construction emissions would be above the BAAQMD threshold of 10 per million and is therefore a significant impact.

**Table 5-5: Estimated Unmitigated Health Impacts for Existing Receptors**

Source	Cancer Risk (adult/child)	Hazard Impact (acute/chronic)	PM <sub>2.5</sub> Concentration
<b>Unmitigated Proposed Project Construction</b>	<b>4.30/28.0</b>	<b>0.06/0.04</b>	<b>0.20</b>
Significance Threshold	10	1.0	0.3
Significant (Yes or No)?	<b>Yes</b>	No	No

Both acute (short-term) and chronic (long-term) adverse health impacts unrelated to cancer are measured against a hazard index (HI), which is defined as the ratio of the predicted exposure concentration from the proposed Project to a reference exposure level (REL) that could cause adverse health effects. The impact is considered to be significant if the overall HI for the highest-impacted organ system is greater than 1.0.

There is no acute REL for DPM. However, diesel exhaust does contain acrolein, formaldehyde, and other compounds, which do have established acute RELs. Based on DPM speciation data, acrolein emissions are approximately 1.3 percent of the total DPM emissions. The acute REL for acrolein was established by the California OEHHA as 2.5 µg/m<sup>3</sup>. In total, acrolein emissions represent over 90 percent of the acute health impacts from diesel engines.

The unmitigated acute HI would be 0.06, based on a Project-related maximum 1-hour diesel concentration of 10.8 µg/m<sup>3</sup>, respectively (per dispersion modeling analysis) and acrolein speciation of 1.3 percent for DPM or 10.8 µg/m<sup>3</sup>/2.5 µg/m<sup>3</sup> times 1.3 percent, which is 0.06. The mitigated acute HI would be 0.01. The acute HI would be below the Project-level threshold of 1 and the impact of the Project with regard to acute health risks would therefore be less than significant.

The chronic reference exposure level for DPM was established by the California OEHHA as 5 µg/m<sup>3</sup>: if the Project-related annual concentration of DPM were to exceed 5.0 µg/m<sup>3</sup> this would result in a chronic acute HI of greater than 1.0 (i.e., DPM annual concentration/5.0 µg/m<sup>3</sup>), which would be a significant impact. However, dispersion modeling analysis shows that Project-related maximum annual diesel concentration would be 0.20 µg/m<sup>3</sup>, resulting in a chronic HI of 0.04. With mitigation, the chronic HI would be 0.01. In either case, the chronic HI would be below the Project-level threshold of 1 and the impact of the Project with regard to chronic health risks would therefore be less than significant.

Dispersion modeling also estimated the exposure of sensitive receptors to Project-related concentrations of PM<sub>2.5</sub>. The BAAQMD *CEQA Air Quality Guidelines* requires inclusion only of PM<sub>2.5</sub> exhaust emissions (typically emissions from a tailpipe or stack) in this analysis (i.e., fugitive dust emissions, such as wind-driven erosion, are addressed under BAAQMD Fugitive Dust Control Mitigation Measures which are required by law to be implemented during Project construction). The proposed Project's unmitigated annual PM<sub>2.5</sub> concentration from construction activities would be

0.20 µg/m<sup>3</sup>, which is below the significance threshold of 0.30 µg/m<sup>3</sup>. The Project's impacts with regard to PM<sub>2.5</sub> emissions would therefore be less than significant.

Chrysotile and amphibole asbestos occur naturally in certain geologic settings in California, most commonly in association with ultramafic rocks and along faults. Serpentinized ultramafic rocks (serpentine), which contain the minerals that make up asbestos, is present throughout Marin County associated with Franciscan melange, such as to the east of Alta Way on the Tiburon Peninsula. However, serpentine is not part of the tectonic environment in Tamalpais Valley and has not been identified or mapped on or in the vicinity of the Project site. Subsurface investigation of the site did not encounter serpentine in the borings or test pits (PJC and Associates, 2016).

## **Mitigation Measures**

### **Mitigation Measure AQ-2: Enhanced Exhaust Emissions Reduction Measures.**

The Project applicants and all construction contractors involved in Project construction shall implement BAAQMD's *Enhanced Exhaust Emission Reduction Measures* during both Phase I and Phase II of Project construction to reduce construction-related exhaust emissions. These measures include the following:

All off-road equipment greater than 25 horsepower (hp) and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements:

1. Where access to alternative sources of power are available, portable diesel engines shall be prohibited; and
2. All off-road equipment shall have:
  - a. Engines that meet or exceed either USEPA or CARB Tier 3 off-road emission standards, or
  - b. Engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such are available.

## **Significance with Mitigation**

As shown in **Table 5-6**, with the implementation of **Mitigation Measure AQ-2**, the maximum cancer risk from Project construction for a residential-adult receptor would be less than 0.6 per million and for a residential-child receptor would be 4.4 per million. Thus, the cancer risk due to mitigated construction activities would be below the BAAQMD threshold of 10 per million and would be less than significant with mitigation.

Implementation of **Mitigation Measure AQ-2** would also reduce acute and chronic hazard and PM<sub>2.5</sub> concentration, as shown in **Table 5-6**.

**Table 5-6: Estimated Mitigated Health Impacts for Existing Receptors**

Source	Cancer Risk (adult/child)	Hazard Impact (acute/chronic)	PM <sub>2.5</sub> Concentration
<b>Mitigated Proposed Project Construction</b>	<b>0.58/4.36</b>	<b>0.01/0.01</b>	<b>0.04</b>
Significance Threshold	10	1.0	0.3
Significant (Yes or No)?	No	No	No

- c) **Alter air movement, moisture, or temperature, or cause any change in climate?**
- Significant Impact**      **Potentially Significant Unless Mitigated**      **Less Than Significant Impact**      **Not Applicable**

[ ]      [ ]      [X]      [ ]

Moderate winds and mild temperatures throughout the year characterize the climate of the Tamalpais Valley. Implementation of the proposed Project would not result in considerable alterations to climatic conditions because the Project would result in ten residential structures 30 feet or less in height above the surrounding grade, involving a relatively limited area of land. The proposed Project would not significantly influence or cause alteration of air movements, temperature or change local or regional climates. Therefore, impacts of this kind would be less than significant.

- d) **Create objectionable odors?**
- Significant Impact**      **Potentially Significant Unless Mitigated**      **Less Than Significant Impact**      **Not Applicable**

[ ]      [ ]      [X]      [ ]

According to BAAQMD's CEQA Air Quality Guidelines, (BAAQMD, 2017c) odor impacts could result from siting a new odor source near existing sensitive receptors or siting a new sensitive receptor near an existing odor source.

Though offensive odors rarely cause any physical harm, they still remain unpleasant and can lead to public distress and citizen complaints. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

The BAAQMD's significance criteria for odors are subjective and are based on the number of odor complaints generated by a Project. Generally, the BAAQMD considers any project with the potential to frequently expose members of the public to objectionable odors to cause a significant impact. With respect to the proposed Project, diesel-fueled construction equipment exhaust would generate some odors. However, these emissions typically dissipate quickly and would be unlikely to affect a substantial number of people, or to persist for a substantial length of time. Therefore,

odor impacts associated with the proposed Project on existing sensitive receptors would be less than significant.

Odor impacts could also result from siting a new sensitive receptor near an existing odor source. Examples of land uses that have the potential to generate considerable odors include, but are not limited to wastewater treatment plants; landfills; refineries; and chemical plants. In the BAAQMD CEQA Air Quality Guidelines, odor screening distances are recommended by BAAQMD for a variety of land uses (BAAQMD, 2017). Projects that would site a new receptor farther than the applicable screening distance from an existing odor source would not likely result in a significant odor impact. The odor screening distances are not used as absolute screening criteria, rather as information to consider along with the odor parameters and complaint history. The odor screening distances for a sewage treatment plant, refinery, and chemical plant are two miles (SMAQMD, 2016). The proposed Project is not within the odor screening distances for a sewage treatment plant, refinery, or other odor producing sources. Therefore, odor impacts associated with the location of the proposed Project would be less than significant.

## **References**

Bay Area Air Quality Management District, 2017a, Draft 2017 Clean Air Plan, January 10, 2017.

Bay Area Air Quality Management District, 2017b, Final 2017 Clean Air Plan, April 19, 2017.

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## 6. GREENHOUSE GAS EMISSIONS

### Greenhouse Gas Emissions Setting

“Global warming” and “global climate change” are the terms used to describe the increase in the average temperature of the earth’s near-surface air and oceans since the mid-20th century and its projected continuation. Warming of the climate system is now considered to be unequivocal, with global surface temperature increasing approximately 1.33 degrees Fahrenheit (°F) over the last 100 years. Continued warming is projected to increase global average temperature between 2 and 11°F over the next 100 years (IPCC, 2014).

Natural processes and human actions have been identified as the causes of this warming. The International Panel on Climate Change concludes that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. After 1950, however, increasing greenhouse gas (GHG) concentrations resulting from human activity such as fossil fuel burning and deforestation have been responsible for most of the observed temperature increase. These basic conclusions have been endorsed by more than 45 scientific societies and academies of science, including all of the national academies of science of the major industrialized countries. Since 2007, no scientific body of national or international standing has maintained a dissenting opinion.

Increases in GHG concentrations in the earth’s atmosphere have been identified as the main cause of human-induced climate change. GHGs naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space. Some GHGs occur naturally and are necessary for keeping the earth’s surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Gases that trap heat in the atmosphere are referred to as GHGs because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs has been implicated as the driving force for global climate change. The primary GHGs are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), ozone, and water vapor. While the presence of the primary GHGs in the atmosphere are naturally occurring, CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O are also emitted from human activities, increasing the concentration of these compounds within earth’s atmosphere.

#### ***Would the proposal:***

<b>a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

CalEEMod was used to quantify GHG emissions associated with construction activities, as well as long-term operational emissions produced by motor vehicles,



natural gas combustion for space and water heating, electricity use, and landscape maintenance equipment.

The proposed Project's estimated construction and operational GHG emissions are presented in **Table 6-1**. There is no BAAQMD CEQA significance threshold for construction-related GHG emissions. Nevertheless, the BAAQMD recommends quantifying and disclosing construction-related GHG emissions. The estimated construction GHG emissions are 111 metric tons of CO<sub>2</sub>e during the roadway extension and 219 metric tons of CO<sub>2</sub>e during the housing construction.

The BAAQMD has established a threshold for operational emissions of 1,100 metric tons per year (BAAQMD, 2017). The operational GHG emissions for the Project are estimated to be 122 metric tons per year, which is well below the BAAQMD threshold. Thus, the proposed Project impacts on climate change would be less than significant.

**Table 6-1: Estimated Annual Greenhouse Gas Emissions (metric tons)**

Source	Annual CO <sub>2</sub> e Metric Tons
<b>Operations</b>	
Area Sources	0.30
Energy	35.4
Mobile	84.3
Solid Waste	1.27
Water	0.25
<b>Total Operational Emissions</b>	<b>122</b>
<i>Significance Threshold</i>	1,100
Potentially Significant?	No

Source: RCH Group, 2017; CARB CalEEMod Version 2016.3.1.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	Not Applicable
	[ ]	[ ]	[ X ]	[ ]

In 2006, the California legislature passed and Governor Schwarzenegger signed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished by enforcing a statewide cap on GHG emissions. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions. Under AB 32, CARB must prepare a Scoping Plan and adopt regulations to achieve reductions in GHG emissions to meet the 1990 emissions cap by 2020. SB 32, enacted in 2016, increases the required reductions in GHG emissions to 40 percent below 1990 levels by 2030. This will be accomplished by increasing renewable energy use, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

Marin County has developed a Climate Action Plan (Marin County, 2015) that provides a roadmap for how the County will reduce energy consumption and GHG emissions to contribute to meeting the State GHG emissions targets. In addition, the Marin Countywide Plan outlines action items pertaining to sustainability including the preparation of policies that promote efficient management and use of resources in order to minimize GHG emissions. Marin County has also enacted Green Building requirements for construction of energy- and materials-efficient buildings. These requirements, which would be applied to each of the residences constructed under the Project, are in addition to California Title 24 Green Building requirements. The Marin County Climate Action Plan, Marin Countywide Plan, and State and County Green Building requirements are all designed to contribute to achieving the State's GHG reduction goals. With adherence to State and County Green Building requirements, the Project would be consistent with County plans, policies, and regulations for reduction of GHGs, and would therefore also be consistent with AB 32 and other Statewide goals for GHG reduction, and there would be no impact of this kind.

## **References**

Bay Area Air Quality Management District. 2017, CEQA Air Quality Guidelines, May 2017.

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## **7. TRANSPORTATION/CIRCULATION.**

### **Transportation/Circulation Setting**

Alta Way is an existing public road that extends two blocks and about 1,000 feet from its origin at Sunnybrook Lane to its current terminus at a fire turn-around. Alta Way ranges from 18-24 feet in width and has intermittent sidewalks and no bicycle lanes. One other street, Blue Jay Way, a one-block long cul-de-sac, intersects with Alta Way just past the bridge over an unnamed tributary to Coyote Creek. Past its intersection with Alta Way, Sunnybrook Lane is also a cul-de-sac. Sunnybrook Lane intersects with State Highway 1 (Shoreline Highway) about 50 feet from the intersection with Alta Way, providing the sole egress and ingress for all three streets (Figure 7-1). In all, 29 existing homes are accessed via the Sunnybrook Lane segment that intersects with Shoreline Highway. Sunnybrook Lane is stop-sign controlled at Shoreline Highway; none of the other intersections described above are controlled. An estimated 220 vehicles enter and exit Sunnybrook Lane per day (W-Trans, 2016). Sunnybrook lane and Alta Way from its intersection with Sunnybrook Lane to the bridge are County-maintained roads. Beyond the bridge, Alta Way is privately maintained, though it is a public street.

Shoreline Highway provides regional access to the Project site. In the vicinity of the intersection with Sunnybrook Lane, Shoreline Highway is a winding 2-lane road with narrow shoulders and a posted speed limit of 35 miles per hour (MPH). In the northbound direction (that is, toward the Coast and away from Tam Junction), there is a left-turn lane for vehicles turning onto Sunnybrook Lane. This left-turn lane is about 50 feet long, enough to accommodate two automobiles or one large truck. Caltrans data for 2016 indicate that the average daily traffic for Shoreline Highway at Loring Avenue, just north of Sunnybrook Lane, was 9,200 vehicles northbound and 13,500 vehicles southbound (Caltrans, 2017)

Modeling of traffic delays at this intersection, based on both 2016 and 2017 traffic counts, indicates that during the morning and afternoon peak traffic hours (the hours during which traffic is heaviest), the intersection operates overall at Level of Service A<sup>14</sup> both for vehicles turning into Sunnybrook Lane from Shoreline Highway, and out of Sunnybrook Lane onto Shoreline Highway (W-Trans, 2016; Prism Engineering, 2017). This indicates little or no delay under existing conditions.

