



STONEWOOD RESORT

MASTER PLAN

JUNE 2023



PROJECT INFO

SITE ADDRESS

37 Frenchmans Creek Road
Half Moon Bay, CA 94019

ASSESSORS PARCEL NUMBER

048-320-020

PERMITTING AUTHORITY

San Mateo County Planning and Building
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Redwood City, CA 94063
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ZONING & ACREAGE

Planned Agriculture District (PAD/CD)
164.23 acres

GENERAL PLAN DESIGNATION

Agriculture, Coastal Zone

FIRE AUTHORITY

Coastside Fire Protection District
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PROJECT TEAM

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1. INTRODUCTION

Introduction

This plan has been prepared on behalf of the owners in order to provide an overview of the Stonewood Resort, a private development project envisioned at 37 Frenchmans Creek Road in Half Moon Bay, California. While the project is still in its preliminary stages and subject to change, the following discussion provides background information on the existing use of the property, the owner's goals for the project, and physical site improvements. Technical studies that have been completed to date in support of the project are referenced herein and included as appendices.

Project Vision & Goals

SKRRR has been widely regarded as a role model for other agriculture businesses in San Mateo County. When the County first passed a cannabis cultivation ordinance in 2017, it was with the hope and vision that it would provide an opportunity for struggling local farms to diversify their operations and find a new revenue stream to help bolster the existing agriculture which is vital to the community and an irreplaceable piece of San Mateo County's heritage. As the first permittee under the new ordinances, the applicants worked closely with County staff, neighbors, and the Coastside community to bring the County's vision of cannabis's economic stimulus to fruition.

When SKRRR took over operations at 37 Frenchmans Creek Road, they inherited an agriculture operation in dire condition. An outdated business strategy, changes in the local economy, and a history of permit and environmental violations severely limited avenues back to a profitable business. Today, through SKRRR's efforts and investment, the property has been reimagined. Existing, undocumented buildings have been permitted and brought up to building code. Trash and debris previously covering the property and riparian corridors are gone. Illegal dwellings have been removed and crumbling infrastructure has been repaired.

Stonewood Resort is the next step on SKRRR's path of being a role model for agriculture in San Mateo County. The resort is a demonstration that agriculture properties in the unincorporated Midcoast have a wealth of opportunities to support local farming while enhancing coastal recreation. The proposed development will be consistent with County Zoning and General Plan land use designations and the Local Coastal Program. It will not infringe on any existing agricultural use and will not reduce the footprint of prime agriculture soils on the property. New structures and infrastructure will be located outside of environmentally sensitive areas and will utilize technologies at the forefront of environmental sustainability, including all-electric mechanical systems, rainwater/greywater water recycling, and renewable energy sources onsite. Most importantly, the development will allow for continued and expanded agriculture on the property and serve as a marquee destination for recreation on the Coastside and the greater Bay Area.

Master Development Plan Summary

Stonewood Resort includes a comprehensive plan for the development of 37 Frenchmans Creek Road which can be broken down into (3) separate phases of development. Refer to Section 3 for more detailed descriptions of each phase of work.



Table 1.1 Master Development Summary

Phase	Development Component	Approximate Gross Floor Area (sq.ft)	Development Description
Phase I	Farm Labor Housing	5,040	(6) Units, each with (2) Bedrooms, a Full Kitchen, Living Space
	Agriculture Reconfiguration	--	5+ Acres of Expanded Agriculture, Farm-to-Table, U-Pick, Wasabi and Other Crops
	Reservoir Expansion	--	
	Campground	--	12 Camp Sites with a Restroom & Shower
Phase II	Restaurant	2,200	(50) Seat Restaurant
	Clubhouse	8,000	(50) Seat Bar, Lounge Area, Lower Level Social Facilities
	Wellness Center	4,800	1,000 sq.ft gym space, 600 sq.ft massage, 300 sq.ft sauna, 700 sq.ft lockers/showers, 2,200 sq.ft entry/hallway/support space
	Villas	12,000	(12) Units, each with (2) Bedrooms, Kitchenette, Living Space
	Site Amenities	--	Sport Court, Patio Space, Fire Pits, Expanded Reservoirs, Access Roads, Parking, Water Tanks, Greywater Treatment, Eco-Garden, Art Walk
Phase III	Owner Operator Residence	5,000	(5) Bedroom Home, Garage, Workshop, Swimming Pool

Phase I: Construction of up to (6) units of farm labor housing, each accommodating 2 to 4 residents. Farm labor housing is intended to support current and expanded operations for agriculture onsite and at adjacent parcels. Farm labor housing would be located in the valley floor to the northwest of Building 8, adjacent to existing agriculture/cultivation activities. For the reconfiguration of existing agriculture operations outside of current cultivation activities, the applicants are exploring a range of agricultural uses on the property within the footprint of the existing cherry hoopouses and the prime agricultural land within the western valley adjacent to Frenchmans Creek. Current options being studied include organic produce for retail sale and incorporation in farm-to-table dining at the resort. The campground consists of 12 campsites and a shower/restroom structure in the northwest corner of the property. This phase would also include the water reservoir expansion, domestic/firewater treatment, and storage equipment.

Phase II: Development of the clubhouse, restaurant, and wellness center buildings, and up to twelve (12) stand-alone villas located along the eastern ridge of the property. This phase would also include related infrastructure improvements along the ridge.

Phase III: Construction of the owner/operator single-family residence, located on the ocean side of the east ridge, due southwest of the proposed clubhouse and wellness buildings. The single-family residence would also provide accessory use as staging/overflow facilities to support clubhouse operations and visitor-serving space during events.



2. EXISTING SITE OVERVIEW

Geographic Location

The project is located at 37 Frenchmans Creek Road, a bucolic, 164-acre property located east of Cabrillo Highway (CA State Highway 1) in unincorporated San Mateo County. The parcel is tucked into the westernmost foothills of the Santa Cruz mountain range and buffered on all sides by similar agricultural and open space lands. The City of Half Moon Bay lies approximately 1 mile to the west and south, and the unincorporated communities of Miramar, El Granada, and Moss Beach to the north.

Zoning & Land Use Designations

The property is located in unincorporated San Mateo County with Planned Agriculture District / Coastal Development District (PAD/CD) zoning designation. The property lies within the Coastal Zone subject to the Local Coastal Program. The General Plan Landuse Designation is Planned Agriculture Development. The site lies outside of the Urban/Rural Boundary and outside of the Scenic Corridor. The property contains Prime Agriculture Lands within currently developed areas of the site.

The property is also in the process of canceling its Williamson Act agreement. A Williamson Act Contract Non-Renewal Application Form and Williamson Act Cancellation Letter have been submitted to the county, see Appendix 8.

Existing Operations

Historically developed for agricultural purposes, the project site is utilized today primarily for the commercial growing of cannabis, consistent with San Mateo County ordinances. Licenses are maintained for both cultivation and nursery operations, which include year-round harvesting, and are divided into several mixed light greenhouses across the valley floor. Existing structures onsite include approximately 130,000 ft² of greenhouse space, 22,000 ft² of ag-related support buildings, and 100,000 ft² of earth-floor hoop-houses. The property currently does not support any residential dwellings or other habitable spaces.

Topographic Setting

The roughly rectangular property is entered from the southwest at the confluence of perennial Frenchmans Creek and a seasonal tributary known as Loess Creek. These two watercourses run approximately north to south through the parcel forming a gently sloped, narrow, wishbone of riparian valleys bisected by a steep, well-defined ridgeline through the middle of the lot. The ridge extends north to the parcel limits and is dominated by an existing manmade reservoir which has consistently been used for irrigation water storage.

On the east half of the property, Loess Creek is flanked by a steep ridge rising 400 feet above the valley floor and similarly running north-south along the eastern limit of the parcel. This ridge has also been historically farmed and contains its own manmade reservoir. To the west and south, the ridge has views of the Frenchmans Creek valley extending out to the Pacific Ocean. To the east and north, the ridge looks down across Diggs Canyon and the back side of Ox Hill. The east ridge includes the site of the Stonewood clubhouse and wellness center, villas, the proposed owner/operator single-family home, water tanks, and other support infrastructure to support development along the ridge and the valley below.



Environmental Setting

A Biological Resources Report was prepared by Sol Ecology, dated February 28, 2023. The report studied the potential biological resource impacts that may occur from the and provided potential mitigation measures. No sensitive natural vegetation communities, special-status plant species, and special-status wildlife were found to be within the project study area. The project study area only has the potential to support five (5) special-status wildlife species. Potential jurisdictional features on the site include ephemeral drainage from the northwest corner of the site, Frenchmans Creek, Loess Creek, and a man-made perennial wetland. The current proposed site plan shows all planning development to be outside the prescribed setbacks of these features.

Proposed mitigation measures include using construction fencing around the feature's setback areas, implementing a spill prevention plan, stockpiling of materials in designated areas at least 100 ft from the creek, and providing and worker environmental awareness program/training. Refer to the report for more detailed information on the impacts and mitigation measures, see Appendix 11.

Geotechnical Setting

A Geotechnical Hazard Evaluation was prepared by Sigma Prime Geosciences, dated June 24, 2022. The report evaluated the potential geologic hazards that could exist at the hillside resort project site area. After evaluating slope stability, faulting, flooding, liquefaction, and expansive soil hazards, Sigma Prime concluded that there are no potential hazards that render the property infeasible for development. Refer to the report for more detailed information on the potential geologic hazards, see Appendix 9.

Road Access

The property is reached via Frenchmans Creek Road, which connects directly with Cabrillo Highway approximately 1 mile west of the site entrance. The first 0.6 miles from the highway are within Half Moon Bay city limits, although the City does not acknowledge ownership or maintenance of the road. The original road is depicted as a 43 ft right-of-way in the original Bernal Ranch Subdivision, mapped in 1879 and recorded in San Mateo County, March 25, 1911. Across the 37 Frenchmans parcel, the road extends northeast through the site, crosses Loess Creek, and up a switchback alignment to the top of the eastern ridge. The proposed sites for the clubhouse, restaurant, and wellness center are located on this ridge, occupying an existing saddle extending south of the main road.

Beyond the clubhouse development area, Frenchmans Creek Road leaves the property and continues north for 2 miles offsite, following the ridgeline through several parcels before looping southeast at Ox Hill. From there, Frenchmans Creek Road snakes down the hill through the Ox Mountain Sanitary Landfill and eventually connects back to San Mateo Road (Highway 92). A separate branch road near Ox Hill continues northwest along the ridgeline to a radar station maintained by the US Federal Aviation Administration (FAA) at Scarper Peak. A road right-of-way agreement over Frenchmans Creek Road has been in place between the property owners and the FAA since 1958.



Physical Road Improvements

Frenchmans Creek Road generally consists of a 16-20 ft paved asphalt surface with 12 inches of unpaved shoulders. A pavement improvement project was completed in January 2021 as part of a larger project by the applicants for the legalization of several existing greenhouses and permitting the use of facilities for cannabis cultivation (MNA 2018-00022). As part of the pavement project, the entire 1 mile stretch of Frenchmans Creek Road was resurfaced, striped, and widened in select areas for installation of fire truck turnouts and speed tables. This work was completed to satisfy access requirements of the Coastside Fire Protection District (CFPD) and to address general safety concerns of neighboring farms also utilizing the road. Improvements were inspected by the City of Half Moon Bay Public Works Department and CFPD upon completion in February 2021.

Water Tank Storage

There are approximately fifty-five (55) above ground, poly water tanks scattered across the property, mostly ranging from 1,500 to 2,500 gallon capacity, typically clustered in groups of four to eight tanks daisy-chained together. There is also a group of three (3) galvanized steel tanks approximately 5,000 gallons each, and one 28,000 gallon steel tank which was most recently permitted in conjunction with cannabis cultivation and greenhouse legalization.

Surface Water Storage

Existing manmade reservoirs are located along each of the two prominent ridges and are utilized as surface storage for agricultural irrigation. The larger, western reservoir (referred to as Pond 1) has an existing storage capacity of approximately 7.0 acre feet (2.4 MG), based on basin topography and the elevation of the existing concrete outlet structure. The eastern reservoir (Pond 2) has a capacity of approximately 1.5 acre feet (0.49 MG), assuming a 1 foot freeboard below the top of bank. Existing pressure piping is installed at both ponds and appears to be in good working condition, allowing for either pumping up to or gravity flow down from the ponds to the valley floor below.

Irrigation Water Supply

Water supply for current operations comes from several sources, the largest being a permitted surface diversion from Frenchmans Creek. Licenses with the State Water Resources Control Board (License #s 6556 and 10827) permit a maximum of 10.66 acre-feet (3.5 MG) per year, which can only be collected between January 1st and March 31st, and only once the flow in the creek has reached the minimum required bypass flow of 2.8 cfs, set by the State. The settling basin and pump system for the diversion are restricted by an adjustable weir located at the intake manifold. Each year the owners are required to document the condition of the creek and reset the weir as needed to ensure the minimum bypass flow is maintained. Observations in the creek and total diverted volumes are recorded via a flowmeter at the diversion pump and documented in an annual monitoring report which is submitted to the Water Board and California Department of Fish and Wildlife.

The existing reservoirs have a combined water surface area of 1.27 acres and additional 0.82 acres of tributary vegetated land area draining into them. The San Mateo County C.3 Stormwater Technical Guidance manual includes Mean Annual Precipitation maps for San Mateo County which estimate the annual average precipitation for the property at 30 inches. Based on these figures, assumed run-off coefficients of 0.90 for



the area of the pond surface and 0.30 for the vegetated tributary, we estimate the approximate annual rainfall contribution to the reservoir water supply to be around 3.4 acre-ft during years of average rainfall. Combining this with the diversion rights described above, the total existing irrigation water supply is approximately 14.06 acre-ft (4.6 MG).