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<sup>14</sup> Intersection traffic operations are evaluated using the term “level of service” (LOS), which is a qualitative description of traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels of service are defined ranging from LOS A (best operating conditions) to LOS F (worst operating conditions), with LOS E operating “at or near capacity.” When volumes approach capacity, stop-and-go conditions result. The Countywide Plan establishes as policy the maintenance of LOS D or better for peak hour intersection operations.



SOURCE: Prism Engineering

**Figure 7-1**  
Intersection Air Photo



A database search revealed that there have been no accidents on Alta Way or Sunnybrook Lane in the past five years, but six reported accidents on Shoreline Highway within 500 feet of the Sunnybrook Lane intersection (Transportation Injury Mapping System, 2017). All six accidents involved injuries, and none were fatal. Three involved bicycles. While the sight distance to the north is limited for vehicles stopped on Sunnybrook Lane waiting to turn onto Shoreline Highway, none of the reported accidents appeared to be caused or influenced by this limitation. Neither did any of the reported accidents involve vehicles using the northbound turn lane into Sunnybrook Lane.

Golden Gate Bridge, Highway and Transportation District provides regional bus service, with connections to surrounding neighborhoods, communities and counties. Marin Transit operates the 61 and 66 bus lines that access Highway 1 passing by Sunnybrook Lane (but with no bus stop there). The nearest bus stop is at Pine Hill Road a half mile to the south, and the Four Corners (Muir Woods Road) intersection 2.3 miles to the north.

The analysis for this section is based on the Applicant's traffic study (W-Trans, 2016a and 2016b) and supplemental studies performed by Prism Engineering (Prism Engineering, 2017). Prism Engineering peer reviewed the Applicant's traffic study and found much of the data and conclusions to be adequate as a basis for this Initial Study (Prism Engineering, 2017). Where data or conclusions were questionable, Prism Engineering conducted additional analysis.

***Would the proposal result in:***

<b>a) Substantial increase in vehicle trips or traffic congestion such that existing levels of service on affected roadways will deteriorate below acceptable County standards?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	[ ]	[ ]	[ X ]	[ ]

**Project Construction**

Project construction would generate short-term increases in vehicle trips by construction workers and construction vehicles on roadways near the Project site, including Alta Way, Sunnybrook Lane, and Shoreline Highway. Construction-generated traffic would be temporary and therefore would not result in long-term degradation of operating conditions (level of service or delay) on Project area roadways. The primary impacts resulting from the movement of construction trucks would include a short-term and intermittent lessening of roadway capacities due to the slower movements and larger turning radii of the trucks compared to passenger vehicles.

Traffic-generating construction activities would consist of the daily arrival and departure of personnel (construction work crews and supervisory staff); trucks hauling equipment and materials to the worksites; and the hauling of excavated spoils from, and/or import of new fill to, the Project site. The number of construction-related trips

would vary between the two Project phases, and among the tasks needed to complete construction.

As noted in the Project Description, phase 1 of Project construction is anticipated to use several pieces of heavy equipment and 4-5 workers per day for a period of 5-6 months. Phase 1 would not require soil import or export, but would require periodic delivery of concrete and other construction materials, as well as move-in and move-out of equipment, removal of debris, and other incidental vehicle trips. This level of construction traffic is not expected to exceed roadway capacity or substantially affect intersection level of service.

This analysis assumes that phase 2, during which the ten lots would be developed, would occur over a 3-4 year period, with about three homes being constructed each year. During this time, vehicle trips would include construction workers travelling to and from works sites (estimated to be on average about 10 workers per day), periodic delivery of construction materials, move-in and move-out of equipment, removal of debris, and other incidental vehicle trips. As noted in the Project Description, anticipated cut and fill volumes for development of the ten lots are 4,900 cubic yards cut and 5,000 cubic yards fill, resulting in a net deficit of about 100 cubic yards. Because construction of the ten lots would not be expected to occur at once or on a coordinated basis, the actual amount of soil export or import may be more than 100 cubic yards. It is conservatively assumed that 75 percent of the cut material (3,675 cubic yards) would be exported and 75 percent of the fill material (3,750 cubic yards) would be imported; resulting in 230 haul truck round trips for exporting and 235 haul truck round trips for importing during the entirety of phase 2. Thus, an estimated 78 haul truck round trips for exporting and 78 haul truck round trips for importing would occur per year during phase 2. Since all grading activities would take place during the period April 16-September 30, these truck trips would be spread out over a 5.5 month period, or about 110 work days. This would mean an average of one to two soil-hauling truck trips (round trips) per day. Project-generated truck trips would be dispersed throughout the day, and construction workers typically commute to and from work sites before or after peak traffic hours.

The anticipated increase in traffic volumes caused by Project-generated construction traffic on local and regional roadways would not be substantial relative to background traffic conditions (i.e., would tend to fall within the daily fluctuation of traffic volumes on those roads).<sup>15</sup> Project construction traffic would not significantly disrupt traffic flow on these roadways, though drivers could experience delays if they were traveling behind a construction truck. Traffic volume increases caused by Project construction would be most noticeable on Sunnybrook Lane and Alta Way, but the increased traffic volumes are expected to remain at levels less than the carrying capacity of the roads, and the impact would be less than significant.

### **Project Operation**

Following completion of the Project, the ten new homes, once occupied, would generate new vehicle trips, adding traffic to local and regional roads. The trip

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<sup>15</sup> Day-to-day traffic volumes typically vary by as much as 10 percent (i.e., +5 percent), and an increase of less than that is unlikely to be perceptible to the average motorist.

generation for the Project was calculated using the standard trip generation rates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9<sup>th</sup> edition, 2012 for Single Family Detached Housing (ITE Landuse #210). The project is expected to generate 95 one-way trips per day, including 8 trips in the a.m. peak hour, and 10 trips in the p.m. peak hour, as shown in Table 7-1.

**Table 7-1: Trip Generation Summary**

Land Use, Units	Daily		AM Peak Hour				PM Peak Hour			
	Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Single Family Housing, 10 dwelling units	9.52	95	0.75	8	2	6	1.00	10	6	4

Source: Prism Engineering, 2017

A level of service (LOS) analysis for the intersection of Highway 1 at Sunnybrook Lane was conducted using the Synchro 9 software. Operation of the intersection was evaluated based on the Highway Capacity Manual 2010 version using peak hour volumes during the weekday evening (4:00 to 6:00 p.m.) peak hours, since this time period represents the worst case (i.e., combination of highest traffic volume on Shoreline Highway and highest number of vehicles turning into and out of Sunnybrook Lane during a concentrated period of time). While there are high volumes of traffic on Shoreline Highway on weekends, especially during the summer months, weekend peak operations for the intersection are expected to be lower, as vehicles turning in and out of Sunnybrook Lane on weekends would not be concentrated during commute hours.

The results of the LOS analysis are shown in Table 7-2, which indicates that the intersection is currently operating overall at LOS A, and would continue to operate at LOS A after Project build-out.

The intersection analysis also considered whether the north bound left turn lane from Shoreline Highway onto Sunnybrook Lane, which is approximately 50-feet long, would have adequate capacity for the critical pm peak hour following Project build-out. The capacity analysis results for the existing year 2017 pm peak hour and the exiting-plus-project condition are shown in Table 7-2. Since the average delay of the turning movement is projected at 0.2 seconds, increasing to 0.3 seconds with the project, queues would not be expected to form. Adequate gaps in southbound traffic on Shoreline Highway would be available to accommodate the anticipated number of vehicles that would be turning left into Sunnybrook Lane.

**Table 7-2: Summary of PM Peak Hour Level of Service for Highway 1 at Sunnybrook Lane**

<b>Analysis Description</b>	<b>Existing (based on July, 2017 traffic counts)</b>	<b>Existing Plus Project</b>
Overall Intersection LOS and Delay	LOS A, 0.2 secs	LOS A, 0.3 secs
Side Street Eastbound Approach, LOS and Delay	LOS B, 13.6 secs	LOS B, 13.8 secs
North Bound Left Turn from Shoreline Highway, LOS and Delay	LOS A, 0.2 secs	LOS A, 0.3 secs

Source: Prism Engineering, 2017

Because additional traffic from Project operation would not result in a deterioration of LOS at the Sunnybrook Lane/Shoreline Highway intersection below County standards, the impact would be less than significant.

<b>b) Traffic hazards related to: 1) safety from design features (e.g. sharp curves or dangerous intersections); 2) barriers to pedestrians or bicyclists; or 3) incompatible uses (e.g. farm equipment)?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ X ]</b>	<b>[ ]</b>	<b>[ ]</b>	<b>[ ]</b>

As discussed above, the Project would add incrementally to traffic volumes on local roadways and intersections, including the Shoreline Highway-Sunnybrook Lane intersection. Vehicles exiting Sunnybrook Lane onto Shoreline Highway currently have limited sight distance to the west, due to a sharp curve in the highway at Loring Avenue. The traffic engineer for this Initial Study, Grant Johnson, T.E., of Prism Engineering, examined the sight line at this intersection, which included measuring the sight line distance and observing traffic speeds on southbound Shoreline Highway at this location (Prism Engineering, 2017). Based on these measurements and the standards contained in the Caltrans Highway Design Manual (Caltrans, 2017b), sight lines are currently adequate at this intersection such that a safety hazard does not exist. The incremental increase in traffic from the Project would not change or substantially exacerbate this condition, and the impact of limited sight distance at the intersection is less than significant.

The proposed design for the extension of Alta Way shows that the roadway would have two short segments with very steep grades, up to 15%. There would be abrupt changes in grade to 8% and then to 1%. In addition, the design includes a sharp horizontal curve. Per Marin County Code §24.04.035, the minimum design speed for a Minor Residential Road is 25 mph. Based on the Caltrans Highway Design Manual, the abrupt changes in grade (referred to as a vertical curve) and the sharp horizontal curve do not meet standards for 25 mph speeds. Furthermore, the substandard



geometry of the roadway could result in the inability of emergency vehicles, especially fire trucks, to use the road safely.

Furthermore, the proposed width of the roadway extension, 20 feet with no paved shoulders, does not meet the design requirements for roadway width for a Minor Residential Road contained in Marin County Code §24.04.110. That standard is 28 feet width with 4-foot shoulders on each side.

In addition, the Project plans do not demonstrate the adequacy of driveway access points from each lot onto the proposed road. It is unclear from the Project plans whether there will be adequate access from each parcel onto the proposed road, and whether sight distance from each driveway access point will be sufficient to avoid safety hazards.

The inconsistencies of the proposed roadway design with County and Caltrans roadway standards, the potential for the roadway not to accommodate emergency vehicles, and the lack of clarity regarding driveway access, pose potentially significant traffic safety hazards. This issue should be further examined in an EIR.

Currently, Alta Way has intermittent sidewalks and no bicycle lanes. The proposed design for the extension of Alta Way has neither sidewalks nor bicycle lanes. The road extension would not, however, create a barrier to pedestrians or bicyclists, and no impact of this kind would occur.

Once Project construction is completed, the ten residences would generate traffic typical of residential areas and compatible with the existing uses of roads in the vicinity, and impacts related to incompatible uses would not occur. Please refer to the previous discussion regarding construction traffic.

<b>c) Inadequate emergency access or access to nearby uses?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ X ]</b>	<b>[ ]</b>	<b>[ ]</b>	<b>[ ]</b>

As noted in the previous discussion, the proposed design for the Alta Way extension has a road width of 20 feet with no shoulders, less than the design standard contained in Marin County Code §24.04.110. Combined with other non-standard design features, including sharp vertical and horizontal curves and the potential for inadequate driveway access noted in the previous discussion, the Project could result in inadequate emergency vehicle access to the new residences constructed under the Project. This could be exacerbated if street parking further reduces available roadway width and turning movements. It is noted that currently, the fire turn-around at the existing terminus of Alta Way is often used for parking, and no no-parking signs are posted in the turn-around.

The Fire Marshall has submitted comments on the Project (Hilliard, 2018), which include a requirement for the road extension and driveways to have turnouts every 150 feet or as specified by the Southern Marin Fire Protection District (SMFPD).

Alternatively, turnouts may not be needed if parking were not allowed on the roadway, in order to maintain an unobstructed width of 20 feet to allow vehicles to pass (Wong, 2018). Currently, the Project plans do not show turnouts, other than the fire turn-around at the end of the proposed road extension, and it is unclear whether a no-parking restriction would be or could be enforced. The Fire Marshall has also stated that having only one means of egress and ingress from the Project site poses a hazard for emergency responders and for residents attempting to evacuate from their residences during an emergency, such as a wildfire (Hilliard, 2018).

The known and unknown design features of the roadway extension and driveway access, including roadway width, lack of turnouts, only one means of ingress and egress, and uncertainties regarding driveway access and provision for parking, pose a potential for inadequate emergency access to the new residences constructed under the Project. This would be a significant impact, and should be further examined in an EIR.

<b>d) Substantial impacts upon existing transportation systems, including rail, waterborne or air traffic systems?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

No rail, waterborne, or air traffic systems currently operate in the vicinity of the Project site, and the Project would not affect any such systems. No impact of this kind would occur.

#### **References:**

Caltrans, 2017a. 2016 Traffic Volumes (for ALL vehicles on CA State Highways): Route 1. <http://www.dot.ca.gov/trafficops/census/volumes2016/Route1.html>  
Accessed December 17, 2107.

Caltrans, 2017b. Highway Design Manual. Available at:  
<http://www.dot.ca.gov/design/manuals/hdm.html>

Hilliard, Fred, 2018. Letter from Captain Fred Hilliard, Deputy Fire Marshall, Southern Marin Fire Protection District, to Marin County Community Development Department and Department of Public Works, re: Alta Way Extension Project. February 6, 2018.

Prism Engineering, 2017. Peer Review and Supplemental Analyses for Sight Distance and Capacity / Queues: W-Trans Studies for the Alta Way Project, Marin County, CA. Prepared for Sicular Environmental Consulting and Natural Lands Management, August 16, 2017.

Transportation Injury Mapping System, 2017. *Transportation Injury Mapping System (TIMS)*, Safe Transportation Research and Education Center, University of California, Berkeley. 2017, a website found at <https://tims.berkeley.edu/>

Wong, Jason, 2018. Personal communication (email) with Captain Fred Hilliard, Deputy Fire Marshall, Southern Marin Fire Protection District, with Jason Wong, Marin

County Department of Public Works, regarding Alta Way Grading Permit GP16-003. January 24-February 12, 2018.

W-Trans, 2016a. Traffic Study for the Alta Way Project. Prepared by W-Trans for Mr. Daniel Chador, February 9, 2016.

W-Trans, 2016b. Sight Distance and Queuing Analysis for the Alta Way Project. Prepared by W-Trans for Mr. Daniel Chador, September 8, 2016.

## 8. BIOLOGICAL RESOURCES

### Biological Resources Setting

The assessment of potential impacts on biological resources is based on a review of the Biological Site Assessment for the Alta Way Road Extension and Residential Development at 42 Alta Way, Mill Valley, California (WRA 2016a) and field verification of the biological resources and existing conditions at the Project area. While the title of the Biological Site Assessment Report appears to focus on the roadway extension and the development of only one lot, the report in fact evaluates biological resources in the entire Project area described in the Project Description for this Initial Study.

A site visit on April 16, 2017 by Julia King of JK Botany on behalf of Sicular Environmental Consulting was used to confirm that site conditions remain as described in the Biological Site Assessment. Additionally, the Alta Way Tree Survey Report (WRA 2016b) and Defensible Space Vegetation Management Plan (Blayney, 2016) were reviewed for the preparation of this study. These biological reports included a review of aerial photography, the San Rafael USGS 7.5' quadrangle map to identify potential Stream Conservation Areas (SCA), National Resources Conservation Service (NRCS) mapped soil types, the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) and the list of federal threatened and endangered species in the vicinity of the Project. The habitat assessment contains detailed descriptions of existing conditions and conclusions regarding the presence or absence of sensitive biological resources. Biological information regarding specific natural elements and special-status species is summarized below.

#### *Would the proposal result in:*

<b>a) Reduction in the number of endangered, threatened or rare species, or substantial alteration of their habitats including, but not necessarily limited to:</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
<b>1) plants; 2) fish;</b>	<b>[ X ]</b>	<b>[ ]</b>	<b>[ ]</b>	<b>[ ]</b>
<b>3) insects; 4) animals; and</b>				
<b>5) birds listed as special-status species by State or Federal Resource Agencies?</b>				

The six vegetation mapping units within the Project area include California bay forest, non-native annual grassland, non-native mixed woodland, eucalyptus grove, broom patches and purple needlegrass (*Stipa pulchra*) grassland<sup>16</sup> communities as classified based on Sawyer et al, (2009) descriptions. All of these habitats are considered non-sensitive. No wetlands, waters, riparian, or other aquatic communities were observed within the Project site boundary. The proposed Project area and vegetation mapping units are shown in Figure 8-1 Vegetation Communities.

CNDDDB Database maps and information indicate that several special-status plants (Figure 8-2) and wildlife (Figure 8-3) have occurrences in the vicinity of the Project area. However, because of absence of essential habitat characteristics, lack of connectivity to suitable habitat, previous disturbance, slope and exposure, soil type, and urban setting, suitable habitat for these species was determined absent and no special-status plant or wildlife species were determined to have the potential to occur within the Project site. Three non-listed species monitored by agencies, Townsend's big-eared bat (*Corynorhinus townsendii*), northern spotted owl (*Strix occidentalis caurina*), and Monarch butterfly (*Danaus plexippus*), were considered to have a low potential to occur based on a marginal habitat element presence within the Project area. These species were determined not to have the potential for specific Project site occurrence due to the absence of several prerequisite habitat conditions required (WRA 2016a).

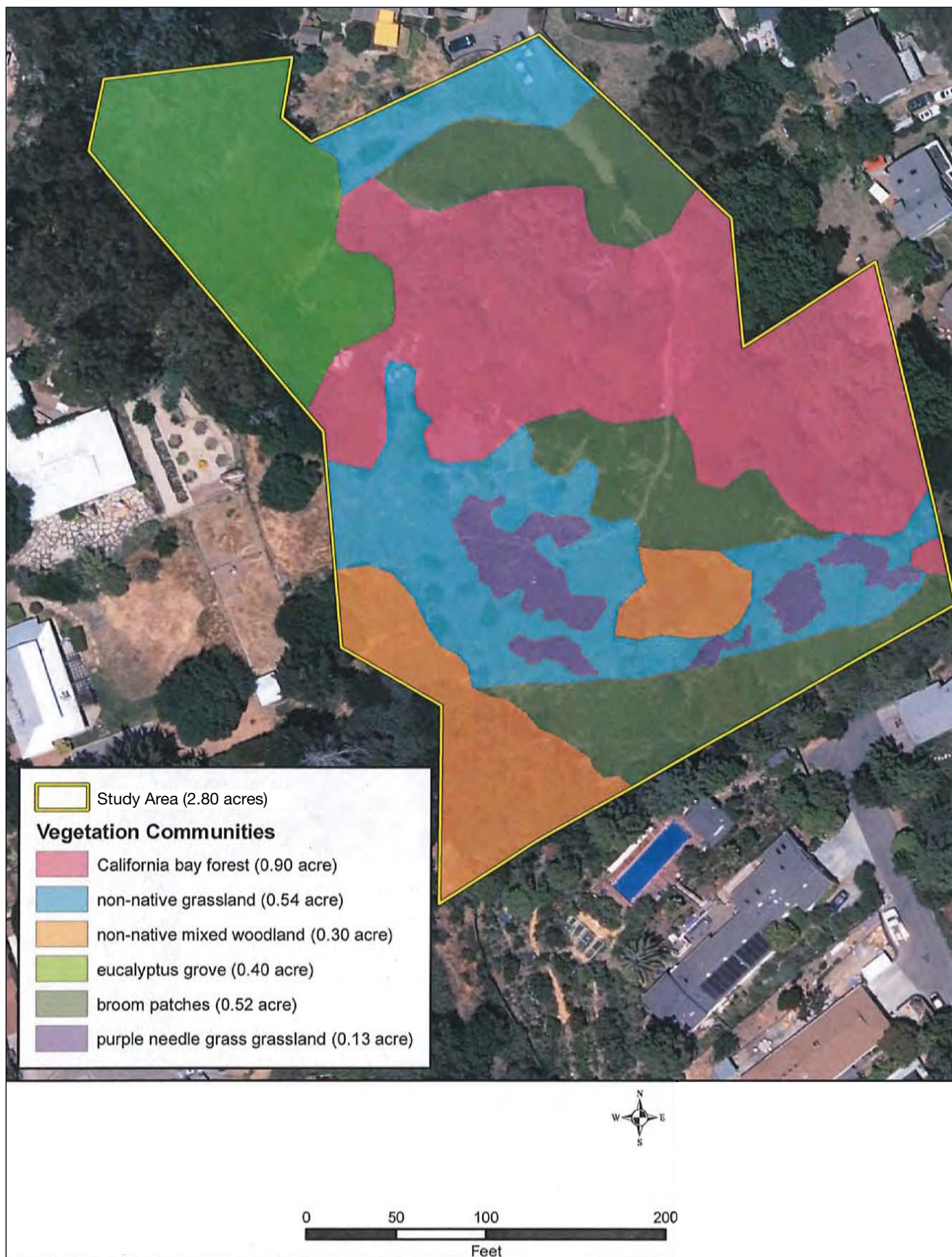
No special-status plant species were observed within the Project site or its immediate surroundings during the site visit, despite the site visit being conducted during the peak bloom period for the majority of the focal special-status plant species.

### **Nesting Birds**

Some species or taxa of wildlife do not have special-status, but they are nonetheless regarded as a sensitive biological resource. Many of the resident and migratory bird species that may nest in and around the Project site are protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGF). Although the Project area is within a residential area and provides limited wildlife habitat, it does include mature trees and dense shrubs that could be used as nesting habitat by passerine and raptor species protected by the MBTA and CFGF. These protections apply to a wide variety of native birds, including non-migratory species commonly found in developed areas. It is possible that raptors nest in the eucalyptus grove within or adjacent to the Project site. Common raptor species known to occur in the Project area include red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), great-horned owl (*Bubo virginianus*), and barn owl (*Tyto alba*). Raptors

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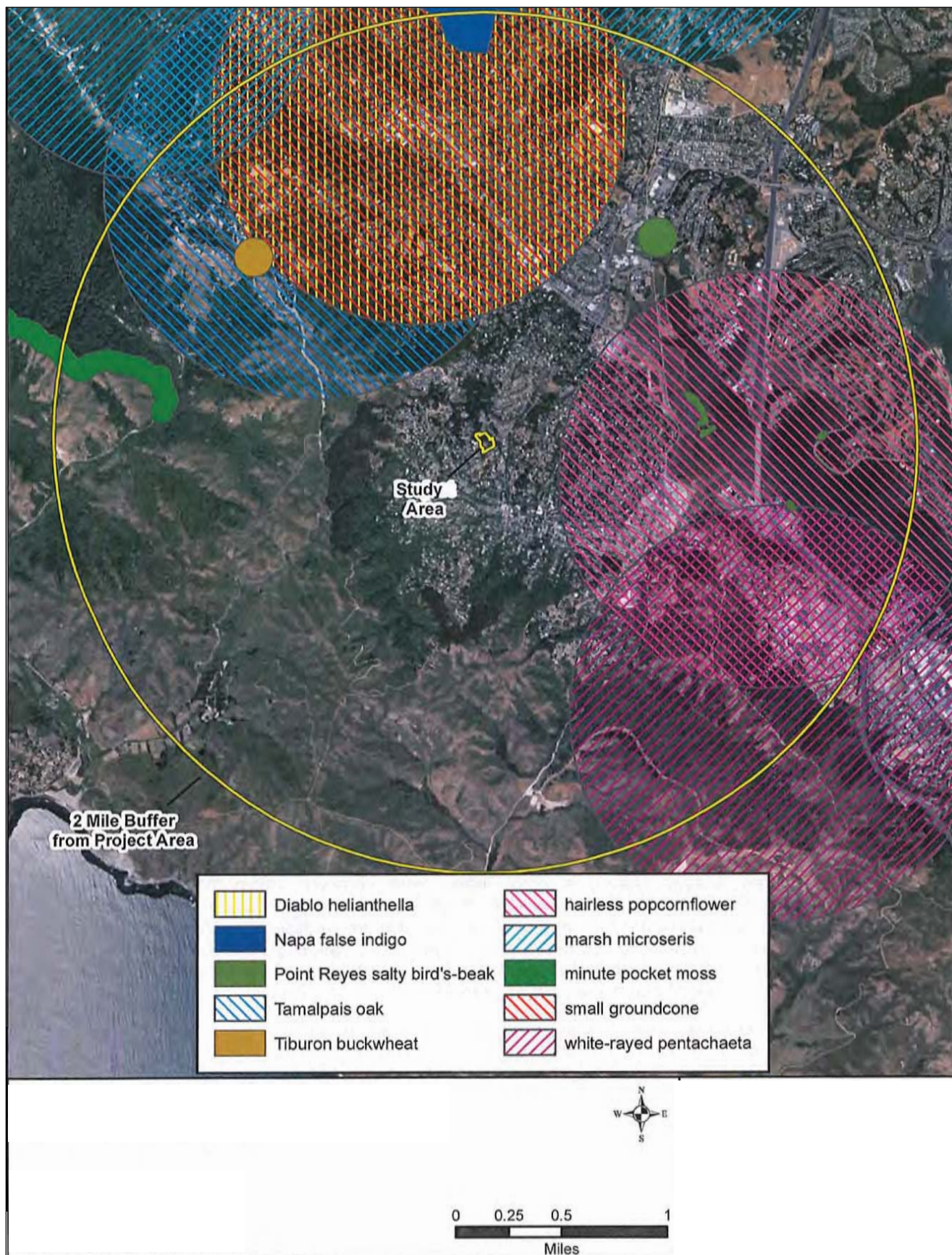
<sup>16</sup> CDFW considers contiguous stands of purple needlegrass as a sensitive resource, defined by code W4 C3?, when the stands are of high quality as loosely defined by the lack of invasives, absence of predation, absence of grazing and/or insect infestations. Within the Project area invasive annual grasses and broadleaves are common and purple needlegrass plants are spaced widely. While they occur in loose aggregation, the needlegrass plants are not the dominant species in the areas in which they occur. The patches of purple needlegrass grassland documented on site are a non-sensitive habitat as they do not meet the qualitative criteria described by the CDFW to be considered a high-quality occurrence of the vegetation type (WRA, 2016a; CDFW, 2017).