Domestic Water Supply

One existing domestic well is permitted onsite (State Well No. 155758), located near the southeast corner of Building 9S. Well logs indicate it was drilled in 1985, and installed as a domestic well with a sealed depth of 27 ft and a total depth of 43 ft. Pumping results from the well log indicate a discharge capacity was measured at 1.5 gallons per minute at the time of drilling. Based on feedback from the owners, the well has been silted up and unused for several years. Given the failure of this well, it's our understanding that no other domestic source of water currently exists onsite. To support operations and provide drinking water for staff, clean water is regularly trucked into the property.

A new domestic well has been drilled in December 2022 at the top of the eastern ridge near the proposed clubhouse, see Appendix 4 for location and test results. The well was installed as a domestic well with a total depth of 600 ft and a flowrate of 6.7 gpm. Lab analysis of the well's water showed that total coliforms were present and iron, manganese, and cadmium exceeded Title 22 drinking limits. Treatment will be provided to remove these contaminants from the water prior to distribution to the development.

Table 2.1 estimates water use based on the 2002 EPA Onsite Wastewater Treatment Systems Manual, Chapter 3. Estimates are provided for both weekday (Monday-Thursday) and weekend (Friday-Sunday) use and averaged for daily peak flows. At a flowrate of 6.7 gpm the new well will need to be pumped for approximately 9 hours a day to meet the estimated water use of 3,577 gpd.



Table 2.1 Estimated Water Use

Development Component	Comparable EPA Facility	Water Use Metric	Mon-Thur Quantity	Fri-Sun Quantity	Avg. Daily Quantity	Unit Volume (gal/unit/day)	Daily Volume (gal/day)
(E)Cannabis Nursery	Industrial	Employee	14	2	8.9	13	116
(E)Half Moon Grow	Industrial	Employee	10	2	6.6	13	86
Farm Labor Housing	Apartment House	Person	24	12	18	50	900
Villas	Cabin, Resort	Person	36	48	42	20*	840*
Restaurant	Restaurant	Customer	32	50	40	9	360
Clubhouse Cocktail Lnge	Bar/Cocktail Lounge	Customer	30	50	39	3	117
Clubhouse Lower Level	Assembly Hall	Seat	32	50	40	3	120
Wellness Center	Gym, Showers	Customer	24	30	27	15	405
Staff	Resort Employee	Employee	10	15	12	10	120
Campground	Campground -Developed	Person	12	24	17.1	30	513
Total:							3,577

*Typical daily volumes for water use under Cabin Resort Classification would generally be 40 gal/unit/day. It is expected that a majority of the Villa occupants would utilize the wellness center for showers/bathing and restaurant for dining, such that water use at each Villa is expected to be less, and for the purposes of overall water use, weighting at 50% of the EPA volume.



3. PROPOSED DEVELOPMENT

Farm Labor Housing (Phase 1)

Phase I of the Master Development Plan would consist of permitting and construction of farm labor housing on the valley floor near Building 8. Farm labor housing units would consist of pre-fabricated mobile-home type construction, typically wood framed and set on a permanent raised concrete foundation. The applicants have the goal of constructing housing for a combined twelve (12) bedrooms, for up to twenty-four (24) employees and/or their families, within approximately six (6) stand-alone buildings.

The dwelling units are clustered and located in previously developed/graded areas. The proposed location avoids environmentally sensitive habitat areas and minimizes land-disturbing activity that would be needed to accommodate both the units and adjacent parking facilities. Since there is no domestic water line available for connection, the new well described in *Chapter 2. Existing Site Overview* will be used to supply water to the units. Access to adequate septic facilities are actively being studied in this area with plans to conduct percolation testing for the septic system scheduled for fall 2023.

Current operations at 37 Frenchmans Creek employ up to 20 full-time employees during peak harvest season, all of whom must travel to the property from outside areas. The proposed units will provide current and future staff and their families with safe and affordable options for local housing and will lower vehicle trips to and from the property. SKRRR plans to offer free rent for the first 10 years to their employees living in the proposed farm labor housing.

Agriculture Reconfiguration (Phase 1)

Phase I also includes the reconfiguration of existing agriculture operations on the property. Historically, the previous property owners planted cherry trees that had been poorly maintained and not profitable. Since SKRRR acquired the parcel in 2018, and despite revitalization efforts, cherry crop yields have been poor and continue to be cost-prohibitive to harvest. Current non-cannabis-related agriculture at 37 Frenchmans Creek includes approximately 5.6 acres of cherries, succulents, pumpkins, and tomatoes. Approximately 70% of this existing area is designated as LCC Class 3 Prime Agriculture Soil considered suitable for artichokes, brussels sprouts, and similar crops.

The applicants plan to replant these areas with crops better suited for the soil and local growing conditions. Ideally, they hope to find a selection of produce crops that thrive and when combined with other locally sourced fruits, vegetables, meat, and poultry, would provide an excellent selection of fresh, high-quality foods for use in menu planning at the restaurant and potential catering and special events.

Reservoir Expansion (Phase 1)

Phase 1 also includes the expansion of two existing manmade reservoirs on the property, located along the central and east ridges. Both reservoirs are proposed to be expanded to increase resilience to drought, capitalize on periods of heavy rainfall, and offset stormwater impacts caused by the development. Refer to Section 5 for more information on the reservoir expansions.



Campground Along the Western Valley (Phase 1)

Phase II would also expand outdoor recreation opportunities to include a campground located in the northwest corner of the property. The campground includes twelve (12) campsites and a restroom & shower enclosure. A leach field will be installed downhill from the campsites to serve the restroom and showers.

Clubhouse, Restaurant, Wellness Center and Villas (Phase 2)

Phase II of the Master Development Plan includes construction of the clubhouse, restaurant, and wellness center and up to twelve (12) detached villas (rentable rooms). It would also include related site amenities and landscaping along the east ridge.

The clubhouse is envisioned as a two-story, wood-framed structure with separate restaurant and social facilities and approximately 8,000 square feet gross floor area. Upstairs is envisioned as the cocktail lounge for up to 50 patrons and cigar lounges complemented by outdoor deck space. Downstairs would consist of meeting areas with a library and accessory meeting and office space. Outdoor amenities would include outdoor sitting areas and activity space.

The wellness center is planned as a single-story building divided into two predominant wings connected by a reception lounge and flanked by privacy gardens. The front wing includes separate rooms for massage treatment, sensory deprivation float pools, a yoga studio, and a weight room. The rear wing includes sauna/steam rooms, cold plunge, showers, and changing room facilities. Overall gross floor area is anticipated to be about 4,800 square feet, divided into 2,600 square feet of active use space (spa rooms, gym space, etc) and 2,200 square feet of ancillary/open space (offices, mechanical equipment, storage, hallways, reception, etc).

The detached villas would serve as overnight or short-term suite accommodations. At approximately 1,000 to 1,500 square feet apiece, each villa would be equipped with sleeping rooms for up to four (4) guests, restroom, and shower facilities. A kitchenette is planned for each villa, limited to a dish sink, refrigerator, and small electric cooktop or microwave oven.

Site amenities to be constructed in conjunction with the clubhouse, spa, and villas are still being defined but would generally consist of outdoor recreational facilities limited to the east ridge of the property. Active recreation facilities being considered include a potential tennis court, pickleball, squash, walking/fitness trails, bocce ball, table tennis, fishing, and stand-up paddleboards (at enlarged Pond 2). Passive recreation amenities would generally include outdoor patio and picnic areas, art and garden exhibits, view decks, fire pits, and related gathering spaces. Expansion of the reservoir and amenities beyond the east ridge are covered further in other sections below.

Restaurant (Phase 2)

Phase II also includes a 50 patron restaurant that would be constructed along the northern section of the east ridge. There would be 25 seats for indoor dining plus six (6) cabanas with five (5) seats in each for private dining.



Owner/Operator Residence (Phase 3)

Phase III of the Master Development Plan includes the construction of an Owner/Operator residence located on the east ridge, due west of the existing Pond 2. The residence is planned as a 5-bedroom, 4,000 to 5,000 square foot single-family home. The dwelling would serve as a shared residence among the property owners at 37 Frenchmans Creek Road and as accommodation for the property manager. The home would also function as an overflow area for accessory parking, equipment, and event space. Phase III would also include the construction of an attached garage/workshop, swimming pool, and adjacent outdoor living space.

Membership Considerations

The applicants intend to offer annual club membership. Members would have exclusive access to the clubhouse facilities. All other amenities including the wellness center, restaurant, etc. will be available to both club members and the general public via reservation. The owners are also studying the feasibility of opening the resort up to hosting public and private catered events such as weddings and seasonal festivals via reservation only.



4. ZONING & LAND USE CONFORMITY

Zoning Use Determination

Development regulations for Planned Agricultural District (PAD) parcels are covered under Chapter 21A of the San Mateo County Zoning Regulations. Sections 6352 & 6353 describe permitted uses and uses which are discretionary, requiring Planned Agricultural Permit approval by the Planning Commission. To be consistent with zoning regulations, Planning staff would find Stonewood Resort's Master Development Plan consistent with the following uses:

Table 4.1 PAD Zoning References by Use

Project Item	Permitted Use Classification	Reference Zoning Code Section
Farm Labor Housing	Farm Labor Housing	6353.A.2 6353.B.2
Villas	Commercial Recreation	6353.B.7
Restaurant	Commercial Recreation	6353.B.7
Clubhouse (Cocktail Lounge/Lower Level)	Commercial Recreation	6353.B.7
Wellness Center	Commercial Recreation	6353.B.7
Owner/Operator Residence	Single Family Residence	6353.B.1
Agriculture Reconfiguration	Agriculture	6352.A.1 6352.B.1
Campground	Commercial Recreation	6353.B.7

For those uses classified as commercial recreation, additional findings must be made to show compliance with the adopted 2013 Local Coastal Program (LCP) policies.

Maximum Density of Development

Section 6356 defines the total density of development permitted on PAD-zoned parcels, using Density Credits as the metric for determining compliance. For the proposed Master Development Plan, the owner/operator residence, farm labor housing, and expanded agriculture do not count against a property's Density Credit allocation. Visitor Serving and Commercial Recreation do count, and densities are calculated using one of the two methods:

For new or expanded visitor-serving and commercial recreation, density credits shall be based on average daily water use during the two months of highest use in a year.

Below is an assessment of Density Credit requirements based on the estimated water use. Table 4.2 estimates water use based on the 2002 EPA Onsite Wastewater Treatment Systems Manual, Chapter 3. Estimates are provided for both weekday (Monday-Thursday) and weekend (Friday-Sunday) use and averaged for daily peak flows.



Table 4.2 Required Density Credits Based on Estimated Water Use

Development Component	Comparable EPA Facility	Water Use Metric	Mon-Thur Quantity	Fri-Sun Quantity	Avg. Daily Quantity	Unit Volume (gal/unit/day)	Daily Volume (gal/day)	Density Credit Equivalent
Villas	Cabin, Resort	Person	36	48	42	40	1,680	2.17*
Restaurant	Restaurant	Customer	32	50	40	9	360	0.57
Clubhouse Cocktail Lnge	Bar/Cocktail Lounge	Customer	30	50	39	3	117	0.19
Clubhouse Lower Level	Assembly Hall	Seat	32	50	40	3	120	0.19
Wellness Center	Gym, Showers	Customer	24	30	27	15	405	0.64
Staff	Resort Employee	Employee	10	15	12	10	120	0.19
Campground	Campground -Developed	Person	12	24	17.1	30	513	0.82
Total:							3,315	4.79

*One density credit shall be required for the first 945 gallons of average daily water use, and one additional credit for every 630 gallons, or fraction thereof, of average daily water use during the two months of highest water use in a year.

Our plan for meeting this requirement is further described below, including a combination of available base density credits and proposals for bonus density as permitted.

Base Density Credits Available

Section 6356 of the Zoning Regulations describes the process for calculating a property's Density Credits based on criteria outlined in subsections A through J. Calculations following these criteria are summarized in the table below.

Table 4.3 Available Base Density Credits

Section 6356 Criteria	Land Use	Credit Allocation (credit/acre)	Area (acres)	Credits Accrued
A	Prime Agriculture Lands	1/160	11.07	0.07
B	Landslide Susceptibility	1/160	7.07	0.04
C	Slope > 50%	1/160	53.29	0.33
D	Remote Lands	1/160	0.00	0.00
E	Slopes 30% to 50%	1/80	47.16	0.59
F	Rift Zones or Active Faults	1/80	0.0	0.00
G	Flood Hazard Area	1/60	8.98	0.15
H	Slopes 15% to 30%	1/60	22.81	0.38
I	Agriculture Preserves	1/60	13.85	0.23
J	All Other Lands	1/40	0.00	0.00
Total:			164.23	1.80*

*Round up to 2.0 density credits per Section 6356.



Density Bonus and Transfer

PAD Zoning Regulations include additional provisions for density bonus allocation as described in Section 6357, under three separate processes:

A. Consolidating Parcels – 0 Credits Sought

No parcel mergers are proposed as part of the Master Development Plan for Stonewood Resort.

B. Agricultural Water Improvements – 1.5 Credits Sought

Improvements to existing surface water impoundments are proposed which would increase available water storage capacity by more than 25.7 acre-feet. Improvements to both ponds, which are located onsite, are further described in *Chapter 5. Infrastructure Improvements* below.

C. Land Density Transfer – 1.5 Credits Sought

Parcels consisting of Prime Agricultural Land and land which is not developable under the Local Coastal Program may apply to transfer development density to another parcel via deed restriction and at the discretion of the Planning Commission where sites are deemed suitable. Parcels proposed for Density Credit Transfer are described below in *Chapter 6. Density Transfer Parcels*.



5. INFRASTRUCTURE IMPROVEMENTS

Access Road Improvements

Access road improvements are anticipated between the lower valley and east ridge to satisfy Coastside Fire Protection District standards. Based on initial feedback from the Fire Marshal and experience on past projects, the existing road will likely require re-surfacing in select areas where slopes exceed 15% or where shoulder improvements are currently limited to compacted class II base. Road widths, slopes, turnout locations, and drainage structures are generally suitable in their existing configuration and only limited adjustment is anticipated as part of the project based on further discussions with the fire marshal. No grading exercises or land disturbance activities are anticipated for the road resurfacing.

Traffic Impacts

Refer to Transportation Study prepared by Hexagon Transportation Consultants, Inc, dated March 30, 2023, see Appendix 10. For the project's potential traffic impacts, the study concludes that the increase in vehicle miles traveled (VMT) would be less than significant and that the Highway 1/Frenchmans Creek Road intersection would continue to operate at the same level of service (LOS).

The owners have had an initial meeting with the Half Moon Bay Public Works Department to discuss potential impacts at CA-Highway 1 at Frenchmans Creek Road. Based on feedback from the City of Half Moon Bay, we assessed the stopping sight distance (SSD) and dimensions per the Caltrans Highway Design Manual (HDM). The intersection meets the SSD requirements. However, the intersection appears to slightly fall short of the 30' width standards. See the Highway 1 Connection Exhibit for SSD and dimension exhibits.

Reservoir Expansion

There are two existing manmade reservoirs on the property, located along the central and east ridges. The ponds have an estimated existing combined storage capacity of 9 acre-feet. As part of the project, both reservoirs are proposed to be expanded to increase resilience to drought, capitalize on periods of heavy rainfall, and offset stormwater impacts caused by the development. Currently, Pond 1 receives inflow from two water sources, the property's permitted diversion from Frenchmans Creek, and direct precipitation within the footprint and tributary of the pond. Pond 2 currently only receives water by direct precipitation. The combined existing annual water supply available to the existing reservoirs from these sources is approximately 14.06 acre-feet, see *Chapter 2. Existing Site Overview*.

Improvements at Pond 1 include installing an impermeable liner and raising the emergency overflow outlet to a higher elevation to increase capacity within the existing footprint. Pond 2 would be completely reconfigured with an increase in the pond area, depth, and bank steepness. Pond 2 improvements would also include an impermeable liner. See the below table for a summary of existing and proposed reservoir characteristics.



Table 5.1 Reservoir Expansion Summary

Reservoir	Surface Area (sq.ft)	Bottom Area (sq.ft)	Pond Bank Side Slope	Depth (ft)	Storage Volume (cu.ft)	Storage Volume (ac.ft)	Water Source
(E) Pond 1	44,000	2,300	4 : 1	13.2	327,375	7.5	Diversion & Precipitation
(E) Pond 2	11,500	500	3 : 1	11.0	66,330	1.5	Precipitation
Pre-Development Total:					393,705	9.0	
(P) Pond 1	60,000	2,300	4 : 1	21.5	917,460	21.0	Diversion & Precipitation
(P) Pond 2	50,000	14,500	2 : 1	24.0	598,500	13.7	Precipitation & RW Harvesting
Post-Development Total:					1,515,960	34.7	
Net Increase in Reservoir Storage:					1,122,255	25.7	

Rainwater Harvesting

Improvements along the east ridge will result in a net increase in stormwater runoff due to the creation of new impervious areas for buildings and hardscape. In accordance with San Mateo County C.3 Stormwater Regulations, increases in stormwater run-off must be mitigated to prevent erosion and flooding impacts to downstream channels and creeks. Stonewood Resort is proposing a mitigation strategy that would collect stormwater from all created impervious roofs and hardscape along the east ridge as a result of development, including stormwater generated from the clubhouse, restaurant, wellness center, villas, owner residence, and associated hardscape. The general drainage concept for the development is to convey all stormwater run-off to relative low points along the east ridge where bioretention planters would be located to provide water quality treatment and attenuation of peak flows. Each bioretention planter would also include a pump system to take treated and overflow water and pump it back up to Pond 2, located near the top of the east ridge.

In the post-development condition, pervious areas will largely bypass the impervious storm drain system and be directed downhill to follow historic drainage patterns. Orifice metering will be implemented on the impervious storm drain collection system to ensure that existing drainage patterns are maintained in the post-development condition and so downstream vegetation will still receive comparable stormwater from upstream tributaries.

An emergency spillway/overflow system will also be provided at Pond 2 and at each bioretention planter pump system to collect and convey overflow downhill to a stabilized outfall location on the valley floor.

The below table summarizes rainwater harvesting water sources that will supply reservoirs in addition to the existing available water supply described in *Chapter 2. Existing Site Overview*.



Table 5.2 Rainwater Harvesting Summary

Building / Site Feature (Includes Adjacent Patios)	Captured Area (sq.ft)	Net Increase in Run-off* (cu.ft)	RW Harvesting Volume Available (ac.ft)	Collection Method
Pond 1 (Net Increase)	17,500	26,250	0.6	Direct Precipitation
Pond 2 (Net Increase)	34,600	51,900	1.2	Direct Precipitation
Villas	36,000	54,000	1.2	Gravity Storm Drain + Pump System
Restaurant	2,200	3,300	0.1	Gravity Storm Drain + Pump System
Clubhouse	8,000	12,000	0.3	Gravity Storm Drain + Pump System
Wellness Center	4,800	7,200	0.2	Gravity Storm Drain + Pump System
Play Courts	21,000	52,500	1.2	Gravity Storm Drain + Pump System
Roads and Parking (East Ridge Only)	118,000	495,000	6.8	Gravity Storm Drain + Pump System
Owner/Operator Residence	5,000	7,500	0.2	Gravity Storm Drain + Pump System
Total:	215,700	539,250	12.4	

*Net increase in run-off based on the average annual rainfall of 30.0 inches and a Composite Runoff Coefficient, Composite = 0.60

When switching from pervious to impervious area as a result of development ($C_{Composite} = C_{post} - C_{pre} = 0.90 - 0.30 = 0.60$)

Domestic Water Supply & Storage

The required water supply and storage for the proposed development will be based on NFPA 1142 fire flow calculations. Since there is no domestic water line available for connection, a storage tank is proposed to store water pumped from the new well described in *Chapter 2. Existing Site Overview*. Domestic and fire water storage tanks are to be located at the proposed fire truck turnaround in the northeast corner of the site on the east ridge.

Septic System

The septic design for the proposed development will be broken up into four (4) separate systems: farm labor housing, campground, owner/operator residence, and villas/clubhouse/restaurant. Each system will be designed following the San Mateo County Onsite Systems Manual.

The owners have percolation tests performed for the proposed owner/operator residence and villas/clubhouse/restaurant leach field areas and all have given "A" percolation results. Additional percolation testing must be performed for the farm labor housing and campground leach fields. Follow-up percolation testing is planned for Fall 2023.



Recycled Water System

Options for recycled water systems are being explored for greywater recycling and reuse in toilets and outdoor irrigation. Approximately 50% of the wastewater flows from owner-operator residence and villas and 70% of wastewater flows from the wellness center may be viable for greywater recycling and reuse. A commercial greywater system used for toilet flushing and/or surface irrigation would be designed to meet NSF 350 certification standards as required by the County. Alternatively, a less complex subsurface irrigation system utilizing greywater may also be proposed.

Parking

Initial Parking Demands have been calculated based on San Mateo County Zoning Regulation. Per Section 6119, the below parking table summarizes the required and provided stall counts.

Table 5.3 Proposed Parking Summary

Proposed Structure	Section 6119 Classification	Parking Req'd # Stalls / Use	Proposed Use Count	Stalls Required	Stalls Provided
Farm Labor Housing	Dwelling	2 stalls / +2 bedrm unit	6 units 2 bedrm ea.	12	12
Villas	Lodging Houses	1 stall / 3 bedrm	24 bedrm	8	24
Restaurant	Food Establishment	1 stall / 3 seats	50 seats	17	19
Clubhouse Cocktail Lounge	Food Establishment	1 stall / 3 seats	50 seats	17	19
Clubhouse Lower Floor	Commercial General	1 stall / 160 sf	4,000 sf	25	25
Wellness Center	Commercial General	1 stall / 160 sf	2,600 sf	17	17
Owner/Operator Residence	Dwelling	2 stalls / +2 bedrm unit	1 unit 5 bedrm	2	4
Total				94	116

Please refer to Sheets A103-105 of the Concept Plans for more detail on stall locations.



6. DENSITY TRANSFER PARCELS

According to the 2013 San Mateo County Local Coastal Program Policy 5.11e, density credits on parcels consisting entirely of prime agricultural land, or of prime agricultural land and land which is not developable under the Local Coastal Program, may be transferred to other parcels in the Coastal Zone, provided that the entire parcel from which credits are transferred is restricted permanently to agricultural use by an easement granted to the County or other governmental agency. The applicant is pursuing the transfer of density credits from 511 Frenchmans Creek Road (APN 048-320-030).

511 Frenchmans Creek Road is located immediately north of 37 Frenchmans Creek Road and is included in the Coastal Zone. The parcel is surrounded by ridges to the east, west, and north with Loess Creek flowing south through the property to 37 Frenchmans Creek Road. There is currently a single-family home on the southern portion of the property that is intended to be converted into farm labor housing for 37 Frenchmans Creek Road operations. The rest of the property consists of prime agricultural land and land that is not developable due to steep slopes and the creek running through the middle of the parcel.

Section 6356 of the Zoning Regulations describes the process for calculating a property's Density Credits based on criteria outlined in subsections A through J. The 511 Frenchmans Creek Road parcel has a 1.0 density credit based on these criteria. See Exhibit X-1: Transfer Parcel Exhibit in Appendix 7 for density credit land designations.

Since the single-family home on 511 Frenchmans Creek Road is being converted into farm labor housing and the transferred density credits will be used towards commercial recreation, the available density credits stated in Table 1.5 can be multiplied by a factor of 1.5 according to Section 6356. The total density credits available to be transferred to 37 Frenchmans Creek Road is 1.5 credits.



7. CONCLUSION

The proposed Stonewood Resort development at 37 Frenchmans Creek Road in Half Moon Bay, California will be consistent with County Zoning and General Plan land use designations and the Local Coastal Program. It will not infringe on any existing agricultural use and will not reduce the footprint of prime agriculture soils on the property. New structures and infrastructure will be located outside of environmentally sensitive areas and will utilize technologies at the forefront of environmental sustainability, including all-electric mechanical systems, rainwater/greywater water recycling, and renewable energy sources onsite. Most importantly, the development will allow for continued and expanded agriculture on the property and serve as a marquee destination for recreation on the Coastside and the greater Bay Area.



8. APPENDICES

1. Architectural Concept Development Plans
2. Frenchmans Creek / Hwy 1 Intersection Exhibit
3. Reservoir Expansion Exhibits
4. Well Site Plan & Drilling Log
5. Percolation Test Plans and Results
6. 37 Frenchmans Density Analysis
7. 511 Frenchmans Transfer Analysis
8. Williamson Act Cancellation
9. Geotechnical Study
10. Transportation Study
11. Biological Study
12. C.3 and C.6 Development Review Checklist



APPENDIX 1

ARCHITECTURAL CONCEPT DEVELOPMENT PLANS



SITE DATA:

APN: 048-320-020
 ZONING: PAD/CD
 OCCUPANCY GROUP: R-1
 TYPE OF CONSTRUCTION:

PRE:
 PLN:
 BLD:

APPLICABLE CODES:
 SAN MATEO COUNTY ZONING & BUILDING ORDINANCES

2019 CALIFORNIA RESIDENTIAL CODE
 2019 CALIFORNIA BUILDING CODE
 2019 CALIFORNIA MECHANICAL CODE
 2019 CALIFORNIA PLUMBING CODE
 2019 CALIFORNIA ELECTRICAL CODE
 2019 CALIFORNIA ENERGY CODE
 2019 CALIFORNIA FIRE CODE
 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

OWNER/APPLICANT:

SKRRR LLC
 37 FRENCHMANS CREEK ROAD
 HALF MOON BAY, CA 94019
 ED WILKINSON
 ed@halfmoongrow.com
 (626)-321-2119

ARCHITECT:

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 HALF MOON BAY, CA 94019
 EDWARD LOVE
 edwardclovearch@gmail.com
 (650)-728-7615

CIVIL ENGINEER / SURVEYOR:

BKF ENGINEERS
 255 SHORELINE DRIVE SUITE 200
 REDWOOD CITY, CA 94065
 DALE LEDA, PE
 dleda@bkf.com
 (650)-482-6457

GEOTECHNICAL ENGINEER:

SIGMA PRIME GEOSCIENCES, INC
 332 PRINCETON AVENUE
 HALF MOON BAY, CA 94019
 CHARLES KISSICK
 sigmaprm@gmail.com
 (650)-728-3590