SOURCE: WRA, 2016a

**Figure 8-1**  
Vegetation Communities

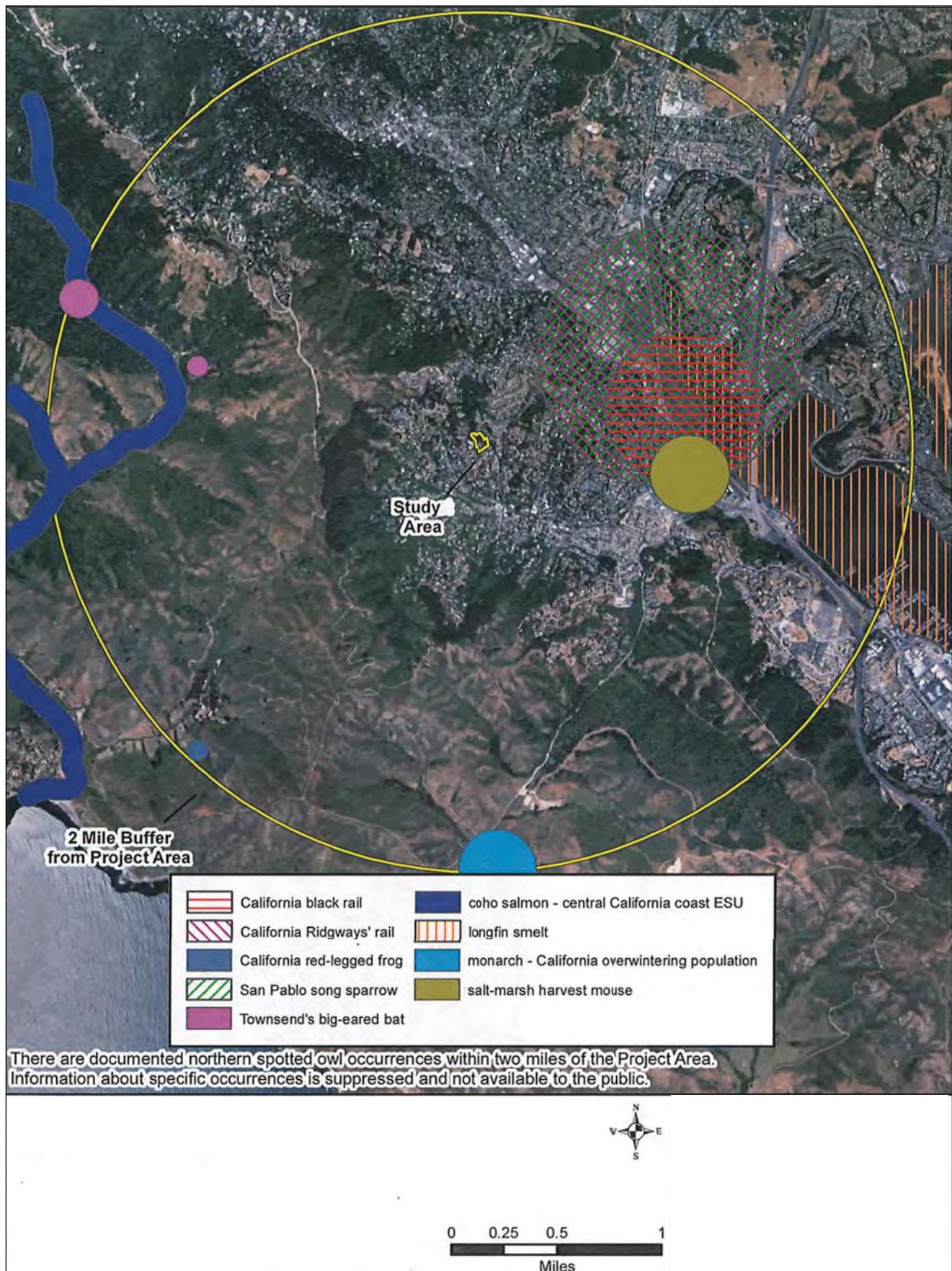




SOURCE: WRA, 2016a

**Figure 8-2**  
Special Status CNDDDB Plant Species  
within 2 Miles of Study Area





SOURCE: WRA, 2016a

**Figure 8-3**  
Special Status CNDDDB Wildlife Species  
within 2 Miles of Study Area

nesting in eucalyptus trees on site would be directly impacted by tree removal, while raptors nesting adjacent to the site could be disturbed by construction, potentially leading to nest abandonment and the death of dependent juveniles.

The death of nesting passerines and/or raptors and their young, protected under the MBTA and/or CFGC, as a result of construction clearing and grubbing, disturbance or harassment would be a significant impact.

While the applicants have committed to conducting pre-construction surveys for nesting birds, Mitigation Measures BIO-1a and BIO-1b add specificity to ensure that the impact is adequately mitigated.

### **Anadromous Fish and Aquatic Habitat**

Historically, many of the perennial streams that drain to San Francisco Bay, including Coyote Creek, supported steelhead trout (*Oncorhynchus mykiss*). Steelhead are an anadromous salmonid species. Juvenile fish rear in freshwater, then migrate out to sea as smolts to mature to adult size before returning to freshwater streams to spawn and repeat the cycle. The Central California Coast population of steelhead, which includes remaining populations in San Francisco Bay, are listed as threatened under the federal Endangered Species Act. There are no recent reports of steelhead utilizing Coyote Creek or its tributaries (Leidy et al, 2005; CDFW, 2013, WRA 2016a), and Coyote Creek is not designated as Critical Habitat for recovery of the species by the National Marine Fisheries Service (NMFS, 2005). Still, the San Francisco Bay Basin Water Quality Control Plan (Basin Plan) lists Cold Freshwater Habitat (COLD) as one of the beneficial uses of Coyote Creek (RWQCB, 2017). Furthermore, a California Department of Fish and Wildlife survey of fish habitat in Coyote Creek in 2009 found that habitat quality was generally poor. The report nevertheless recommended management of Coyote Creek as an anadromous, natural production stream.

Apart from fish, it is likely that Coyote Creek supports other native aquatic organisms, including amphibians and invertebrates, though no such special status species have been reported from the lower watershed (WRA, 2016a).

In the 1960s, the Army Corps of Engineers constructed flood control structures in the lower reach of Coyote Creek, extensively modifying and degrading aquatic habitat. The creek drains to the 106-acre Bothin Marsh Preserve, which supports sensitive species including Ridgway's rail (*Rallus obsoletus*), salt marsh harvest mouse (*Reithrodontomys raviventris*) and Point Reyes bird's beak (*Cordylanthus maritimus*) (Southern Marin Watershed Program, 2016, WRA 2016a).

As discussed in Section V.3, Geophysical, soil excavation and grading for road and lot development and the removal of trees could result in the short term destabilization of earthen materials. While sediment entering stream channels in stormwater runoff could degrade aquatic habitat, Section V.3, Geophysical, finds that sufficient regulatory requirements are in place to reduce impacts of erosion and stream sedimentation to less than significant.

Section V.4, Water, discusses the potential for the Project to increase stormwater runoff, and identifies a potentially significant impact because this could destabilize stream channels, possibly resulting in bank or bed erosion and sedimentation. If this



were to occur, it could degrade aquatic habitat in Coyote Creek and Bothin Marsh. This could result in a significant impact, and should be further examined in an EIR.

### **Mitigation Measures**

**Mitigation Measure BIO-1a: Protections for Nesting Passerines.** The following mitigation measures shall be implemented to avoid impacts to breeding birds protected by the MBTA and CFGC. These measures shall apply both to Phase I and Phase 2 of Project construction.

Breeding Season: March 1 through August 1. If ground disturbance or removal of vegetation occurs between March 1 and July 31, pre-construction surveys shall be performed by a qualified biologist no more than 14 days prior to commencement of such activities to determine the presence and location of nesting bird species. If active nests are present, establishment of temporary protective breeding season buffers will be used to avoid direct mortality of these birds, nests or young. The appropriate buffer distance is dependent on the species, surrounding vegetation, and topography and shall be determined by a qualified biologist as sufficient to prevent nest abandonment and avoid direct mortality during construction.

Non-breeding Season: August 1 through February 28. Ground disturbance and removal of vegetation within the Project Area does not require pre-construction surveys if performed between August 1 and February 28.

**Mitigation Measure BIO-1b: Protection for Nesting Raptors.** If construction is planned to occur between January 1 and August 31, no more than 14 days prior to construction a qualified biologist shall conduct pre-construction surveys for nesting raptors in accordance with established USFWS Migratory Bird Treaty Act Nationwide Standard Conservation Measures survey protocols. For the Project, site surveys shall include the following: Raptor nest surveys will cover a minimum of a 500-foot radius around the construction area. If nesting raptors are detected, the Project applicants shall establish buffers around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by construction. Buffers around active raptor nests will be 250 feet for non-listed raptors, unless a qualified biologist determines that smaller buffers would be sufficient to avoid impacts to nesting raptors. Factors to be considered for determining buffer size shall include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers shall be maintained until a qualified biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival.

Non-Breeding Season: No pre-construction surveys or other protections for raptors are required outside the typical breeding season (September 16 to December 31).

### **Significance with Mitigation**

Implementation of Mitigation Measures BIO-1a and BIO-1b will ensure that nesting passerines and raptors are adequately protected. With implementation of these measures, the impact on nesting birds would be reduced to less than significant. The potential for the Project to contribute to degradation of aquatic habitat in Coyote Creek should be further examined in an EIR.

b) Substantial change in the diversity, number, or habitat of any species of plants or animals currently present or likely to occur at any time throughout the year?	Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	Not Applicable
	[ ]	[ X ]	[ ]	[ ]

### Wildlife

Habitat losses to California bay forest, non-native grassland, non-native mixed woodland, eucalyptus grove, broom patches and purple needlegrass grassland that would occur through the development of the Project. This will decrease the habitat available for foraging, nesting, or breeding of several commonly occurring wildlife species in the area such as California quail (*Callipepla californica*), various other passerines, snakes, raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), coyote (*Canis latrans*), foxes (*Vulpes Vulpes*) and black-tailed deer (*Odocoileus hemionus*). All of these animals are common in urban and rural residential areas and will continue to use the habitat in and around the development area for their lifecycles. Some of these animals have experienced an expansion in range due to urban development and with the low housing density within the region of the development area these species numbers are not expected to decline. The displacement of common wildlife species from the Project area is a less than significant impact.

### Trees

The Alta Way Tree Survey (WRA 2016b) identified 66 trees within the Project site that are protected under Marin County Code §22.27 (Native Tree Protection and Preservation) of which 44 are “protected” size, 18 are “heritage” size and 4 potentially exempt due to the presence of Sudden Oak Death (SOD). Both protected coast live oak and California bay would be removed to facilitate road and building site grading for the 10 lots over two phases of construction. During Phase I and Phase II, 25 and 39 protected trees would be removed during grading, respectively.

The applicants have proposed to replant the protected trees which are removed at a three-to-one (3:1) ratio (Marin County Code §22.27.040 requires 2:1 replacement), which would result in the planting of 75 replacement trees for 25 removed during Phase I. Development of Phase II is expected to result in the removal of an additional 39 protected trees as well as additional native and non-native trees, shrubs, and grasslands. The planting program described above for Phase 1 would also be applied to Phase 2, resulting in the planting of 117 trees to replace the 39 protected trees removed, as well as replanting of other native trees, shrubs, and grasses. Areas disturbed by grading during both phases would be restored with native trees, shrubs, and herbaceous species. A native seed mix would be used for erosion control and ground cover, which would include native grass and herbaceous species found within the Project site, including purple needlegrass (*Stipa pulchra*).

If adequate space is not available on-site for the entirety of 192 replacement trees, the applicants have committed to funding an in-lieu payment of \$500 to the Marin County Tree Preservation Fund for every tree below the required number.

The removal of a total of 64 trees protected by the County's Native Tree Preservation and Protection code would be a potentially significant impact unless mitigated. The implementation of onsite replacement and/or off site mitigation would be used to reduce impacts to protected trees to a less than significant level. While the applicants have committed to a replanting program and if necessary payment of in-lieu fees, Mitigation Measure BIO-2 adds specificity to ensure that the impact is adequately mitigated.

### **Mitigation Measures**

**Mitigation Measure BIO-2.** Prior to commencement of any construction activities that would result in vegetation disturbance or removal, the applicants shall submit and implement a Native Tree Protection and Replacement Plan prepared by a qualified arborist. The plan shall outline measures required to minimize or eliminate indirect impacts to protected trees during Project construction. The Plan shall include measures including but not limited to the following:

- Incorporate all measures identified in the Project's arborist report that are identified as necessary to reduce construction-related impacts to trees that would remain after construction.
- Identify a Tree Protection Zone (TPZ) and specify fencing and other requirements for adequately protecting trees and trunks which shall remain undisturbed on site through construction. Identify any additional protective measures necessary to protect trees and trunks.
- Specify construction activities that require oversight by a qualified arborist.
- Procedures shall be clearly identified for addressing trees damaged during construction, including procedures for replacement planting or payment of in-lieu fees if the damaged tree is to be removed, as determined by a qualified arborist.
- Identify replacement trees to compensate for the loss or damage to protected trees during construction. Trees that are removed or significantly damaged shall be replaced with minimum 5-gallon trees at a 3:1 ratio in appropriate locations around the Project site. A projected removal of 64 protected trees equates to 192 replacement trees within the Project site. For each replacement tree which cannot be planted within the Project site, a \$500.00 fee shall be paid to the Marin County Tree Preservation Fund.
- Areas disturbed by grading during both phases shall be restored with shrubs and herbaceous species. A native seed mix shall be used for erosion control and ground cover, which shall include native grass and herbaceous species found within the Project site, including purple needlegrass.

## Significance with Mitigation

Mitigation Measure BIO-2 would ensure that tree protection and replacement occurs in compliance with Marin County Code §22.27. With implementation of Mitigation Measure BIO-2, the impact would be reduced to less than significant.

<b>c) Introduction of new species of plants or animals into an area, or improvements or alterations that would result in a barrier to the migration, dispersal or movement of animals?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

The Project is not likely to result in the introduction of new species of plants into the area that would result in a barrier to the migration, dispersal, or movement of animals. Activities associated with implementation of the Project and development of features supporting future residences would result in the conversion of non-sensitive habitats that are populated with a high percentage of non-native invasive plant species including many which are listed on the California Invasive Plant Council inventory. Protected trees, some of which are infected by SOD, that are removed as a result of the Project would be replaced or an in-lieu fee paid, per Mitigation Measure BIO-2.

The Project would result in the removal of portions of non-sensitive vegetation communities, including communities such as eucalyptus grove, non-native annual grassland, and broom patches which are dominated by highly invasive noxious weeds. Removing non-native plant species and non-sensitive habitat will result in vegetation removal impacts that would be less than significant.

Because the Project site is within the Wildland-Urban Interface (WUI), new landscaping for each developed lot would be required to comply with Marin County Fire Department Fire Protection Standard 220, Vegetation Management. Compliance includes development, submittal, and approval of a Vegetation Management Plan.<sup>17</sup> This rule requires establishment of a defensible space zone around structures that must be planted with fire-resistant plants and irrigated if necessary. Standard 220 requires property owners to use the FireScope Plant selection list on the University of California Cooperative Extension Pyrophytic vs. Fire Resistant Plants brochure or other approved plant lists as determined by the Fire Marshal, and to select native or domesticated plants that best suit the architectural and planning design of the proposed Project. Slope, soil type, drought resistance shall be considered when selecting plant types. Standard 220 includes a list of prohibited plants, which includes many common invasive species. Adherence to Standard 220 will ensure that the Project does not result in introduction of invasive plant species.

Areas disturbed by grading but not permanently covered by a structure would be protected from potential erosion with native trees, shrubs, and herbaceous species as

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<sup>17</sup>A plan for Lot 42 has already been prepared (Blayney, 2016).

discussed above. A native seed mix would be used for erosion control and ground cover, which would include native grass and herbaceous species found within the Project site, including purple needlegrass.

The Project site is surrounded by urban development consisting of single family homes and roadways, as the west, south and eastern borders of the Project site abut developed residential areas. Wildlife access to the Project site from the north through undeveloped lands currently exists. However, the Project site is a dead end for local wildlife due to the constraints on the west, south and eastern boundaries. Migratory corridors do not exist through the property. Common wildlife species that occur in the local area such as owls, Cooper's hawk, red-tailed hawk, California quail, various other passerines, snakes, raccoon, Virginia opossum, coyote, non-native foxes, and black-tailed deer could still travel along the ridge to the north of the Project site after development.