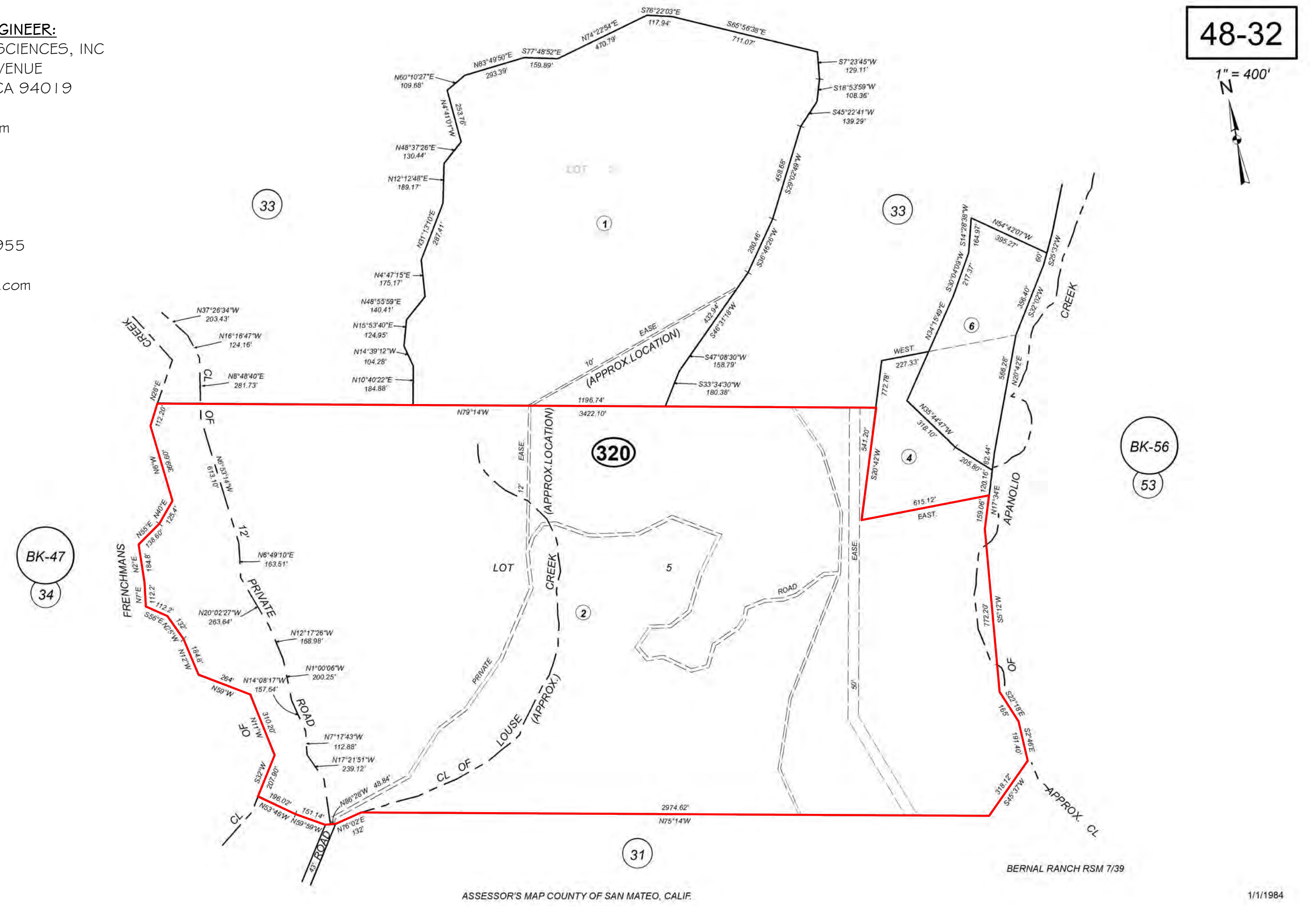
BIOLOGIST:

SOL ECOLOGY, INC
 PO BOX 5214
 PETALUMA, CA 94955
 DANA RIGGS
 dnrggs@solecology.com
 (707)-241-7718

	EXISTING		PROPOSED		TOTAL			
	AREA (SQFT)	%	AREA (SQFT)	%	AREA (SQFT)	%		
LOT AREA	7153859							
FLOOR AREA	Building 3	70200	Farm Labor Housing	5334				
	Building 4	3600	Clubhouse	2000				
	Building 6	40000	Wellness Center	4000				
	Building 9 North	4800	Restaurant	1100				
	Building 9 South	1100	Operator Residence	2500				
	Dryline Facility	2700	Villas	12000				
	Processing Building Tool Shed	3700 1500	Cabanas	1600				
LOT COVERAGE	129600	1.8	27596	0.4	157196	2.2		
FLOOR AREA	Building 3	70200	Farm Labor Housing	5334				
	Building 4	3600	Clubhouse	4000				
	Building 6	40000	Wellness Center	4000				
	Building 9 North	4800	Restaurant	2200				
	Building 9 South	1100	Operator Residence	5000				
	Dryline Facility	2700	Villas	12000				
	Processing Building Tool Shed	3700 1500	Cabanas	1600				
Total	128600	1.8	Total	34934	0.5	Total	163534	2.3

Sheet List	
Sheet Number	Sheet Name

A100	Cover Sheet
A101	Master Plan - Existing
A102	Master Plan - Proposed
A103	Site - Farm Labor Housing - P1
A103.1	Site - Campground - P1
A103.2	Agriculture Reconfiguration & Campground - P1
A104	Site - Proposed Lodge - P2
A105	Owner Operator Residence - P3



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 Ed Wilkinson
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Cover Sheet

FOR REVIEW ONLY

DATE: 2-20-2023
 SCALE:
 DRAWN: AKB
 JOB: SWL
 SHEET:
A100
 OF SHEETS



TRUE NORTH

FRENCHMAN'S CREEK ROAD
APN: 048-320-020

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Master Plan - Existing

FOR REVIEW ONLY

DATE: 2-20-2023
SCALE: 1" = 130'-0"
DRAWN: Author
JOB: SWL

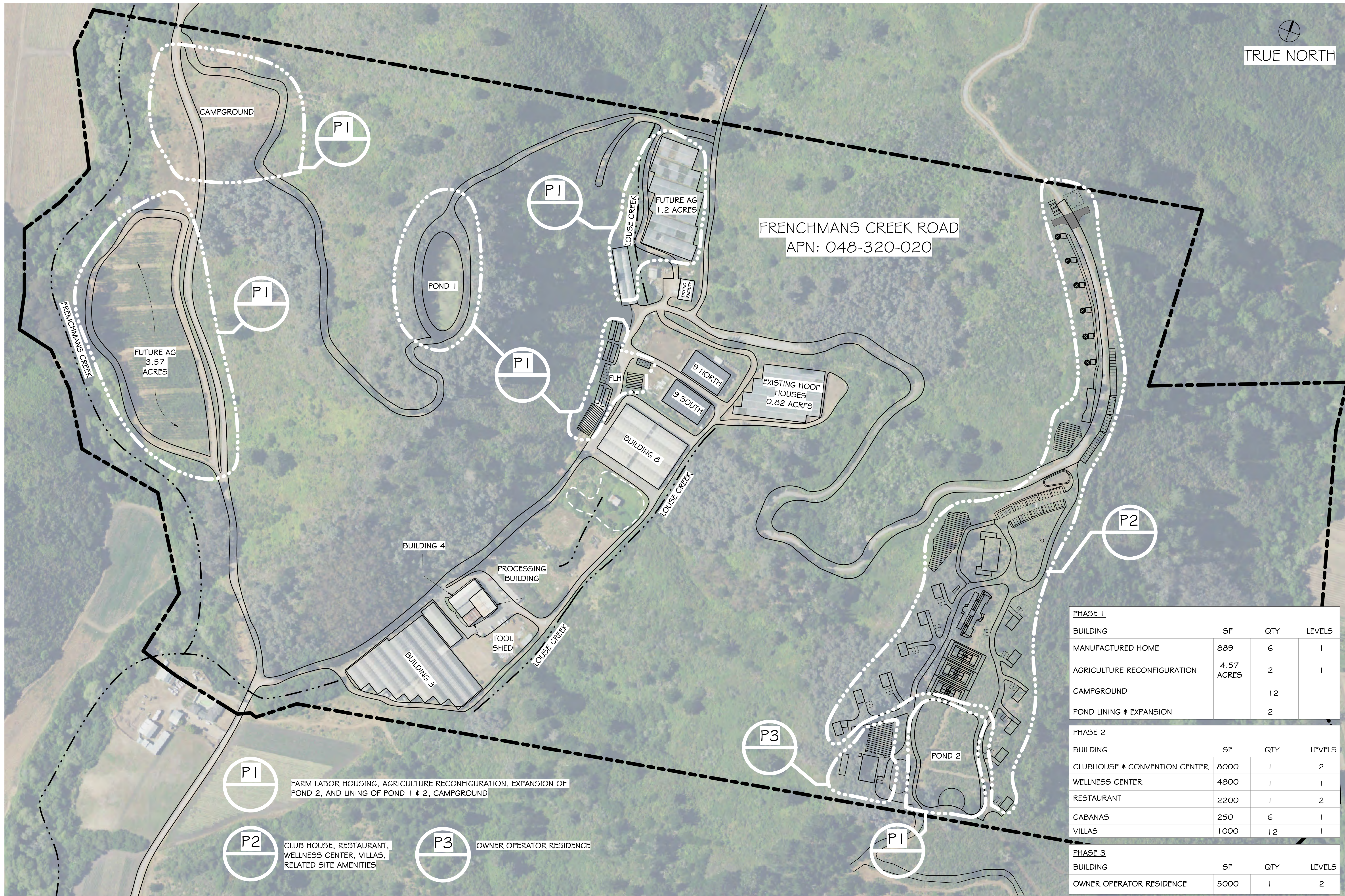
SHEET:
A101

OF SHEETS

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1 Master Plan - Existing
1" = 130'-0"

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 511 Frenchmans Creek Rd. CA

Master Plan- Proposed

FOR REVIEW ONLY

DATE: 2-20-2023
 SCALE: As Indicated
 DRAWN: AKB
 JOB: SWL
 SHEET:

A102
 OF SHEETS

PHASE 1			
BUILDING	SF	QTY	LEVELS
MANUFACTURED HOME	889	6	1
AGRICULTURE RECONFIGURATION	4.57 ACRES	2	1
CAMPGROUND		12	
POND LINING & EXPANSION		2	

PHASE 2			
BUILDING	SF	QTY	LEVELS
CLUBHOUSE & CONVENTION CENTER	8000	1	2
WELLNESS CENTER	4800	1	1
RESTAURANT	2200	1	2
CABANAS	250	6	1
VILLAS	1000	12	1

PHASE 3			
BUILDING	SF	QTY	LEVELS
OWNER OPERATOR RESIDENCE	5000	1	2

- P1** FARM LABOR HOUSING, AGRICULTURE RECONFIGURATION, EXPANSION OF POND 2, AND LINING OF POND 1 & 2, CAMPGROUND
- P2** CLUB HOUSE, RESTAURANT, WELLNESS CENTER, VILLAS, RELATED SITE AMENITIES
- P3** OWNER OPERATOR RESIDENCE

1 Master Plan - Proposed
 1/4" = 1'-0"

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TABLE OF DEVELOPMENT
 1/4" = 1'-0"



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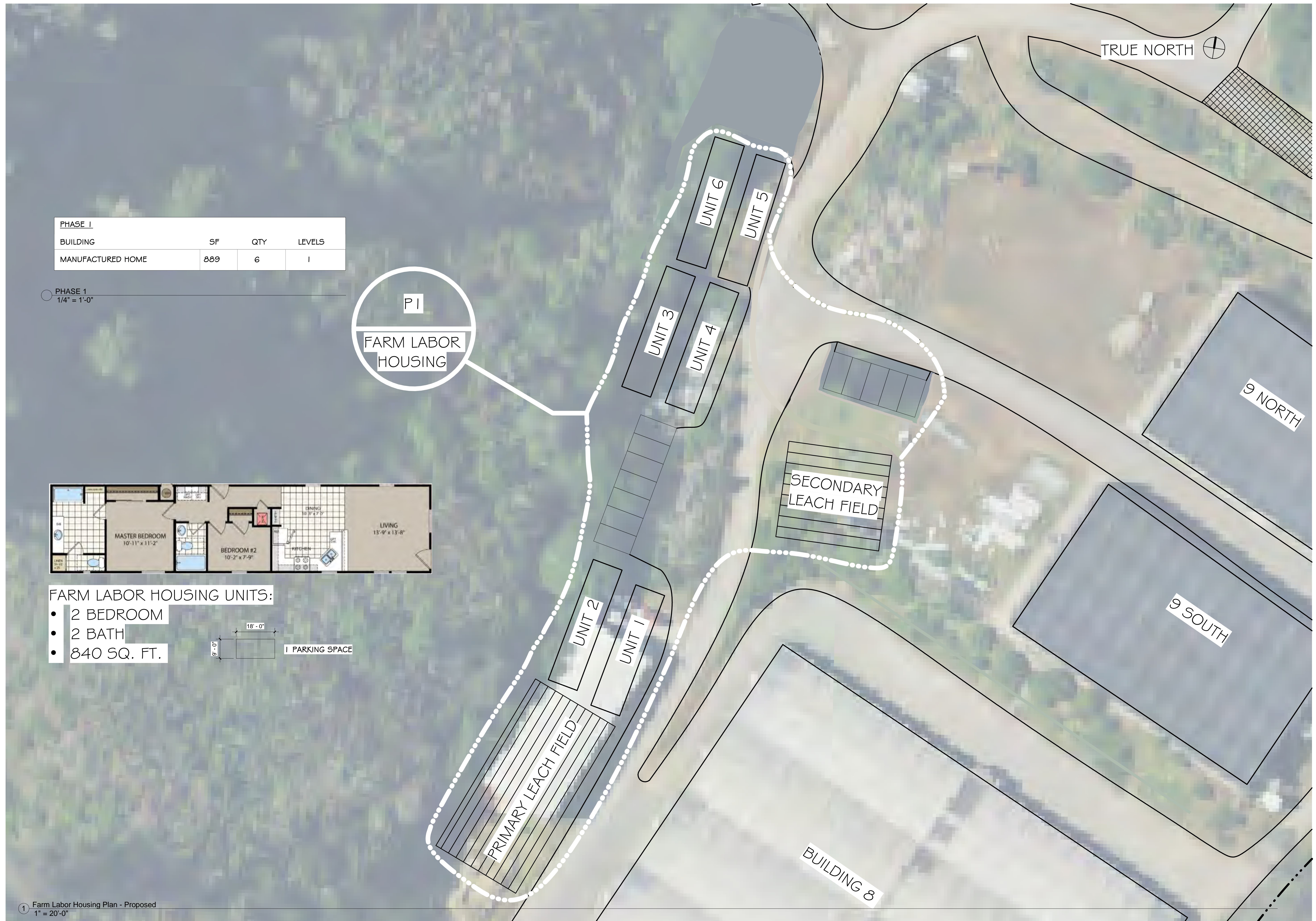
Stonewood Lodge
Ed Wilkinson
511 Frenchmans Creek Rd. CA

Site - Farm Labor Housing -
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DATE: 2-20-2023
SCALE: As Indicated
DRAWN: AKB
JOB: SWL

SHEET:
A103
OF SHEETS



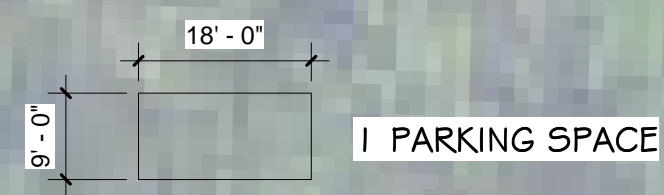
PHASE 1			
BUILDING	SF	QTY	LEVELS
MANUFACTURED HOME	889	6	1

PHASE 1
1/4" = 1'-0"



FARM LABOR HOUSING UNITS:

- 2 BEDROOM
- 2 BATH
- 840 SQ. FT.