As the Project site is surrounded by urban development, domesticated pets such as cats and dogs have long been associated with the Project site and the surrounding neighborhood. The occurrence of new cats or dogs in the neighborhood would be consistent with existing conditions. The Project site does not serve as a key feature in the dispersal, migration or movement of animal species in the region. The Project would not result in a significant impact related to this issue.

## References

Blayney, Donald L., 2016. Defensible Space Vegetation Management Plan for Lot 42, Alta Way, Mill Valley, CA. Prepared for Marin County Fire Department and the County of Marin, by Donald L. Blayney and Associates, Landscape Architecture and Planning. February 16, 2016.

California Department of Fish and Wildlife (CDFW), 2013. East Marin County San Francisco Bay Watersheds Stream Habitat Assessment Reports: Coyote Creek. Surveyed 2009.

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Units of Pacific Salmon and Steelhead in California; Final Rule. Federal Register, Vol. 70, No. 170, September 2, 2005.

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WRA, Inc., 2016a. Biological Site Assessment for Alta Way Road Extension and Residential Development at 42 Alta Way, Mill Valley, California. Prepared for Mr. Daniel Chador, February 23, 2016.

WRA, Inc., 2016b. Tree Survey Report for Alta, Tamalpais Valley, Marin County, California. Prepared for Mr. Daniel Chador, February 2, 2016.

## 9. ENERGY AND NATURAL RESOURCES.

### *Would the proposal result in:*

a) Substantial increase in demand for existing energy sources, or conflict with adopted policies or standards for energy use?	Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	Not Applicable
	[ ]	[ ]	[ X ]	[ ]

Project construction and the operation of ten single family residences under the Project would consume energy in the form of electricity and natural gas as well as gasoline associated with car trips. However, this increase would be minor. Construction of the residences would be required to meet the minimum green building requirements of the Marin County Building Code (Marin County, 2016), and California Code of Regulations Title 24, Part 11, which contains the State's green building requirements, known as CalGreen. These green building requirements include energy efficiency standards that would reduce energy consumption by the Project. Therefore, this impact would be less than significant.

<b>b) Use of non-renewable resources in a wasteful and inefficient manner?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

Construction and operation of the Project would consume non-renewable resources including diesel fuel, gasoline, natural gas, and electricity. However, the Project, including ten future single-family residences, would be required to meet the requirements of the Marin County Building Code and CalGreen, in order to reduce the amount of energy consumed. Therefore, the Project would not result in the use of non-renewable resources in a wasteful and inefficient manner and this impact would be less than significant.

<b>c) Loss of significant mineral resource sites designated in the Countywide Plan from premature development or other land uses which are incompatible with mineral extraction?.</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>

The Project site is not designated in the Countywide Plan as a significant mineral resource site (Marin County, 2007), and there are no mineral extraction sites or operations in the vicinity of the Project site. Therefore, there would be no impact of this kind.

#### **References:**

Marin County, 2007. Marin Countywide Plan Update, Map 6.1.3a: Tamalpais Area Land Use Policy Map.

Marin County Community Development Agency, 2016. Green Building Requirements Fact Sheet. [https://www.marincounty.org/~media/files/departments/cd/planning/sustainability/green-building/2016\\_standards\\_for\\_compliance\\_county-of-marin.pdf?la=en](https://www.marincounty.org/~media/files/departments/cd/planning/sustainability/green-building/2016_standards_for_compliance_county-of-marin.pdf?la=en)

## 10. HAZARDS

*Would the proposal involve:*

	Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	Not Applicable
a) A risk of accidental explosion or release of hazardous substances including, but not necessarily limited to: 1) oil, pesticides; 2) chemicals; or 3) radiation)?	[ ]	[ ]	[ X ]	[ ]

The proposed Project would involve construction activities that use limited quantities of hazardous materials, such as gasoline, diesel fuel, oils and lubricants, paints and thinners, solvents, and other chemicals. The proposed Project would be subject to federal, State, and local laws and regulations governing hazardous materials. As discussed further in Section V.4, Water, topic (c), the Project applicants would be required to comply with federal National Pollutant Discharge Elimination System (NPDES) regulations by applying for coverage under the State Construction General Permit. Under the Construction General Permit, the applicants would be required to implement construction Best Management Practices (BMPs) as set forth in a detailed Stormwater Pollution Prevention Program. These would include measures for storage, use, and disposal of hazardous materials. As a result, the Project would not result in a significant impact related to this issue.

	Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	Not Applicable
b) Possible interference with an emergency response plan or emergency evacuation plan?	[ X ]	[ ]	[ ]	[ ]

The ten proposed residences would all have only one means of ingress and egress, that being via Alta Way. According to the Fire Marshall, this presents a potentially hazardous situation for emergency responders and could inhibit the ability of residents to evacuate the area in the event of a wildfire or other emergency (Hilliard, 2018). This would be a significant impact that should be further examined in an EIR.

	Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	Not Applicable
c) The creation of any health hazard or potential health hazard?	[ ]	[ X ]	[ ]	[ ]

This topic is discussed in detail in Section V.5, Air Quality, topic (b), which finds that the Project could result in a significant health risk from emissions of toxic air



contaminants during Project construction. Implementation of Mitigation Measure AIR-2, Enhanced Exhaust Emissions Reduction Measures, as described in that section, would reduce this impact to less than significant.

<b>d) Exposure of people to existing sources of potential health hazards?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

The Project site is not listed on any of the environmental databases maintained by the State Water Resources Control Board (SWRCB) or the California Department of Toxic Substances Control (DTSC) as a site which has known toxic or hazardous substances located onsite (DTSC 2016; SWRCB 2016). In addition, the Project site is far removed from any sites known to have resulted in contamination from toxic or hazardous substances. As such, the Project would not result in a significant impact related to existing sources of potential public health hazards.

<b>e) Increased fire hazard in areas with flammable brush, grass, or trees?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

The Project site is located within the Wildland-Urban Interface (WUI), as determined by the Southern Marin Fire Protection District (SMFPD) (Hilliard, 2018). Because the Project site contains unmanaged, overgrown, flammable vegetation, including grass, shrubs, and trees, and because it is in close proximity to potential ignition sources, including roadways and homes, it currently poses a substantial fire hazard.

The California Building Code requires new homes in the WUI to be protected from wildfire taking a two-pronged approach:

- Remove flammable materials from around the building;
- Construct the building of fire resistant material.

The Southern Marin Fire Protection District has imposed several conditions on the Project that must be satisfied before a permit of occupancy is issued, or before specified stages of construction (Hilliard, 2016, 2018). These include the following:

- Fire hydrants are required at maximum 350 foot spacing;
- A Vegetation Management Plan, meeting specified conditions, must be submitted to the SMFPD for review and approval for each building permit;<sup>18</sup>

<sup>18</sup> A Vegetation Management Plan for Lot 42 (Blayley, 2016) has been submitted to the County.

- The road extension must include a fire turnaround at the end of the road that meets Southern Marin Fire District Standard 212;
- The road extension and driveways must have turnouts every 150 feet or as specified by the SMFPD, or alternatively, street parking would be prohibited;
- Property owners must comply with California Fire Code Section 304.1.2 and Local Ordinance Section 109.3.2 Abatement of Clearance of Brush or Vegetative Growth from Structures, which require a minimum clearance of 30 feet from the structure, 10 feet from roads and property lines, and keeping vegetation cleared back from any chimney or stovepipe;
- Fire sprinklers are required for all new construction;
- Non-combustible roofing material is required;
- Spark arrestors must be maintained on all chimneys;
- The Project shall comply with California Fire Code Chapter 33 – Fire Safety During Construction and Demolition. These requirements include standards for temporary heating equipment, precautions against fire, flammable and combustible liquids, flammable gases, owner's responsibility for fire protection, fire reporting, access for firefighting, means of egress, water supply for fire protection, standpipes, automatic fire sprinkler systems, portable fire extinguishers, motorized construction equipment, and safeguarding roofing operations;
- Fire access to the Project site as well as the other surrounding properties shall be maintained at all times. Unapproved restrictions in roadway access shall result in citations and vehicles being towed at the owner's expense.

With adherence to the requirements of the California Building Code for new homes in the WUI, and specific requirements imposed on the Project by the SMFPD, the Project will likely result in a reduced risk of fire hazard compared to the existing condition, since unmanaged vegetation will be replaced with landscaping per a fire department-reviewed and approved vegetation management plan, because the residences will be required to be built with sprinkler systems and non-combustible materials, and because access to the site by emergency vehicles will be required. Therefore, the impact would be less than significant.

## References

Blayney, Donald L., 2016. Defensible Space Vegetation Management Plan for Lot 42, Alta Way, Mill Valley, CA. Prepared for Marin County Fire Department and the County of Marin, by Donald L. Blayney and Associates, Landscape Architecture and Planning. February 16, 2016.

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Hilliard, Fred, 2016. Letter from Captain Fred Hilliard, Deputy Fire Marshall, Southern Marin Fire Protection District to Marin County Community Development Agency re: 576 Alta Way, Mill Valley, March 21, 2016.

Hilliard, Fred, 2018. Letter from Captain Fred Hilliard, Deputy Fire Marshall, Southern Marin Fire Protection District, to Marin County Community Development Department and Department of Public Works re: Alta Way Extension Project, February 6, 2018.

## 11. NOISE<sup>19</sup>

### Noise Setting

#### Noise Descriptors

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise is defined as unwanted sound. Sound pressure level has become the most common descriptor used to characterize the “loudness” of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain. Decibels are measured using different scales, and it has been found that A-weighting of sound levels best reflects the human ear’s reduced sensitivity to low frequencies, and correlates well with human perceptions of the annoying aspects of noise. The A-weighted decibel scale (dBA) is cited in most noise criteria. All references to decibels (dB) in this report will be A-weighted unless noted otherwise.

Several time-averaged scales represent noise environments and consequences of human activities. The most commonly used noise descriptors are the equivalent A-weighted sound level over a given time period (Leq)<sup>20</sup>; average day–night 24-hour average sound level (Ldn)<sup>21</sup> with a nighttime increase of 10 dB to account for sensitivity to noise during the nighttime; and community noise equivalent level (CNEL)<sup>22</sup>, also a 24-hour average that includes both an evening and a nighttime sensitivity weighting.

**Table 11-1** identifies decibel levels for common sounds heard in the environment.

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<sup>19</sup> This section is based on a technical report prepared by RCH Group for Sicular Environmental Consulting and Natural Lands Management (RCH Group, 2017).

<sup>20</sup> The Equivalent Sound Level (Leq) is a single value of a constant sound level for the same measurement period duration, which has sound energy equal to the time-varying sound energy in the measurement period.

<sup>21</sup> Ldn is the day-night average sound level that is equal to the 24-hour A-weighted equivalent sound level with a 10-decibel penalty applied to night between 10:00 p.m. and 7:00 a.m.

<sup>22</sup> CNEL is the average A-weighted noise level during a 24-hour day, obtained by addition of 5 decibels in the evening from 7:00 to 10:00 p.m., and an addition of a 10-decibel penalty in the night between 10:00 p.m. and 7:00 a.m.

**Table 11-1: Typical Noise Levels**

Noise Level (dB)	Outdoor Activity	Indoor Activity
90+	Gas lawn mower at 3 feet, jet flyover at 1,000 feet	Rock band
80–90	Diesel truck at 50 feet	Loud television at 3 feet
70–80	Gas lawn mower at 100 feet, noisy urban area	Garbage disposal at 3 feet, vacuum cleaner at 10 feet
60–70	Commercial area	Normal speech at 3 feet
40–60	Quiet urban daytime, traffic at 300 feet	Large business office, dishwasher next room
20–40	Quiet rural, suburban nighttime	Concert hall (background), library, bedroom at night
10–20		Broadcast / recording studio
0	Lowest threshold of human hearing	Lowest threshold of human hearing

Source: Caltrans, 2013

### Noise Attenuation

Stationary point sources of noise, including construction equipment, attenuate (lessen) at a rate of 6 to 7.5 dB per doubling of distance from the source, depending on ground absorption. Soft sites attenuate at 7.5 dB per doubling because they have an absorptive ground surface such as soft soil, grass, or scattered bushes and trees. Hard sites have reflective surfaces (e.g., parking lots or smooth bodies of water) and therefore have less attenuation (6.0 dB per doubling). A street or roadway with moving vehicles (known as a “line” source), would typically attenuate at a lower rate, approximately 3 to 4.5 dB each time the distance doubles from the source, which also depends on ground absorption (Caltrans, 1998). Physical barriers located between a noise source and the noise receptor, such as berms or sound walls, will increase the attenuation that occurs by distance alone.

### **Regulatory Framework**

#### State Guidelines

State Land Use Compatibility Standards for Community Noise are provided in the State of California General Plan Guidelines (OPR, 2003). The guidelines indicate that a Community Noise Exposure up to 60 dB (Ldn or CNEL) is Normally Acceptable for Single Family Residential, and a Community Noise Exposure up to 70 dB (Ldn or CNEL) is Conditionally Acceptable.

### Marin Countywide Plan

Noise policies are included in Section 3.10 of the Built Environment Element of the Marin Countywide Plan (CWP). The CWP refers to the State's acceptable noise levels (described above), and includes the following Implementing Programs:

**Implementing Program NO-1.c**, requires all development to mitigate noise impacts where the project would:

- Raise the Ldn by more than 5 dBA;
- Raise the Ldn by more than 3 dBA and exceed the Normally Acceptable standard; or
- Raise the Ldn by more than 3 dBA and the Normally Acceptable standard is already exceeded.

**Implementing Program NO-1.d** sets a maximum exterior noise level for all new residential units of 60 dBA Ldn, and maximum interior noise level of 45 dBA Ldn.

**Implementing Program NO-1.i** references §6.70.030(5) and §6.70.040 of the Marin County Code, which establish allowable hours of operation for construction-related activities. As a condition of permit approval for projects generating significant construction noise impacts, this Implementing Program requires construction management for any project to include development of a construction noise reduction plan and to designate a disturbance coordinator at the construction site to implement the provisions of the plan.

### Marin County Code

Marin County Code §6.70.030 states that construction noise is allowed from 7 a.m. to 6 p.m. on weekdays and 9 a.m. to 5 p.m. on Saturdays. Construction activities are prohibited on Sundays and holidays.

### **Existing Noise Sources and Levels**

To quantify existing ambient noise levels, RCH group conducted two long-term (48-hour) and six short-term (10-minute) noise measurements at the Project site (RCH Group, 2017). Noise measurement locations are shown in **Figure 11-1**. Noise measurements were made using Metrosonics db308 Sound Level Meters calibrated before and after the measurements. To measure existing 24-hour noise levels at the Project site, noise meters were placed at the center of the site, 650 feet southwest of Highway 1 (Site 2). Additional short-term measurements were conducted at the site at the southern portion of the site (Site 1, 650 feet west of Highway 1), western portion of the site (Site 3, 750 feet southwest of Highway 1), and two measurements each at the end of Alta Way (Site 4, 500 feet southwest of Highway 1) and the intersection of Alta Way and Sunnybrook Lane (Site 5, 100 feet northwest of Highway 1).

The noise measurements are summarized in **Table 11-2**. In general, the Project site is a quiet location, with a noise environment suitable for housing. The predominant source of noise in the vicinity of the Project was traffic noise from Highway 1. Additional noise sources included airplanes, wind, and barking dogs.





SOURCE: Google Earth and RCH Group, 2017

**Figure 11-1**  
Noise Measurement Locations

**Table 11-2: Existing Noise Measurements**

<b>Location</b>	<b>Time Period</b>	<b>Noise Levels (dB)</b>	<b>Noise Sources</b>
Site 1: Southern portion of site, 650 feet west of Highway 1	Monday March 13, 2017 12:13 p.m. to 12:23 p.m.	5-minute Leq's: 50, 51	Traffic on Highway 1 is 48-55 dB. Dog barking is 50-51 dB. Background level is 45 dB. Quieter noises include birds.
Site 2: Center of site, 650 feet southwest of Highway 1	March 14, 12:00 a.m. through March 15, 11:59 p.m. 2017 Tuesday – Wednesday 48-hour measurement	Hourly Leq's ranged from: 44-53  CNELs: 55, 57	Unattended noise measurements do not specifically identify noise sources.
Site 3: Western portion of site, 750 feet southwest Highway 1	Monday March 13, 2017 12:45 p.m. to 12:55 p.m.	5-minute Leq's: 46, 47	Wind is up to 55 dB. Background level is 42 dB. Quieter noises include traffic on Highway 1 and backup beepers from distant construction equipment.
Site 4: End of Alta Way, 500 feet southwest of Highway 1	Monday March 13, 2017 1:05 p.m. to 1:15 p.m.	5-minute Leq's: 48, 50	Airplane is 53 dB. Motorcycle is 50 dB. Background level is 44 dB. Quieter noises include traffic on Highway 1, equipment noise, and a dog barking.
Site 4: End of Alta Way, 500 feet southwest of Highway 1	Thursday March 16, 2017 10:18 a.m. to 10:23 a.m.	5-minute Leq's: 45, 47	Leaf blower is 52 dB. Bird is 52 dB. Background level is 41 dB. Quieter noises include traffic on Highway 1, a distant garbage truck, and gardeners.
Site 5: Intersection of Alta Way and Sunnybrook Lane, 100 feet northwest of Highway 1	Monday March 13, 2017 1:23 p.m. to 1:33 p.m.	5-minute Leq's: 58, 56	Traffic on Highway 1 is 50-64 dB. Motorcycle is 72 dB. Airplane is 55 dB. Pedestrians are 51 dB. Background level is 41 dB.
Site 5: Intersection of Alta Way and Sunnybrook Lane, 100 feet northwest of Highway 1	Thursday March 16, 2017 10:37 a.m. to 10:47 a.m.	5-minute Leq's: 56, 57	Traffic on Highway 1 is 55-60 dB. Approaching traffic is 50-55 dB. Background level is 41 dB. Van on Sunnybrook Lane is 65 dB. Pickup truck on Highway 1 is 64 dB.

Source: RCH Group, 2017

## Existing Sensitive Receptors

Noise sensitive receptors (uses associated with indoor and/or outdoor activities that may be subject to stress and/or significant interference from noise) typically include residential dwellings, hotels, motels, hospitals, nursing homes, educational facilities, and libraries. The nearest sensitive receptors to the Project site are existing single family homes at the end of Alta Way and along Browning Street and Browning Court.

### *Would the proposal result in:*

a) Substantial increases in existing ambient noise levels?	Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	Not Applicable
	[ ]	[ ]	[ X ]	[ ]

## Construction Noise

The use of on-site equipment during the construction phases of the Project would result in increases in ambient noise levels in the Project vicinity. Construction activity would also result in noise from vehicles accessing the construction site (workers, supply deliveries, and trucks used for import or export of soils), but these pass-by vehicles would be limited in number and the noise from them would be similar to other existing pass-by vehicles. The construction noise would extend over several years (to build the road and homes). During that time, noise levels would vary considerably, with most periods having very limited or no construction noise and only limited times when there is constant or near-constant noise. The noise would also be generated from different locations, depending on which lot has building construction. As described in the Project Description, the applicants have proposed a Construction Management Plan that includes designation of a Disturbance Coordinator, whose duties would include noise management. The applicant's Construction Management Plan also contains the following provisions:

- a. Muffle and maintain all equipment used on site. All internal combustion engine-drive equipment shall be fitted with mufflers which are in good condition. Good mufflers shall result in non-impact tools generating a maximum noise level of 80dB when measured at a distance of 50 feet.
- b. Schedule construction activities to have the least impact on noise-sensitive receptors (existing residents) in the area. This shall be accomplished by limiting construction activities, including grading, excavating, and paving, to weekdays between 7:30 AM and 5:30 PM. Allowable construction hours shall be posted clearly on a sign at each construction site.

The applicant's commitment to appoint a Disturbance Coordinator is consistent with CWP Implementing Program NO-1.i. The applicant's stated construction hours are consistent with (and more restrictive than) allowed under Marin County Code §6.70.030.



Given that construction noise associated with the Project would be temporary and intermittent, and would not expose people to significant noise levels nor conflict with adopted noise policies or standards, increases in ambient noise due to Project construction would be less than significant.

### Operational Noise

After construction, impacts from the Project would include any noise generated by the new residences that would affect surrounding land uses. In general, residences are one of the quietest land uses (other than open space), and noise from the new residences would be considered compatible with the surrounding residences.

The primary source of operational noise from the Project would be new vehicle trips from Project residents. Based on an increase of 95 vehicles per day (from 220 to 315 vehicles per day) along Alta Way (W-Trans, 2016), Project-generated traffic is expected to increase noise 1.6 dB, Ldn from 56.1 dBA to 57.7 dBA, Ldn at 30 feet from the roadway center (the approximate distance to the nearest home facades). This increase in traffic noise from the Project would not be considered a substantial increase in the average noise levels along Alta Way, because it is less than the County threshold of 3 - 5 dB increase (Implementing Program NO-1.c) and likely would not be detectable.<sup>23</sup>

Project operations would not result in substantial increases in existing ambient noise levels. These impacts would be less than significant.

<b>b) Exposure of people to significant noise levels, or conflicts with adopted noise policies or standards?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

### Existing Traffic Noise

#### Exterior Noise Level Impacts

Traffic noise from Highway 1, the predominant existing noise source at the Project site, would be perceptible by new residents of the Alta Way Project. The two 24-hour noise measurements at Site 2 (center of the Project site) measured 55 and 57 dB, CNEL. Since the acceptable exterior noise level for single-family residences is 60 CNEL, existing traffic noise on outdoor activity areas would be within the acceptable standard, and the impact would be less than significant.

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<sup>23</sup> It is generally accepted that the average healthy human ear can barely perceive a noise level change of 3 dBA or less (Caltrans, 2013).

### Interior Noise Level Impacts

The closest building facades constructed under the Project would be approximately 650 feet from Highway 1 (the same distance as noise measurement Site 2). As mentioned above, noise levels at this distance ranged from 55 – 57 dB, CNEL. Typical residential construction consistent with the Uniform Building Code (UBC) provides an exterior-to-interior noise level reduction of no less than 25 dB, provided that exterior windows and doors are closed (Bollard, 2005). Assuming typical residential construction, exterior traffic noise exposure of 57 dB CNEL would produce interior noise levels of 32 dB CNEL. Therefore, the Project would be below the Marin County interior noise standard of 45 dB CNEL, and the impact would be less than significant.

### **Construction Noise**

According to the United States Environmental Protection Agency, the construction noise levels of primary concern are often associated with the site preparation phase (U.S. EPA, 1973). Construction activities for the Project associated with site preparation would include site grading, clearing and excavation work. These activities would require the use of numerous pieces of noise-generating equipment, such as excavating machinery (e.g., backhoes, excavators, trenching machines, etc.) and other construction equipment (e.g., bulldozers, compactors, motor graders, paving machines, trucks, etc.).

The noise levels generated by construction equipment would vary greatly depending upon factors such as the type and specific model of the equipment, the operation being performed, the condition of the equipment, and the prevailing wind direction. The typical maximum noise levels for various types of construction equipment that could be used during Project construction are provided in **Table 11-3**. Maximum noise levels generated by construction equipment used for the Project would range from 74 to 89 dB Lmax at a distance of 50 feet (with typical noise levels ranging from 78 to 85 dB). It is unlikely that pile drivers would be needed for construction, and if they were to be used, it would likely be for a short duration, and during the allowable hours in the Noise Ordinance. **Table 11-4** gives average typical construction activity noise levels at 50 feet.

During construction, increased levels of noise could affect sensitive receptors surrounding the Project site. The closest sensitive receptors to the Project site are residences at the end of Alta Way, along Browning Street, and on Browning Court. Project construction would mostly occur 50 feet or more away from these residences (though sometimes construction would occur less than 50 feet away). At a distance of 50 feet, typical construction activity noise levels would range from 81 to 88 dB, Leq. Construction noise levels would be less than this estimate most of the time and would fluctuate throughout the day because equipment would typically not be in use at one location for an extended period of time.

**Table 11-3: Typical Noise Levels from Construction Equipment (L<sub>max</sub>)**

<b>Construction Equipment</b>	<b>Noise Level (dB, L<sub>max</sub> at 50 feet)</b>
Backhoe	78
Compactor (ground)	83
Compressor (Air)	78
Concrete Mixer Truck	79
Crane	81
Dozer	82
Dump Truck	76
Excavator	81
Flat Bed Truck	74
Front End Loader	79
Generator	81
Grader	85
Impact Pile Driver	101
Jackhammer	89
Paver	77
Roller	80
Vibratory Concrete Mixer	80

Notes: L<sub>max</sub> = maximum sound level

Source: FHWA, 2006

**Table 11-4: Typical Construction Activities Noise Levels**

<b>Construction Phase</b>	<b>Noise Level (dB Leq at 50 feet)</b>
Ground Clearing	83
Excavation	88
Foundations	81
Erection	81
Finishing	88

Notes: Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.

Leq = equivalent sound level

Source: U.S. EPA, 1973

As indicated in the Project Description, construction for the Alta Way Project would comply with the guidelines set forth in Marin County Code §6.70.030. Specifically, construction activities would be limited to weekdays between 7:30 a.m. and 5:30 p.m., which is within the period allowed by the Code. The Project Description also indicates that the Project would include other noise control measures including muffling and maintaining all equipment used on site, and designating a Disturbance Coordinator who may be reached during construction hours. With these limitations on construction

hours and additional construction-noise controls in the Project description, the impact of construction noise on nearby sensitive receptors would be less than significant.

### **Operational Noise**

After construction, the primary source of noise affecting the area would continue to be distant traffic noise from Highway 1, not related to this Project. As described in a) above, Project-generated traffic is expected to increase noise from 56.1 dBA to 57.7 dBA (1.6 dB increase) at 30 feet from the roadway center, which is the approximate distance from the roadway center to the existing homes along Alta Way. Neither the new residences nor the existing residences along Alta Way would be exposed to noise levels in excess of the County Normally Acceptable standard (60 dB Ldn), and the Ldn would not be raised by more than 3 - 5 dBA (Implementing Program NO-1.c). Therefore, the Project would not result in exposure of people to significant noise levels, or conflicts with adopted noise policies or standards. These impacts would be less than significant.

### **References**

Bollard Acoustical Consultants, Inc. (Bollard), 2005. Environmental Noise Assessment, PFE/Walerga Mixed-Use Development. Placer County, California. BAC Job # 2005-585. August 18, 2005.

California Department of Transportation (Caltrans), 2013. Technical Noise Supplement.

Federal Highway Administration (FHWA), 2006. Roadway Construction Noise Model User's Guide.

Governor's Office of Planning and Research (OPR), 2003. State of California General Plan Guidelines.

RCH Group, 2017. Technical Noise Report, Alta Way, Marin County, California. Prepared For Sicular Environmental Consulting and Natural Lands Management, November, 2017.

United States Environmental Protection Agency (U.S. EPA), 1973. Legal Compilation. Volume 1: Noise.

W-Trans, 2016. Traffic Study for the Alta Way Project. February 9, 2016.

## 12. PUBLIC SERVICES.

***Would the proposal have an effect upon, or result in a need for new or altered government service in any of the following areas:***

<b>a) Fire protection?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

Fire protection services are provided to the Tamalpais Valley by the Southern Marin Fire Protection District. The nearest fire station to the Project site is Station #4, located at 309 Poplar Ave., about 0.7 miles from the Project site. The Project would not result in a need for new or altered fire protection service (Hilliard, 2017).

<b>b) Police protection?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

Police protection services are provided to Tamalpais Valley by the Marin County Sheriff's Department. The addition of ten single-family homes to this area would not be expected to result in the need for new or altered service from the Marin County Sheriff's Department (Harrington, 2017).

<b>c) Schools?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

The Project site is within the Mill Valley Elementary School District and the Tamalpais Union High School District (MarinMap, 2017).

The Mill Valley School District has five elementary schools and one middle school with an enrollment of approximately 3,200 students in grades K through 8. Four of the schools are located within the City of Mill Valley, while two are located in the adjacent unincorporated areas of Strawberry and Tamalpais Valley. The District also includes the unincorporated communities of Alto, Almonte, Homestead Valley, and Muir Beach (Mill Valley School District, 2017). Tamalpais Valley Elementary School is located at 350 Bell Lane, about 1.3 miles from the Project site.

The Tamalpais Union High School District currently enrolls over 4,800 students served in three comprehensive high schools and two alternative programs (Tamalpais Union High School District, 2017).

Both districts have the capacity for additional enrollments that may result from development of the ten residential units under the Project, if approved (Alvarez, 2017; Wallace, 2018).