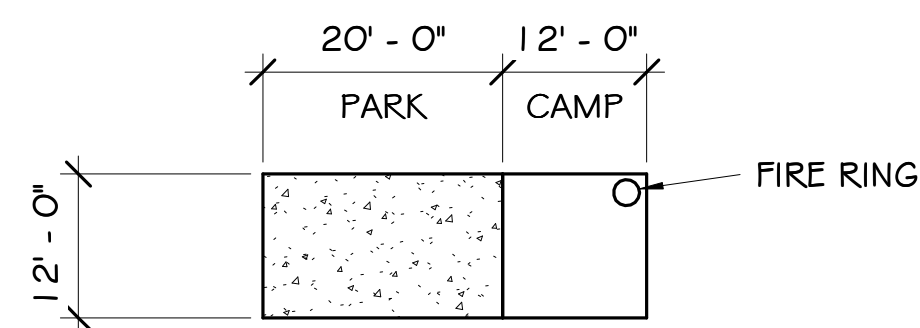


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1 Farm Labor Housing Plan - Proposed
1" = 20'-0"



1 Campground
1" = 40'-0"



2 Camp Site
1/16" = 1'-0"

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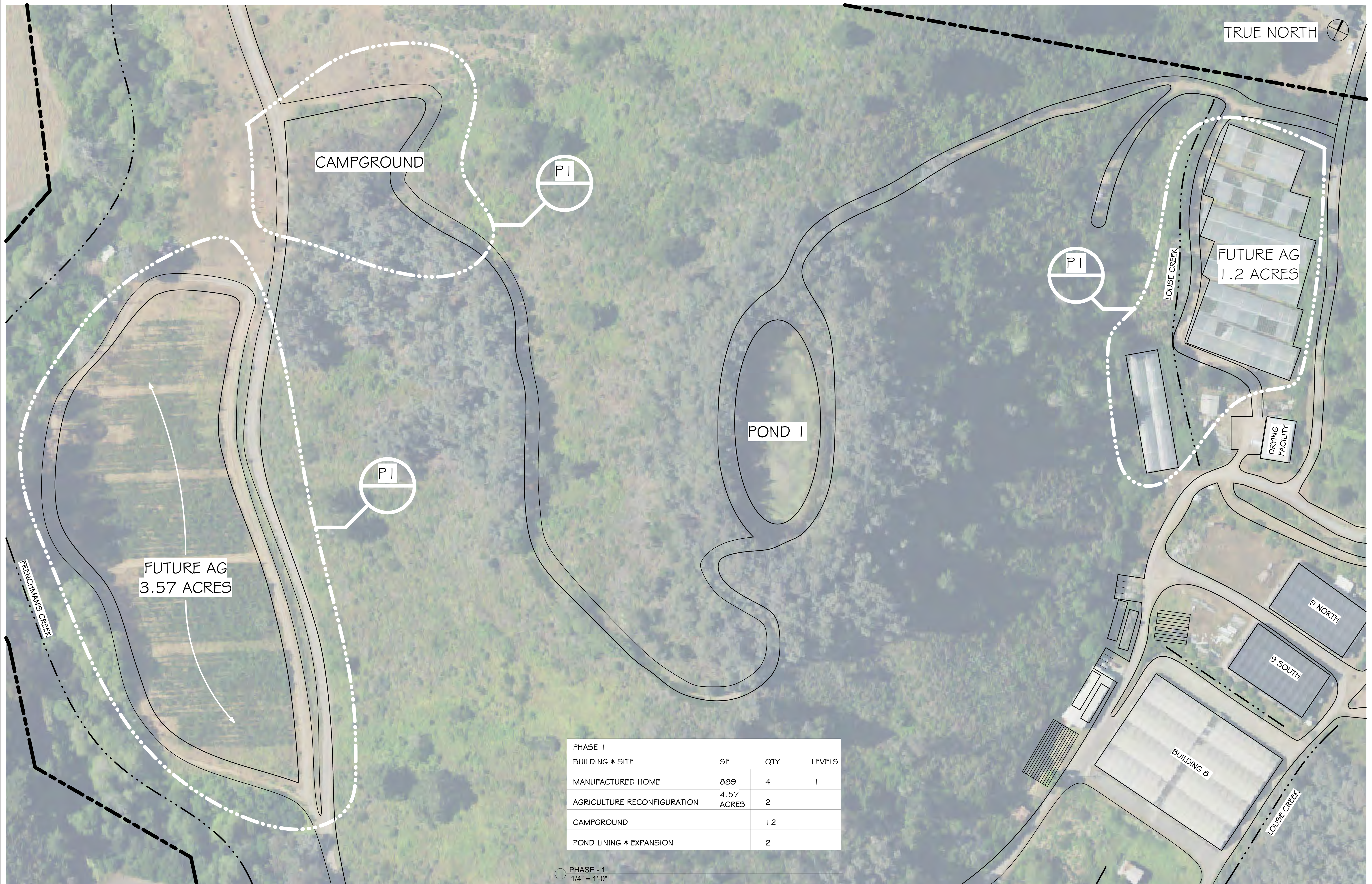
Site - Campground - P1

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DATE: 2-20-2023
SCALE: As Indicated
DRAWN: Author
JOB: SWL

SHEET:
A103.1
OF SHEETS

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PHASE I			
BUILDING # SITE	SF	QTY	LEVELS
MANUFACTURED HOME	889	4	1
AGRICULTURE RECONFIGURATION	4,57 ACRES	2	
CAMPGROUND		12	
POND LINING & EXPANSION		2	

○ PHASE - 1
1/4" = 1'-0"

① Agriculture Reconfiguration
1/64" = 1'-0"

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Agriculture Reconfiguration &
Campground - P1

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SCALE: As Indicated
DRAWN: Author
JOB: SWL

SHEET:
A103.2
OF SHEETS

TRUE NORTH 



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Site - Proposed Lodge - P2

FOR REVIEW ONLY

DATE: 2-20-2023

SCALE: As Indicated

DRAWN: AKB

JOB: SWL

SHEET:

A104

OF SHEETS



PHASE 2			
BUILDING	SF	QTY	LEVELS
CLUBHOUSE & CONVENTION CENTER	8000	1	2
WELLNESS CENTER	4800	1	1
RESTAURANT	2200	1	2
CABANAS	250	6	1
VILLAS	1000	12	1

① Lodge Proposed
 1/64" = 1'-0"

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PHASE 3			
BUILDING	SF	QTY	LEVELS
OWNER OPERATOR RESIDENCE	5000	1	2

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Owner Operator Residence -
 P3

FOR REVIEW ONLY

DATE: 2-20-2023
 SCALE: As Indicated
 DRAWN: Author
 JOB: SWL

SHEET:
A105
 OF SHEETS

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1 Owner Operator Residence
 1/16" = 1'-0"



APPENDIX 2

FRENCHMANS CREEK / HWY 1 INTERSECTION EXHIBIT



APPENDIX 3

RESERVOIR EXPANSION EXHIBITS



255 SHORELINE DRIVE
SUITE 200
REDWOOD CITY, CA 94065
(650) 482-6300
www.bkf.com

CALIFORNIA

SITE PLAN
RESERVOIR CAPACITY EXHIBIT
37 FRENCHMANS CREEK RD

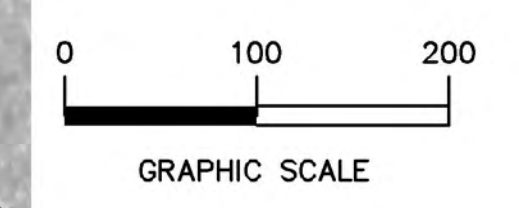
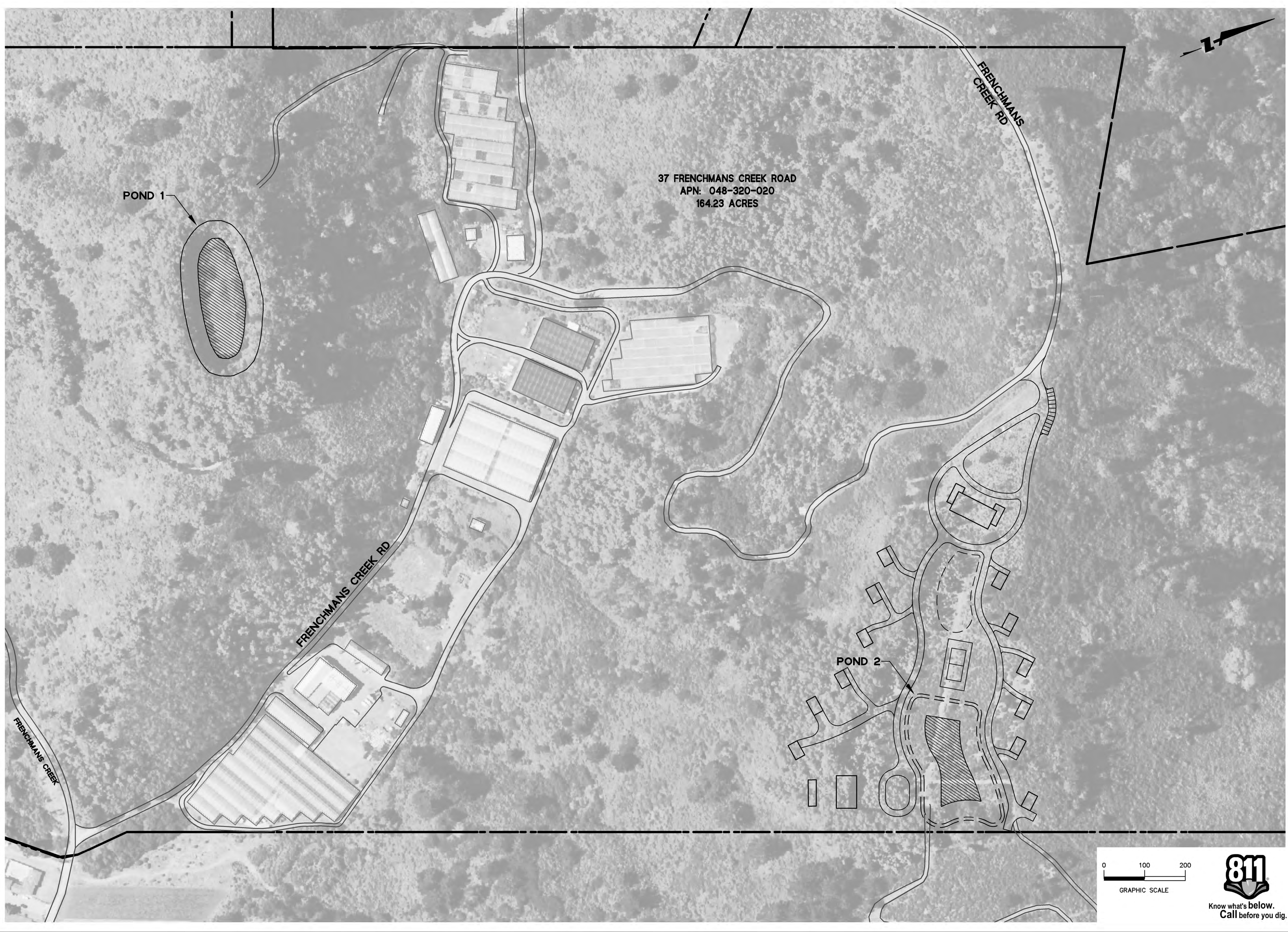
HALF MOON BAY
SAN MATEO COUNTY



Date	Revisions	No.
02/08/2022		
Scale 1" = 100'		
Design D.L.		
Drawn AHM		
Approved D.L.		
Job No. 20170335-15		

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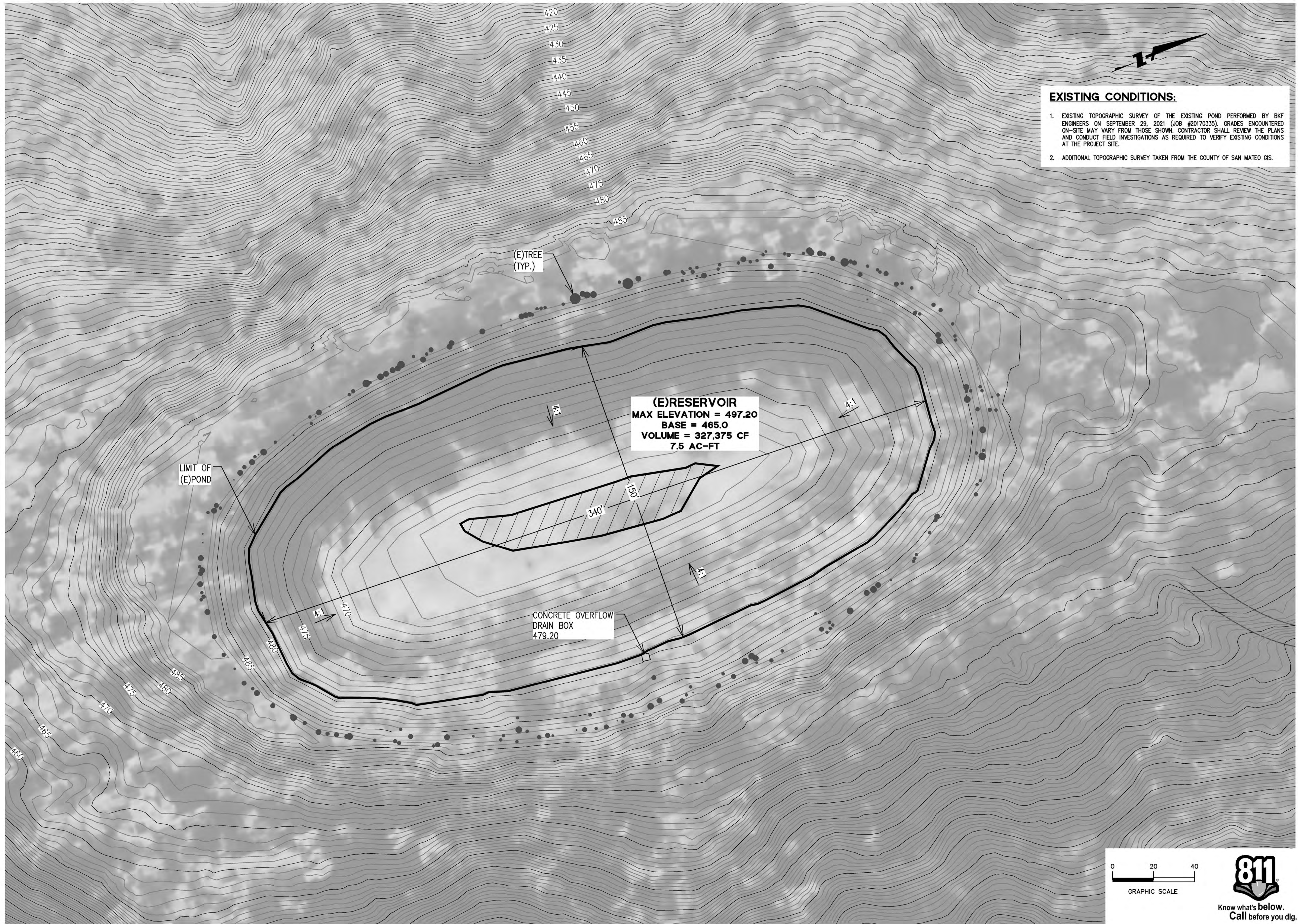
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PLOT DATE: 02-09-22 PLOTTED BY: hemo





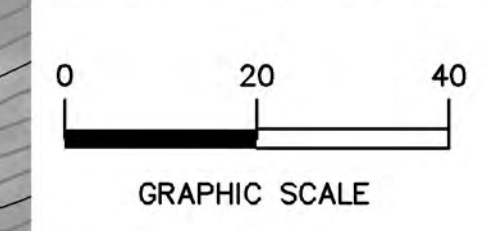
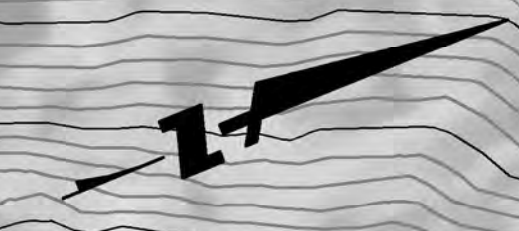
Revisions	No.	Date

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PLOT DATE: 02-09-22 PLOTTED BY: hemo



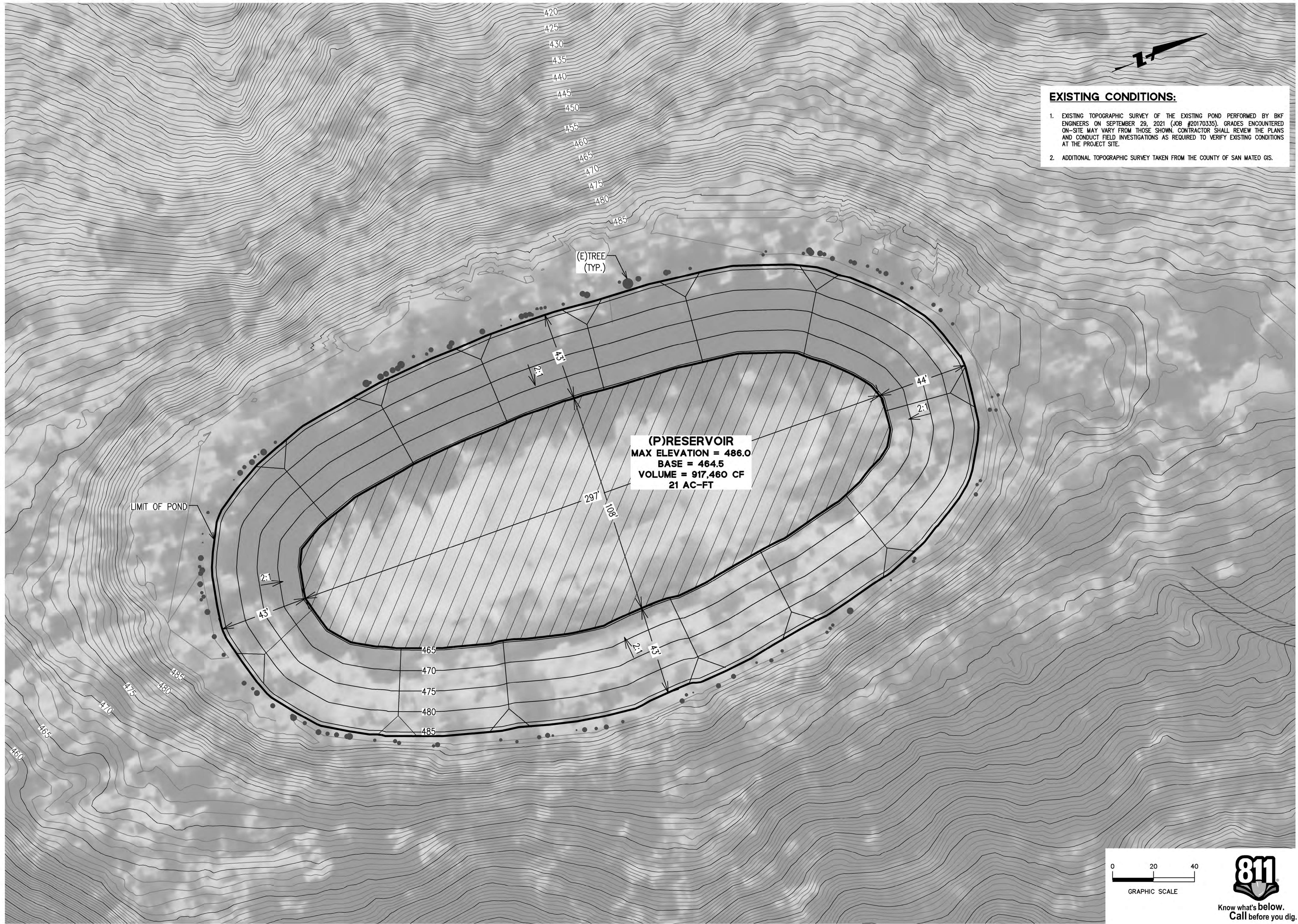
EXISTING CONDITIONS:

- EXISTING TOPOGRAPHIC SURVEY OF THE EXISTING POND PERFORMED BY BKF ENGINEERS ON SEPTEMBER 29, 2021 (JOB #20170335). GRADES ENCOUNTERED ON-SITE MAY VARY FROM THOSE SHOWN. CONTRACTOR SHALL REVIEW THE PLANS AND CONDUCT FIELD INVESTIGATIONS AS REQUIRED TO VERIFY EXISTING CONDITIONS AT THE PROJECT SITE.
- ADDITIONAL TOPOGRAPHIC SURVEY TAKEN FROM THE COUNTY OF SAN MATEO GIS.



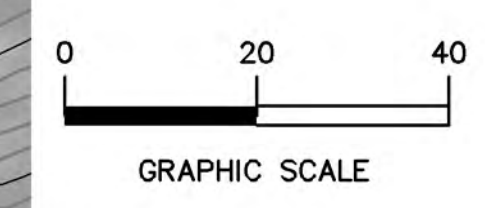
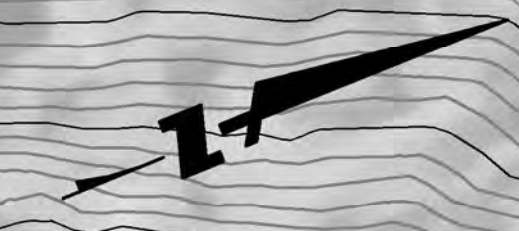


Date	Revisions	No.
02/08/2022		
Scale 1" = 20'		
Design: D.L.		
Drawn: AHM		
Approved D.L.		
Job No. 20170335-15		



EXISTING CONDITIONS:

- EXISTING TOPOGRAPHIC SURVEY OF THE EXISTING POND PERFORMED BY BKF ENGINEERS ON SEPTEMBER 29, 2021 (JOB #20170335). GRADES ENCOUNTERED ON-SITE MAY VARY FROM THOSE SHOWN. CONTRACTOR SHALL REVIEW THE PLANS AND CONDUCT FIELD INVESTIGATIONS AS REQUIRED TO VERIFY EXISTING CONDITIONS AT THE PROJECT SITE.
- ADDITIONAL TOPOGRAPHIC SURVEY TAKEN FROM THE COUNTY OF SAN MATEO GIS.



DRAWING NAME: K:\2017\170335_37_Frenchmans_Creek\ENG\EXHIBITS\2022-02-02-04_Reservoir_Capacity_Exhibit_Capacity_Exhibit.dwg
PLOT DATE: 02-09-22 PLOTTED BY: hemo

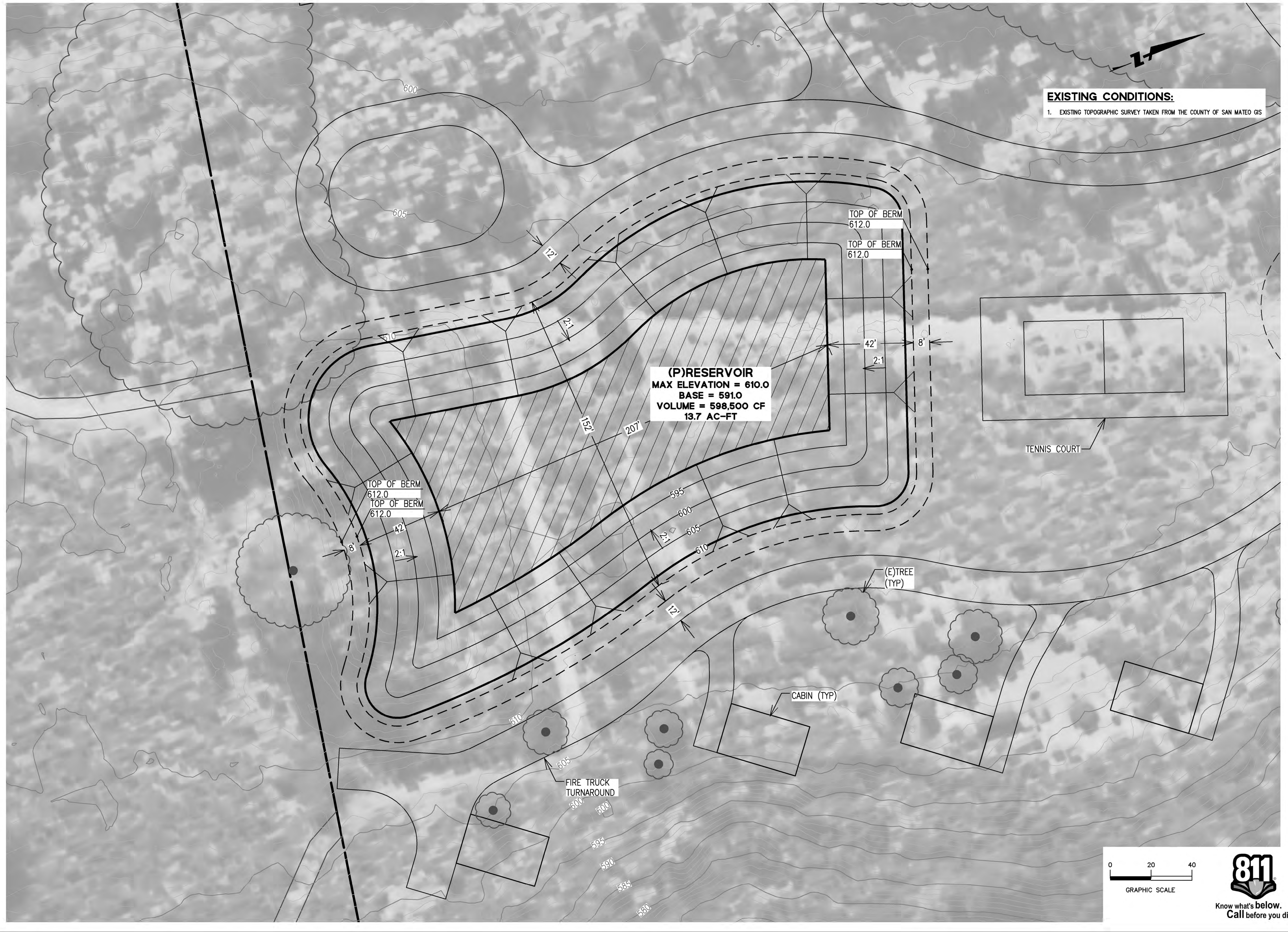


PROPOSED RESERVOIR CAPACITY RESERVOIR CAPACITY EXHIBIT 37 FRENCHMANS CREEK RD



Date	Scale	Design	Drawn	Approved	Job No.
02/08/2022	1" = 20'	DLL	AHM	DLL	20770335-15
Revisions					
No.	Date				
Drawing Number: X-4					