<b>d) Maintenance of public facilities, including roads?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

Alta Way, from its origin at Sunnybrook Lane to just before the bridge over the Coyote Creek tributary, is maintained by the Marin County Department of Public Works. Past this point, Alta Way is privately maintained. The proposed extension of Alta Way would also be privately maintained. It is the responsibility of the property owners who gain access to their properties along Alta Way to maintain these private roads. Following build-out of the Project, increased traffic on these roads may incrementally increase the need for, and the cost of, road maintenance. These costs would be borne by the property owners who use the road. The County will continue to maintain the lower part of Alta Way, as well as Sunnybrook Lane. Because of the small number and likely type of vehicles that would be used by future residents of the project (i.e., light vehicles), Project operations are not expected to result in a need for new or altered government service for road maintenance.

Project construction would involve heavy trucks that have the potential to damage road surfaces, which could lead to the need for road repairs in order to return the road to its pre-Project condition. The property owners who are responsible for maintaining the privately-maintained portion of Alta Way may enter into an agreement with the applicants to fund road repairs. In any event, road damage from Project construction would not have a substantial effect upon, or result in a need for new or altered government service for road maintenance. The impact would be less than significant.

<b>e) Other governmental services?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

The Project would not result in the need to increase other government services, such as libraries, as the proposed Project would not substantially increase local or regional populations that need such services. Therefore, this impact would be less than significant.

## References:

Alvarez, Beverly, 2017. Personal communication (telephone): Beverly Alvarez, Administrative Secretary for Educational Services, Tamalpais Union High School District, with Dan Sicular, December 15, 2017.

Harrington, Scott, 2017. Personal communication (telephone): Lt. Scott Harrington, Marin County Sheriff's Office, with Dan Sicular, December 15, 2017.

Hilliard, Fred, 2017. Personal communication (telephone): Captain Fred Hilliard, Deputy Fire Marshall, Southern Marin Fire Protection District, with Dan Sicular. December 19, 2017.

MarinMap, 2017. Map Viewer with HTML5, on-line GIS system.  
<http://www.marinmap.org/dnn/>

Mill Valley School District, 2017. Web Site: About Us. Accessed December 15, 2017.  
<https://www.mvschools.org/domain/597>

Tamalpais Union High School District, 2017. District Website: "About" page. Accessed December 15, 2017.

Wallace, Monica, 2018. Personal communication (telephone): Monica Wallace, Mill Valley School District, with Dan Sicular, March 23, 2018.

## 13. UTILITIES AND SERVICE SYSTEMS.

***Would the proposal result in a need for new systems, or substantial alterations to the following utilities:***

a) Power or natural gas?	Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	Not Applicable
	[ ]	[ ]	[ X ]	[ ]

Pacific Gas and Electric (PG&E) is the power provider for the Project area. Currently, utilities run to the existing terminus of Alta Way, where the extended roadway would begin. No new facilities or transmission lines would be required to provide power to the Project (Bailey, 2017). Marin County Code §22.20.110 requires undergrounding of utilities to new developments.

<b>b) Communications systems?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

The Project plans include establishment of service connections to existing communications systems that presently extend to the current end of Alta Way. Connection to existing communication systems would not result in substantial alterations to the existing service infrastructure, and therefore, this impact would be less than significant.

<b>c) Local or regional water treatment or distribution facilities?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

Water supply for the Project is discussed in Section V.4, Water, topic (f). As previously stated, there is adequate water supply for the Project. The Project site is within the Marin Municipal Water District, which would provide hook-ups to the residences developed under the Project if certain requirements are met, as discussed in Section V.4. The Project would therefore not result in the need for new or expanded regional water treatment or distribution facilities.

<b>d) Sewer or septic tanks?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

Sanitary sewer service is provided to the Project Area by the Tamalpais Community Services District (TCSD). TCSD's Sanitation Department is responsible for the collection of sewage from homes and businesses in Tam Valley and pumping it to treatment plants located in Sausalito and Mill Valley. The District maintains approximately 30 miles of pipelines, various manhole and cleanouts, and several pump stations to convey effluent for treatment. The Project would require an extension of existing sewer pipes and hookups for the proposed ten new residences. New hookups are available from the TCSD, upon obtaining a permit and paying a connection fee (Abrams, 2018). While ten new hookups would add incrementally to TCSD's existing system, it would not be expected to result in the need for new or substantially altered pumping or treatment facilities. The impact would be less than significant.



<b>e) Storm water drainage?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ X ]</b>	<b>[ ]</b>	<b>[ ]</b>	<b>[ ]</b>

As discussed in Section V.4, Water, topic (a), the Project applicants completed a hydrologic study that was used as the basis for design of a stormwater collection and conveyance system to serve the proposed extension of Alta Way and the uphill lots that would be developed under the Project. The Study determined that the proposed stormwater system would be appropriately sized to accommodate the design storm, thereby ensuring on- and off-site surface runoff impacts do not occur as a result of exceeding the proposed stormwater conveyance system.

The Study, however, did not assess the potential for the net increase in stormwater runoff to exceed the capacity of the existing conveyance culvert that discharges just downstream of the Alta Way Bridge. This culvert directs stormwater flow from Alta Way and Blue Jay Way into the Coyote Creek tributary. Exceedance of the capacity of this culvert could require replacement of the culvert, which could have significant direct and indirect environmental effects related to construction activities that would be required to replace the culvert. This issue should be further examined in an EIR.

<b>f) Solid waste disposal?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

Solid waste and recycling collection service is provided to the Project area by Tamalpais Community Services District (TCSO) TCSO operates its own vehicle fleet and makes separate weekly collection of refuse, recyclable materials, and greenwaste (Abrams, 2018). Collected materials are taken to the Marin Resource Recovery Center, operated by Marin Sanitary Service and located on Jacoby Drive in San Rafael. There, recyclable materials are processed for market and compostable and disposed materials are transferred to the Redwood Landfill, located north of Novato just east of US 101. Redwood Landfill has a permitted capacity to receive 1,390 tons per day for disposal, has a design capacity of 26,077,000 cy, and is projected to reach capacity in 2036 (Marin County Environmental Health Services, 2014). The EarthCare Composting Facility, located on the landfill site, has a daily capacity of 514 tons of compostable material (CalRecycle, 2017). Solid waste generated by Project construction and future single-family residences would not result in exceedance of the permitted throughput capacity or long-term capacity of these facilities. In addition, the proposed Project would be required to comply with applicable County and State regulations regarding solid waste disposal and recycling, including the CalGreen (Title 24) requirement to recycle 65% of construction and demolition waste. Therefore, this impact would be less than significant.

## References

Abrams, Heather, 2018. Personal communication (telephone): Heather Abrams, General Manager, Tamalpais Community Services District, with Dan Sicular. January 2, 2018.

Bailey, T.J., 2017. Personal communication (telephone): T.J. Bailey, PG&E Resource Management Center, with Dan Sicular, December 20, 2017.

CalRecycle, 2017. Solid Waste Information System (SWIS) Database. Searched December 16, 2017.

Marin Sanitary Service, 2017. Marin Sanitary Service website. Accessed December 15, 2017. <https://marinsanitaryservice.com/residential-services/>

Marin County Environmental Health Services, 2014. Solid Waste Facility Permit 21-AA-0001, Redwood Landfill. CalRecycle Concurrence Date: October 13, 2014.

## 14. AESTHETICS/VISUAL RESOURCES.

### *Would the proposal:*

<b>a) Substantially reduce, obstruct, or degrade a scenic vista open to the public or scenic highway, or conflict with adopted aesthetic or visual policies or standards?</b>	<b>Significant Impact</b>	<b>Potentially Significant Unless Mitigated</b>	<b>Less Than Significant Impact</b>	<b>Not Applicable</b>
	<b>[ ]</b>	<b>[ ]</b>	<b>[ X ]</b>	<b>[ ]</b>

State Route 1, Shoreline Highway, is eligible for designation as a State Scenic Highway, but has not been officially designated at this time (Caltrans, 2017). The Project site is not, however, visible from Shoreline Highway, because dense vegetation, buildings, and fences obstruct the view from nearby sections of the Highway.

Both the Countywide Plan (CWP) and the Tamalpais Area Community Plan (TACP) identify undeveloped ridges and upland greenbelts as important scenic resources. The Project site is not within a designated Ridge and Upland Greenbelt area identified in the CWP, nor is it in an area identified as an important scenic resource in the TACP.<sup>24</sup>

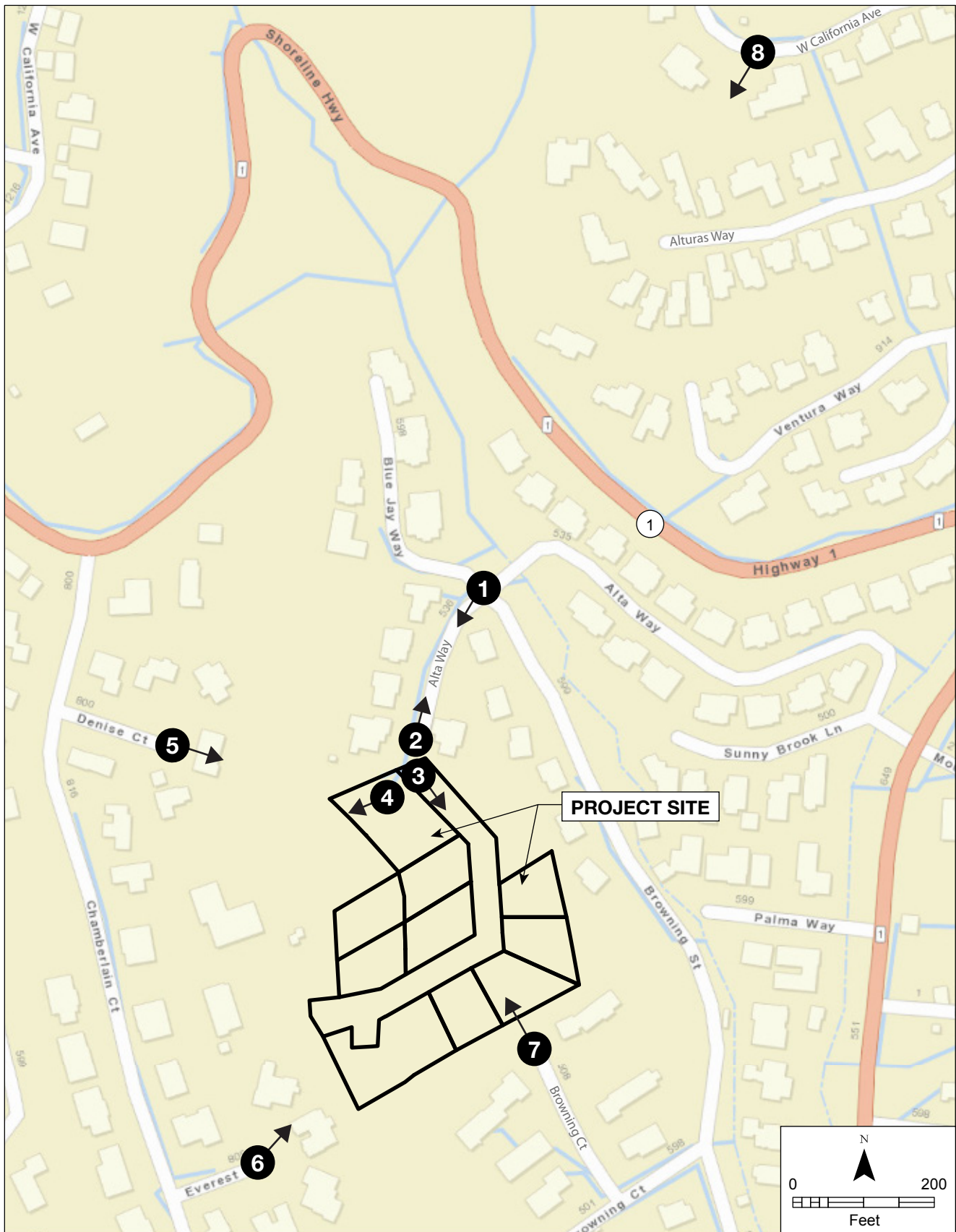
There are few publicly-accessible locations from which the Project site is visible. The Initial Study author visited roads and publicly-accessible locations around the Project site, including Sunnybrook Lane, Alta Way, Denise Court, Everest Court, Chamberlain

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<sup>24</sup> The TACP does identify the upper Shoreline Highway area, from Loring Avenue west, as an area with valuable open space character, but describes the downhill side of the road, where the Project site is located, as characterized by a dense, continuous border of eucalyptus, interrupted only by steep ravines, which contain large bay and oak trees. This description is consistent with the current condition of the roadway observed in this location.

Court, Browning Street, Browning Court, Shoreline Highway, Loring Avenue, and West California Avenue, and found only one from which the Project site was clearly visible, that being the current terminus of Alta Way (Figures 14-1 through 14-5). From this location, some of the undeveloped lots and the existing unimproved road are visible (Figure 14-3). The site has some open space visual amenities, as it contains a variety of vegetation types, including brushy species, grasslands, and trees. The view of the site from this location is not, however, distinctive or important. The Project would not block views of the hillside from the current terminus of Alta Way, though the view would be altered by Project development (see following discussion of scenic resources). Once developed, the view of the Project site would be substantially similar to views of other developed areas in the neighborhood.

Because the Project site is not located in an area identified as visually sensitive or important in the CWP or TACP; because it is visible from few publicly accessible locations; and because where it is visible, the developed Project would blend into the existing landscape, the Project would not substantially reduce, obstruct, or degrade a scenic vista open to the public or scenic highway, or conflict with adopted aesthetic or visual policies or standards, and the impact would be less than significant.



SOURCE: Sicular Environmental Consulting  
and Natural Lands Management; ESRI

**Figure 14-1**  
Location of Photo Points



Alta Way from Blue Jay Way Intersection



Alta Way from End

SOURCE: Sicular Environmental Consulting  
and Natural Lands Management

**Figure 14-2**  
Photos of Alta Way





Project site from end of Alta Way



Project site from end of Alta Way

SOURCE: Sicular Environmental Consulting  
and Natural Lands Management

**Figure 14-3**  
Project Site from End of Alta Way



Photo toward Project Site from Denise Court



Photo toward Project Site from Everest Court

SOURCE: Sicular Environmental Consulting  
and Natural Lands Management

**Figure 14-4**  
Project Site from Denise Court and Everest Court





Photo toward Project Site from Browning Court



Project Site from West California Ave

SOURCE: Sicular Environmental Consulting  
and Natural Lands Management

**Figure 14-5**  
Project Site from Browning Court and West California Ave



b) Have a demonstrable negative aesthetic effect by causing a substantial alteration of the existing visual resources including, but not necessarily limited to: 1) an abrupt transition in land use; 2) disharmony with adjacent uses because of height, bulk or massing of structures; or 3) cast of a substantial amount of light, glare, or shadow?	Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	Not Applicable
	[ ]	[ ]	[ X ]	[ ]

As noted in the previous discussion, the Project site does not contain significant visual or aesthetic resources. While the Project would replace the current open space character of the site, it would change it to a use that is visually compatible with the surrounding uses, consisting of a low-density, wooded neighborhood of single family houses. Height, bulk, and massing of structures would be consistent with the zoning and would not result in an abrupt transition in land use or disharmony with adjacent uses.