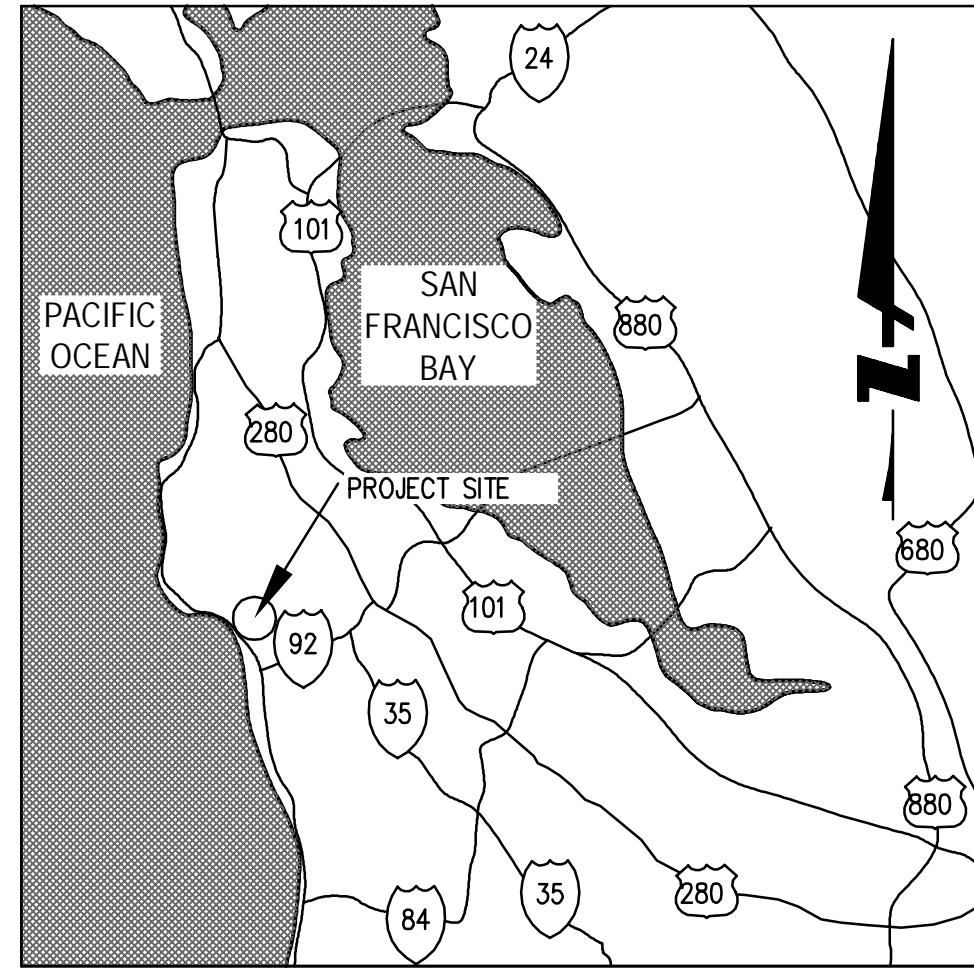
DRAWING NAME: K:\2017\170335_37_Frenchmans_Creek\ENG\EXHIBITS\2022-02-04_Reservoir_Capacity_Exhibit.dwg
PLOT DATE: 02-10-22 PLOTTED BY: hemo





APPENDIX 4

WELL SITE PLAN & DRILLING LOG



VICINITY MAP
N.T.S.

DOMESTIC WELL PLAN

37 FRENCHMANS CREEK ROAD

HALF MOON BAY, CA

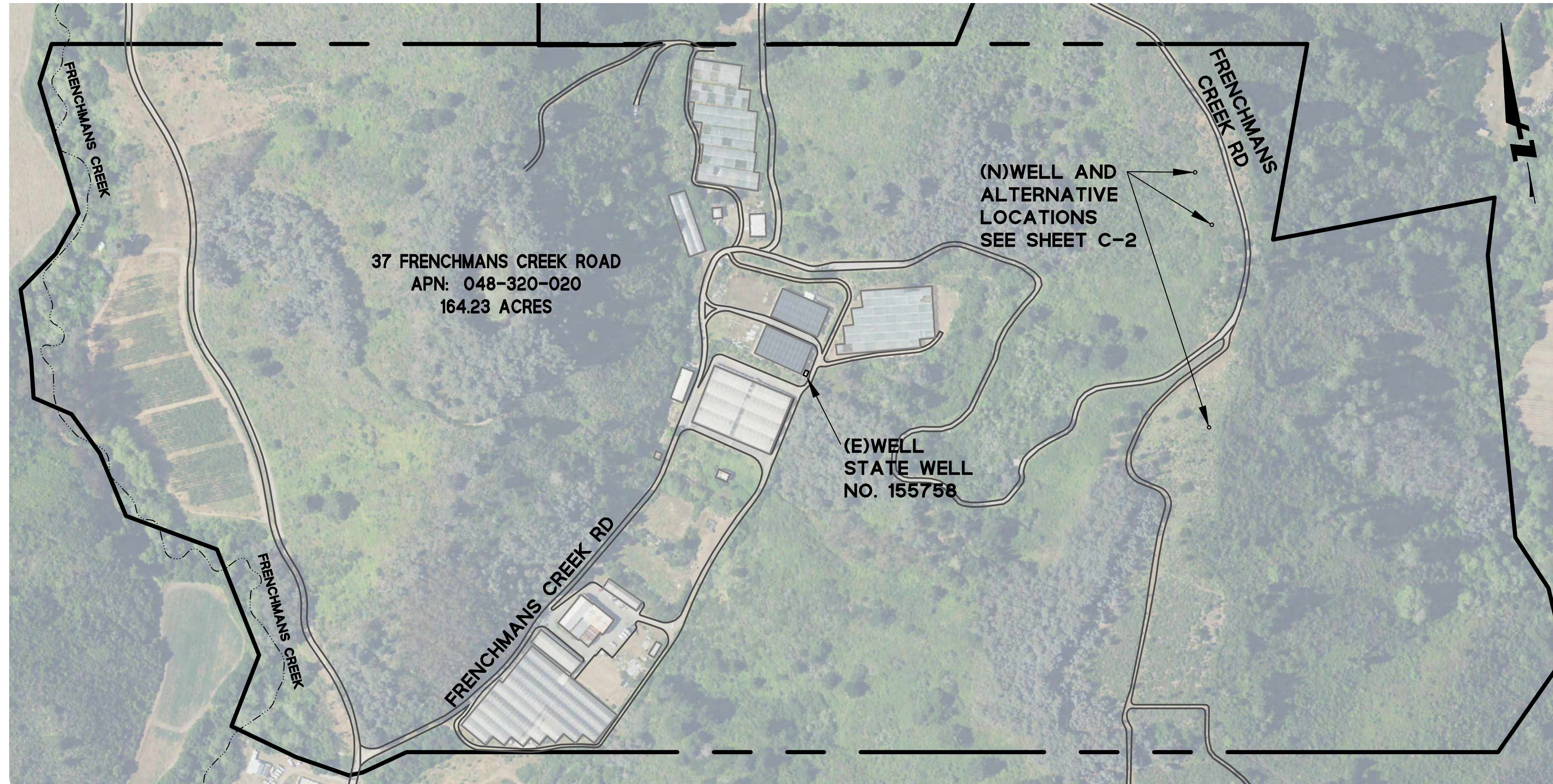
APN: 048-320-020



LOCATION MAP
N.T.S.

ABBREVIATIONS:

BLDG	BUILDING
(E)	EXISTING
L ⁺	LINEAR FEET
(N)	NEW
TYP	TYPICAL

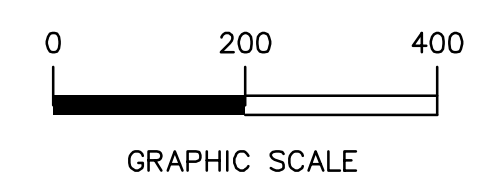


LEGEND:

--- BOUNDARY

SHEET INDEX

SHEET NO.	DESCRIPTION
C-1	TITLE SHEET
C-2	SITE PLAN



TITLE SHEET
DOMESTIC WELL PLAN
37 FRENCHMANS CREEK RD

HALF MOON BAY
SAN MATEO COUNTY
CALIFORNIA



Date	11/04/2021
Scale	1" = 200'
Design	DJP
Drawn	DJG
Approved	DJL
Job No.	20170335-15
Drawing Number:	C-1
	OF

DRAWING NAME: \\Bkf-r-c\dot o\2017\170335_37_Frenchmans_Creek\ENG\EXHIBITS\2021-09-01_Well_Permit.dwg
PLOT DATE: 01-18-22 PLOTTED BY: polt

255 SHORELINE DRIVE
SUITE 200
REDWOOD CITY, CA 94065
(650) 482-6300
www.bkf.com





255 SHORELINE DRIVE
SUITE 200
REDWOOD CITY, CA 94065
(650) 482-6300
www.bkf.com

CALIFORNIA

APN: 048-320-020
SITE PLAN
DOMESTIC WELL PLAN
37 FRENCHMANS CREEK RD
SAN MATEO COUNTY
HALF MOON BAY

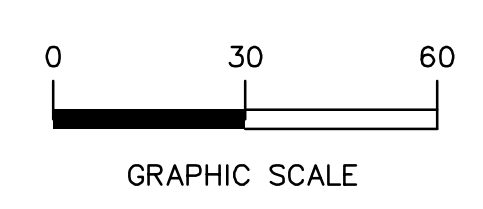
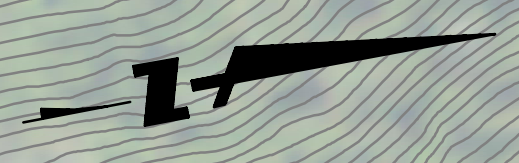


Date	Revisions	No.	Date
11/04/2021			
Scale 1" = 30'			
Design: DJP			
Drawn: DLG			
Approved: DJL			
Job No: 20170335-15			

Drawing Number:
C-2
OF

DOMESTIC WATER WELL NOTES:

- DOMESTIC WATER WELL SPECIFICATIONS:
- DEPTH TO BE DRILLED: 700 FEET
 - DEPTH OF PROPOSED ANNULAR SEAL: 50 FEET
 - SIZE OF OUTER CASING: 8 INCHES
 - TYPE OF CASING: CERTA LOCK SDR 17 PVC



DRAWING NAME: \\BKF-rc\dot\2017\170335_37_Frenchmans_Creek\ENG\EXHIBITS\2021-09-01_Well_Permit\Source Files\2021-10-06_Well_Permit.dwg
PLOT DATE: 01-18-22 PLOTTED BY: polt

SIMMS PLUMBING & WATER EQUIPMENT, INC.

P.O. BOX 738
PESCADERO, CA 94060
(650) 879-1823

WELL REPORT INFORMATION

OWNERS NAME HALF MOON GROW

ADDRESS 37 FRENCHMAN'S CREEK RD

TEST DATE MAY 16, 2023

WELL DEPTH 600'-0

STANDING WATER LEVEL 130'-5

STABILIZED WATER LEVEL 565'-5

PUMP SETTING 570'-0

TIME TEST BEGAN 10:00 AM

TIME	DRAWDOWN	G.P.M.
10:00	130'-0	12.5
10:15	235'-0	12.5
10:30	330'-0	11.5
10:45	410'-0	11.5
11:00	445'-0	10.7
11:15	475'-0	10.4
11:30	530'-0	10.0
11:45	555'-0	9.3
12:00	565'-5	7.3
12:15	565'-5	7.3
12:30	565'-5	6.7
12:45	565'-5	6.7
1:00	565'-5	6.7
1:15	565'-5	6.7
1:30	565'-5	6.7
1:45	565'-5	6.7
2:00	565'-5	6.7
2:15	565'-5	6.7
2:30	565'-5	6.7
2:45	565'-5	6.7
3:00	565'-5	6.7
3:15	565'-5	6.7
3:30	565'-5	6.7
3:45	565'-5	6.7
4:00	565'-5	6.7

SOIL CONTROL LAB

42 HANGAR WAY
WATSONVILLE
CALIFORNIA
95076
USA

Simms Plumbing & Water Equip, Inc.
P.O. Box 9
Pescadero, CA 94060
Attn: Sherry Olsen

Work Order #: 3020244
Reporting Date: February 27, 2023

Date Received: February 14, 2023
Project # / Name: None / 37 Frenchman's Creek RD
Water System #: NA
Sample Identification: 37 Frenchman's Creek RD, sampled 2/13/2023 2:00:00PM
Sampler Name / Co.: Jose Macias / Simms Plumbing
Matrix: Drinking Water
Laboratory #: 3020244-01

	Results	Units	RL	State Drinking Water Limits 1	Analysis Method	Date Analyzed	Flags
General Mineral							
Nitrate as N	ND	mg/L	0.4	10	EPA 300.0	02/14/23	
pH	7.9	pH Units	0.1	-	SM4500-H+ B	02/14/23	
Specific Conductance (EC)	1100	uS/cm	1.0	1600	SM 2510 B-1997	02/14/23	
Hydroxide as OH	ND	mg/L	5.0	-	SM 2320 B-1997	02/14/23	
Carbonate as CO3	ND	mg/L	5.0	-	SM 2320 B-1997	02/14/23	
Bicarbonate as HCO3	430	mg/L	5.0	-	SM 2320 B-1997	02/14/23	
Total Alkalinity as CaCO3	350	mg/L	35	-	SM 2320 B-1997	02/14/23	
Hardness	220	mg/L	5.0	-	SM 2340 B	02/15/23	
Total Dissolved Solids	610	mg/L	11	1000	SM2540C	02/14/23	
Chloride	54	mg/L	1.0	500	EPA 300.0	02/14/23	
Sulfate as SO4	140	mg/L	0.50	500	EPA 300.0	02/14/23	
Fluoride	0.36	mg/L	0.10	2	EPA 300.0	02/14/23	
Calcium	43	mg/L	0.50	-	EPA 200.7	02/15/23	
Magnesium	26	mg/L	0.50	-	EPA 200.7	02/15/23	
Potassium	8.2	mg/L	0.50	-	EPA 200.7	02/15/23	
Sodium	180	mg/L	0.50	-	EPA 200.7	02/15/23	
* Iron	34000	ug/L	50	300	EPA 200.7	02/15/23	
* Manganese	460	ug/L	20	50	EPA 200.7	02/15/23	
Copper	ND	ug/L	50	1000	EPA 200.7	02/15/23	
Zinc	150	ug/L	50	5000	EPA 200.7	02/15/23	
Inorganics							
Nitrate+Nitrite as N	ND	mg/L	0.4	10	EPA 300.0	02/14/23	
Arsenic	6.9	ug/L	2.0	10	EPA 200.8	02/15/23	
Barium	160	ug/L	100	1000	EPA 200.8	02/15/23	

RL - are levels down to which we can quantify with reliability, a result below this level is reported as "ND" for Not Detected.