New residences that would be developed under the Project can be expected to add new sources of nighttime lighting as well as daytime glare from reflective building surfaces. Furthermore, additional vehicle traffic would add new sources of vehicle lights on roadways accessing the new residences, including existing roadways and the proposed extension of Alta Way. These new sources of light and glare can be expected, however, to be similar to existing sources in the surrounding neighborhood. Set back and landscaping requirements specified in the County's Zoning and Building Codes, and further requirements that may be imposed through Design Review, would reduce the intrusiveness of new sources of light and glare. Therefore, the impacts of new sources of light and glare would be less than significant.

#### References:

California Department of Transportation (Caltrans), 2017. California Scenic Highway Mapping System, Marin County.  
[http://www.dot.ca.gov/hq/LandArch/16\\_livability/scenic\\_highways/](http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/) Accessed December 5, 2017.

## 15. CULTURAL RESOURCES.

### *Would the proposal:*

a) Disturb paleontological, archaeological, or historical sites, objects, or structures?	Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	Not Applicable
	[ ]	[ ]	[ X ]	[ ]

A Cultural Resources Assessment Report was prepared for this Initial Study by WSA/Paleowest, under contract to Sicular Environmental Consulting (Miro et al, 2017). The assessment included a search of cultural resources records at the Northwest Information Center at Sonoma State University, a literature survey, a pedestrian survey of the Project site, and consultation with the Federated Indians of Graton Rancheria. No records or artifacts were identified, and no concerns were expressed by the Tribe regarding the potential for occurrence of archeological or historical resources at the Project site. The record search results indicate that no archaeological or historic sites have been previously recorded within the Project site or within ¼-mile of the Project site. No buildings located within ¼-mile of the Project site are listed in the Office of Historic Preservation Directory. Furthermore, the Cultural Resources Assessment Report concludes that the Project site has a low potential for containing undiscovered resources. Nevertheless, there is a potential for accidental discovery of archeological resources or human remains during excavation of the Project site for roadway construction and home construction. Disturbance or destruction of any such materials could result in a significant impact.

Marin County Code §22.20.040 (D) addresses potential accidental discovery of archeological and historical resources during construction. This Code section states that, in the event that archaeological or historic resources are discovered during any construction, construction activities shall cease, and the Community Development Agency shall be notified so that the extent and location of discovered materials may be recorded by a qualified archaeologist, and disposition of artifacts may occur in compliance with State and Federal law. The disturbance of an Indian midden may require the issuance of an Excavation Permit by the Department of Public Works, in compliance with Marin County Code §5.32 (Excavating Indian Middens). With adherence to these Code requirements, the potential for Project construction to result in disturbance of archeological or historical resources would be less than significant.

As noted in Section V.3, Geophysical, the underlying geology of the Project site consists of the mélange rocks of the Franciscan Complex (USGS, 2000). Paleontological resources including fossils of ancient flora and fauna are rare in the mélange rocks of the Franciscan Complex due to its age and chaotic tectonic history. Chert, a common silica rock in the Franciscan Complex, is made up of microscopic fossils of tiny plankton called Radiolaria that accumulated on the ancient seafloor and solidified. Chert has not been identified on the Project site. Because the Project site lacks fossil-bearing rock types, the Project does not have the potential to contain paleontological objects or sites.

## References

Miro, Vanessa, Brenna Wheelis, David Buckley, and Nazih Fino, 2017. Cultural Resources Assessment Report, Alta Way Extension Project, Marin County, California Prepared by WSA/Paleowest, Orinda, California for Sicular Environmental Consulting and Natural Lands Management, December, 2017.

United States Geological Survey (USGS), 2000. *Geologic Map and Map Database of Parts of Marin, San Francisco, Alameda, Contra Costa, and Sonoma Counties, California*, Miscellaneous Field Studies MF 2337 Online Version: <https://pubs.usgs.gov/mf/2000/2337/mf2337f.pdf>

## 16. TRIBAL CULTURAL RESOURCES.

*Would the proposal result in:*

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	Not Applicable
1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k). 2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in	[ ]	[ ]	[ X ]	[ ]

**subdivision (c) of Public  
Resources Code Section  
5024.1, the lead agency  
shall consider the  
significance of the  
resource to a California  
Native American tribe**

On March 14, 2017, WSA/Paleowest contacted the Native American Heritage Commission (NAHC) by email using the NAHC's electronic request system (Miro et al, 2017). This email described the Project, provided a Project location map and requested information on known Native American cultural resources and a list of Native American individuals or groups with a cultural affiliation to the Project area. Sharaya Souza of the NAHC responded in a letter March 24, 2017 stating that "a record search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed for the area of potential project effect (APE) referenced above with negative results." There being no recorded cultural resources within the Project area, the NAHC provided a list of two Native American individuals or organizations with an interest in the Project area. Both individuals are members of the Federated Indians of Graton Rancheria.

WSA contacted both Tribal members to solicit comment and additional information the individuals might have regarding cultural resources in the Project area. After several communications, Tribal Historic Preservation Officer (THPO) Buffy McQuillen provided no additional information regarding the presence or potential presence of unique ethnic cultural values, or religious or sacred uses within the Project area, but asked that, should any cultural materials be discovered during construction, to please contact the THPO office.

A copy of the NAHC correspondence, as well as a complete record of the Native American contacts comments can be found in CRAR (Miro et al, 2017). Because the Tribe has not identified or expressed concern regarding the presence or potential presence of unique ethnic cultural values, or religious or sacred uses within the Project area, it is concluded that none exist, and this impact is less than significant.

## **References**

Miro, Vanessa, Brenna Wheelis, David Buckley, and Nazih Fino, 2017. Cultural Resources Assessment Report, Alta Way Extension Project, Marin County, California Prepared by WSA/Paleowest, Orinda, California for Sicular Environmental Consulting and Natural Lands Management, December, 2017.

## 17. SOCIAL AND ECONOMIC EFFECTS.

***Would the proposal result in:***

Any physical changes which can be traced through a chain of cause and effect to social or economic impacts.	Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	Not Applicable
	[ ]	[ ]	[ ]	[X]

Because the Project involves development of a paper street and undeveloped legal lots of record in an area of similar land uses, the Project would not be expected to result in social or economic impacts that could in turn lead to adverse physical changes in the environment. There would be no impact of this kind.

## VI. MANDATORY FINDINGS OF SIGNIFICANCE. Pursuant to Section 15065 of the State EIR Guidelines, a project shall be found to have a significant effect on the environment if any of the following are true:

	Yes	No	Maybe
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	[ ]	[ ]	[X]

*As described in Sections V.4, Water, and V.8, Biological Resources, the Project could result in increased stormwater runoff, which would increase peak flows in receiving waters, including Coyote Creek, potentially destabilizing the creek channel and resulting in degradation of aquatic habitat in the creek and in Bothin Marsh. This issue should be further examined in an EIR. As described in Section V.15, Cultural Resources, there are no known historic or prehistoric resources within the Project site, and the Project would not have a significant impact on cultural resources.*

- |  | <b>Yes</b> | <b>No</b> | <b>Maybe</b> |
|--|------------|-----------|--------------|
| b) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? | [ ]        | [ ]       | [ X ]        |

*As discussed throughout Section V, the Project would be consistent with the Project site's General Plan designation and zoning. However, the potential for the Project to result in increased stormwater runoff, as discussed in Section V.4, Water, and the potential for the Project not to provide adequate emergency ingress and egress, as discussed in Section V.7, Transportation/Circulation, and in Section V.10, Hazards, could conflict with County policies adopted for the protection of the environment or interfere with the achievement of these goals, as discussed in Section V.1, Land Use and Planning. These issues should be further examined in an EIR.*

- |  | <b>Yes</b> | <b>No</b> | <b>Maybe</b> |
|--|------------|-----------|--------------|
| c) 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). | [ ]        | [ ]       | [ X ]        |

*The potential for the Project to result in increased stormwater runoff, as discussed in Section V.4, Water, and the potential for the Project not to provide adequate emergency ingress and egress, as discussed in Section V.7, Transportation/Circulation, and in Section V.10, Hazards, could contribute to existing cumulative impacts on aquatic habitat and on public safety. These issues should be further examined in an EIR.*

- |   | Yes | No  | Maybe |
|---|-----|-----|-------|
| d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | [ ] | [ ] | [X]   |

*As described in Section V.5, Air Quality, the Project has the potential to impact human health through construction-related emissions of toxic air contaminants. With incorporation of specified mitigation measures, however, emissions would be reduced to the point that they would not have a substantial adverse effect on human beings. As described in Section V.7, Transportation/Circulation, and in Section V.10, Hazards, the Project could result in inadequate emergency access and egress, potentially posing a threat to human life. This issue should be further examined in an EIR.*

**VII. DETERMINATION: (Completed by Marin County Environmental Planning Manager). Pursuant to Sections 15081 and 15070 of the State Guidelines, the forgoing Initial Study evaluation, and the entire administrative record for the project:**

- [ ] I find that the proposed project WILL NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will 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 the mitigation measures described on an attached sheet have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.
- [ X ] I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

  
 Rachel Reid, Environmental Planning Manager

4/25/18  
 Date

## VIII. Scope of Environmental Issues to be Addressed in an Environmental Impact Report

Table VIII-1 provides a summary of the conclusions reached in Sections V and VI of this Initial Study regarding the potential for significant impacts of the Project. Those topical issue areas for which there is the potential for a significant impact should be further evaluated in an EIR. Those topical issue areas for which impacts would be less than significant with incorporation of mitigation measures should be further reviewed in an EIR to determine the feasibility, adequacy, and legality of the mitigation measures identified in this Initial Study. Those topical issues where no potential of a significant impact is indicated need not be further reviewed in an EIR.

**Table VIII-1: Conclusions Regarding Potential Significance of Impacts**

<i>Topical Issue</i>	<i>Significant</i>	<i>Less than Significant with Mitigation</i>	<i>Less than Significant</i>	<i>Impact Reference</i>
1. Land Use and Planning	X			Impact 1.b
2. Population and Housing			X	
3. Geophysical		X		Impact 3a
4. Water	X			Impacts 4a, 4b, 4d, and 4e
5. Air Quality		X		Impacts 5a and 5b
6. Greenhouse Gas Emissions			X	
7. Transportation/Circulation	X			Impacts 7b and 7c
8. Biological Resources	X			Impacts 8a and 8b
9. Energy and Natural Resources			X	
10. Hazards	X			Impacts 10b and 10c
11. Noise			X	
12. Public Services			X	
13. Utilities and Service Systems	X			Impact 13e
14. Aesthetics / Visual Resources			X	
15. Cultural Resources			X	
16. Tribal Cultural Resources			X	
17. Social and Economic Effects			X	
Mandatory Findings of Significance	X			Impacts VI.a, b, c, and d



## **ALTA WAY EXTENSION PROJECT DOCUMENTS INCORPORATED BY REFERENCE**

The following is a list of relevant information sources that have been incorporated by reference into the foregoing Initial Study pursuant to Section 15150 of the State CEQA Guidelines. The number assigned to each information source corresponds to the number listed in parenthesis following the incorporating topical question of the Initial Study checklist. These documents are both a matter of public record and available for public inspection either online or at the Planning Division office of the Marin County Community Development Agency (CDA), Suite 308, 3501 Civic Center Drive, San Rafael. The information incorporated from these documents shall be considered to be set forth fully in the Initial Study.

1. Marin Countywide Plan, CDA - Planning Division (2007)
2. Marin County Code
3. Tamalpais Area Community Plan, CDA-Planning Division (1992)
4. Marin County Development Standards, Title 24, Marin County Department of Public Works - Land Use & Water Resources Division
5. Soil Survey of Marin County, USDA Soil Conservation Service (1985)
6. Flood Insurance Rate Map Series of Marin County, California, prepared by the Federal Emergency Management Agency
7. Association of Bay Area Governments (ABAG), 2013. Marin County Earthquake Hazard Map. Available online: <http://resilience.abag.ca.gov/earthquakes/marin/>
8. California Department of Conservation, (CDC), 2014. Marin County Tsunami Inundation Maps, available online: [http://www.conservation.ca.gov/cgs/geologic\\_hazards/Tsunami/Inundation\\_Maps/Marin/Pages/Marin.aspx](http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/Marin/Pages/Marin.aspx).
9. Alquist –Priolo Special Studies Zone Map (1974)
10. BAAQMD, 2017. CEQA Air Quality Guidelines, Updated May 2017.
11. Bay Area Air Quality Management District, 2017b, Final 2017 Clean Air Plan, April 19, 2017.
12. California Office of Environmental Health Hazard Assessment (OEHHA), 2015, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, February 2015.
13. Mineral Resources, CDA - Planning Division (1987)
14. California Department of Fish and Wildlife. Rarefind v. 5. Online version of the California Natural Diversity Database (CNDDB).
15. California Department of Toxic Substances Control (DTSC), 2017. EnviroStor database. Available online: <http://www.envirostor.dtsc.ca.gov/public/>
16. County of Marin, 2017. Marin Map, Hazard, Fire Hazard Severity Zone. Available online: <http://www.marinmap.org/Geocortex/Essentials/Marinmap/Web/Viewer.aspx?Site=MMDataViewer>.

17. State Water Resources Control Board (SWRCB), 2017. GeoTracker database. Available online: <http://geotracker.waterboards.ca.gov/>
18. Marin County Sheriff Department, official website, available online at <http://www.marinsheriff.org/>.
19. CalRecycle, Facility/Site Summary Details: Redwood Sanitary Landfill (21AA0001), available online at: <http://www.calrecycle.ca.gov/SWFacilities/Directory/21-AA-0001/Detail/>.
20. Marin County Archaeological Sites Inventory Map, CDA - Planning Division (undated) *confidential*.