State Drinking Water Limits: - as listed by California Administrative Code, Title 22.

* - a * in the left hand margin of the report means that particular constituent is above the California Drinking Water Limits.



SOIL CONTROL LAB

42 HANGAR WAY
WATSONVILLE
CALIFORNIA
95076
USA

Simms Plumbing & Water Equip, Inc.
P.O. Box 9
Pescadero, CA 94060
Attn: Sherry Olsen

Work Order #: 3020244
Reporting Date: February 27, 2023

Date Received: February 14, 2023
Project # / Name: None / 37 Frenchman's Creek RD
Water System #: NA
Sample Identification: 37 Frenchman's Creek RD, sampled 2/13/2023 2:00:00PM
Sampler Name / Co.: Jose Macias / Simms Plumbing
Matrix: Drinking Water
Laboratory #: 3020244-01

	Results	Units	RL	State Drinking Water Limits 1	Analysis Method	Date Analyzed	Flags
Inorganics							
Boron	620	ug/L	100	-	EPA 200.7	02/15/23	
* Cadmium	12	ug/L	1.0	5	EPA 200.8	02/15/23	
Chromium	31	ug/L	1.0	50	EPA 200.8	02/15/23	
Cyanide (total)	ND	ug/L	100	200	SM 4500-CN F-1999	02/21/23	
Lead	9.4	ug/L	5.0	15	EPA 200.8	02/15/23	
Mercury	ND	ug/L	1.0	2	EPA 245.1	02/23/23	
Selenium	ND	ug/L	5.0	50	EPA 200.8	02/15/23	
Silver	ND	ug/L	10	100	EPA 200.8	02/15/23	
MBAS (Surfactants)	ND	mg/L	0.025	0.5	SM 5540 C-2000	02/14/23	
Aluminum	ND	ug/L	50	1000	EPA 200.7	02/15/23	
Antimony	ND	ug/L	6.0	6	EPA 200.8	02/15/23	
Beryllium	ND	ug/L	1.0	4	EPA 200.8	02/15/23	
Nickel	27	ug/L	10	100	EPA 200.8	02/15/23	
Thallium	1.0	ug/L	1.0	2	EPA 200.8	02/15/23	
Nitrite as N	ND	mg/L	0.4	1	EPA 300.0	02/14/23	
General Physical							
Color	52	Color Units	3.0	-	SM 2120B	02/14/23	
Threshold Odor No.	ND	T.O.N.	1.0	-	SM 2150B	02/14/23	
Turbidity	500	NTU	0.10	-	SM 2130 B-2001	02/14/23	

RL - are levels down to which we can quantify with reliability, a result below this level is reported as "ND" for Not Detected.

State Drinking Water Limits: - as listed by California Administrative Code, Title 22.

* - a * in the left hand margin of the report means that particular constituent is above the California Drinking Water Limits.

Mike Galloway

SOIL CONTROL LAB

42 HANGAR WAY
WATSONVILLE
CALIFORNIA
95076
USA

Simms Plumbing & Water Equip, Inc.
P.O. Box 9
Pescadero, CA 94060
Attn: Sherry Olsen

Work Order #: 3020244
Reporting Date: February 15, 2023

Bacteriological Examination of Water for Coliform Organisms

Date Received: Water sample(s) received February 14, 2023
Project # / Name: None / 37 Frenchman's Creek RD
Water System #/Name: NA
Sampling Type: Routine Sampling Period: Feb 2023
Sampler's Name: Jose Macias / Simms Plumbing
Matrix: Drinking Water

<u>Sample Identification</u>	<u>Sampling Date</u>	<u>Sampling Time</u>	<u>Total Coliforms</u>	<u>E. coli</u>
37 Frenchman's Creek RD	02/13/23	14:00	Present	Absent

Date/Time Analyzed: 02/14/23 16:52
Method of Analysis: SM 9223 B

CA ELAP Certificate #1494 (This identifies our Laboratory to the Health Department)

Mike Galloway



APPENDIX 5

PERCOLATION TEST PLANS AND RESULTS

APN: 048-320-020

**PERCOLATION TEST OVERVIEW
PERCOLATION TEST PLAN**

37 FRENCHMANS CREEK RD

SAN MATEO COUNTY
HALF MOON BAY



No.	Date	Revisions

Date: 10/4/2021
Scale: 1" = 50'
Design: DJP
Drawn: DLG
Approved: DJL
Job No: 20170335-15
Drawing Number: **X-2**
OF

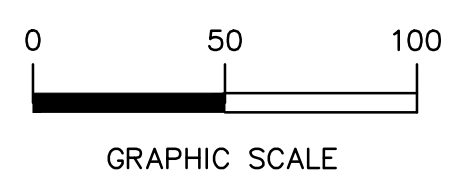
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PLOT DATE: 10-04-21 PLOTTED BY: gald



APPROXIMATE LIMITS OF HOUSE SEPTIC DRAINFIELD AREA (SEE SHEET X-3)

APPROXIMATE LIMITS OF RESORT SEPTIC DRAINFIELD AREA (SEE SHEET X-4)

NOTE: THIS PLAN IS BEING SUBMITTED FOR PERCOLATION TEST PERMIT ONLY. ADDITIONAL STRUCTURES AND UTILITIES SHOWN FOR REFERENCE ONLY.



Know what's below. Call before you dig.

HOUSE SEPTIC SYSTEM SIZING CALCULATIONS:

DESIGN CRITERIA
 NO. BEDROOMS: 5 (ASSUMED)
 AVERAGE SOIL PERCOLATION RATE: A, 2 IN/HR (ASSUMED)

SEPTIC TANK SIZE
 2000 GAL.

DRAINFIELD REQUIREMENTS FOR TRENCHES
 DRAINFIELD = ASSUMED A RATED
 LEACH LINE BASE LENGTH (UP TO 3 BEDROOMS) = 70 FT
 LEACH LINE LENGTH FOR EACH ADDITIONAL BEDROOM = 20 FT
 PRIMARY BASE LENGTH = 70 FT + (2 X 20 FT) = 110 FT

PRIMARY A LENGTH = 110 FT
 SECONDARY B LENGTH = 110 FT
 100% RESERVE C LENGTH = 110 FT
 100% RESERVE D LENGTH = 110 FT
 TOTAL = 440 FT (TRENCHES)



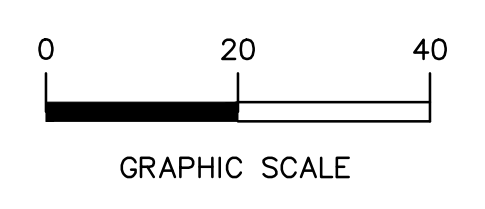
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 PLOT DATE: 10-04-21 PLOTTED BY: gald

APN: 048-320-020

HOUSE PERCOLATION TEST PLAN
 PERCOLATION TEST PLAN
 37 FRENCHMANS CREEK RD
 HALF MOON BAY
 SAN MATEO COUNTY
 CALIFORNIA



NOTE: THIS PLAN IS BEING SUBMITTED FOR PERCOLATION TEST PERMIT ONLY. ADDITIONAL STRUCTURES AND UTILITIES SHOWN FOR REFERENCE ONLY.



Date	Revisions	No.
10/4/2021		

Drawing Number: **X-3**
 OF



Date	Revisions	No.
10/4/2021		

RESORT SEPTIC SYSTEM SIZING CALCULATIONS:

DESIGN CRITERIA

NO. BEDROOMS: 24 (ASSUME 2 BEDROOMS PER UNIT)

AVERAGE SOIL PERCOLATION RATE: A, 2 IN/HR (ASSUMED)

BUILDING	FACILITY	UNIT	QUANTITY	PEAK FLOW* (GAL/UNIT/DAY)	TOTAL PEAK FLOW (GAL/DAY)
CABANAS	HOTEL	GUEST	24	50	1200
	HOTEL	EMPLOYEE	10	10	100
CLUBHOUSE	RESTAURANT (CONVENTIONAL)	CUSTOMER	50	9	450
	BAR	CUSTOMER	50	3	150
				Σ =	1900

*FLOW DATA 2002 US EPA ONSITE WASTEWATER TREATMENT SYSTEMS MANUAL (TABLE 3-4)

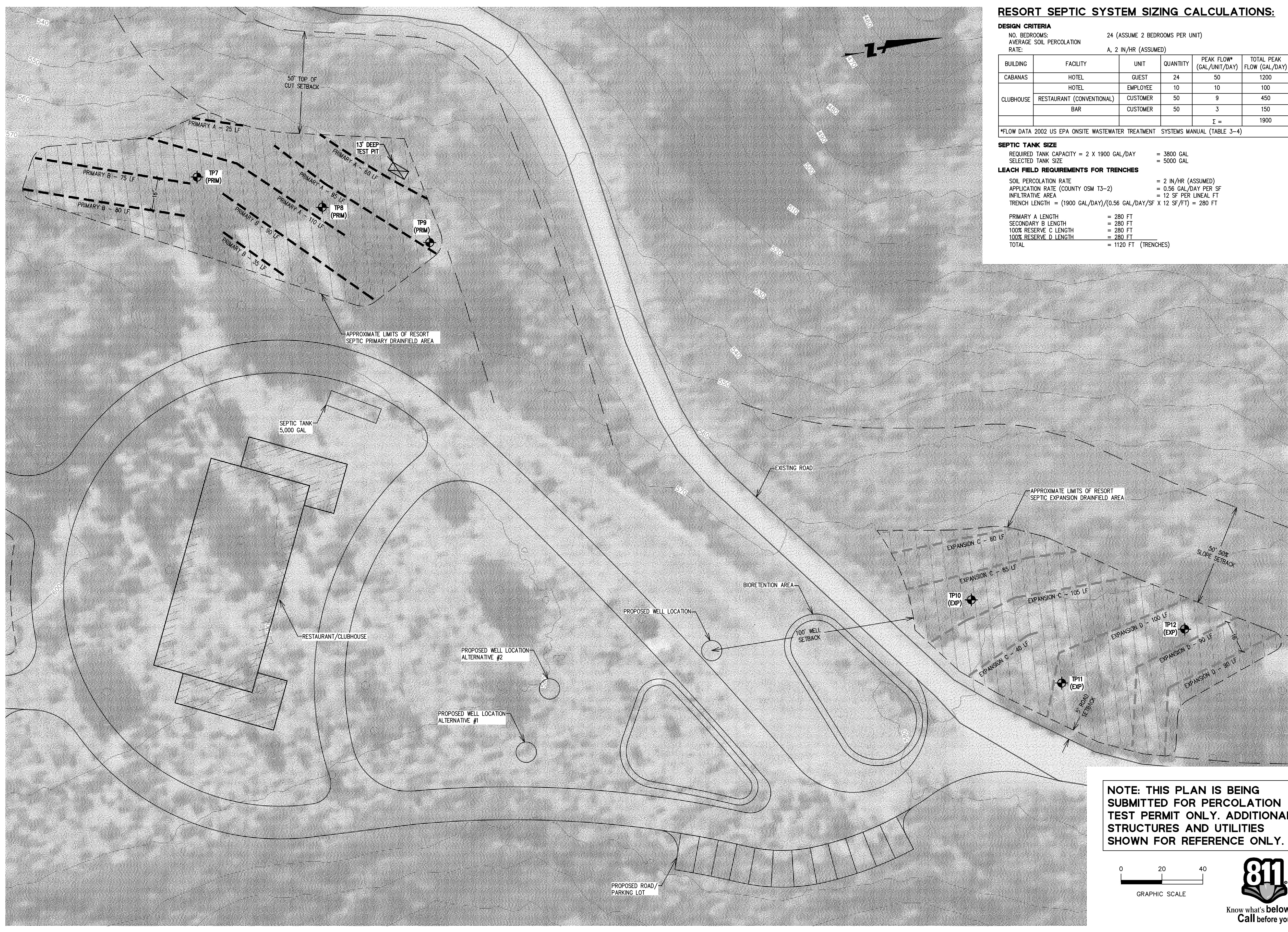
SEPTIC TANK SIZE

REQUIRED TANK CAPACITY = 2 X 1900 GAL/DAY = 3800 GAL
SELECTED TANK SIZE = 5000 GAL

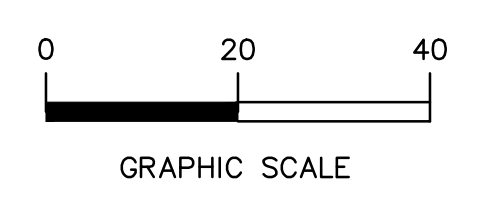
LEACH FIELD REQUIREMENTS FOR TRENCHES

SOIL PERCOLATION RATE = 2 IN/HR (ASSUMED)
APPLICATION RATE (COUNTY OSM T3-2) = 0.56 GAL/DAY PER SF
INFILTRATIVE AREA = 12 SF PER LINEAL FT
TRENCH LENGTH = (1900 GAL/DAY)/(0.56 GAL/DAY/SF X 12 SF/FT) = 280 FT

PRIMARY A LENGTH = 280 FT
SECONDARY B LENGTH = 280 FT
100% RESERVE C LENGTH = 280 FT
100% RESERVE D LENGTH = 280 FT
TOTAL = 1120 FT (TRENCHES)

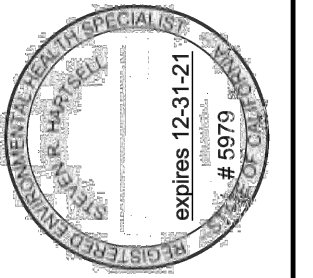
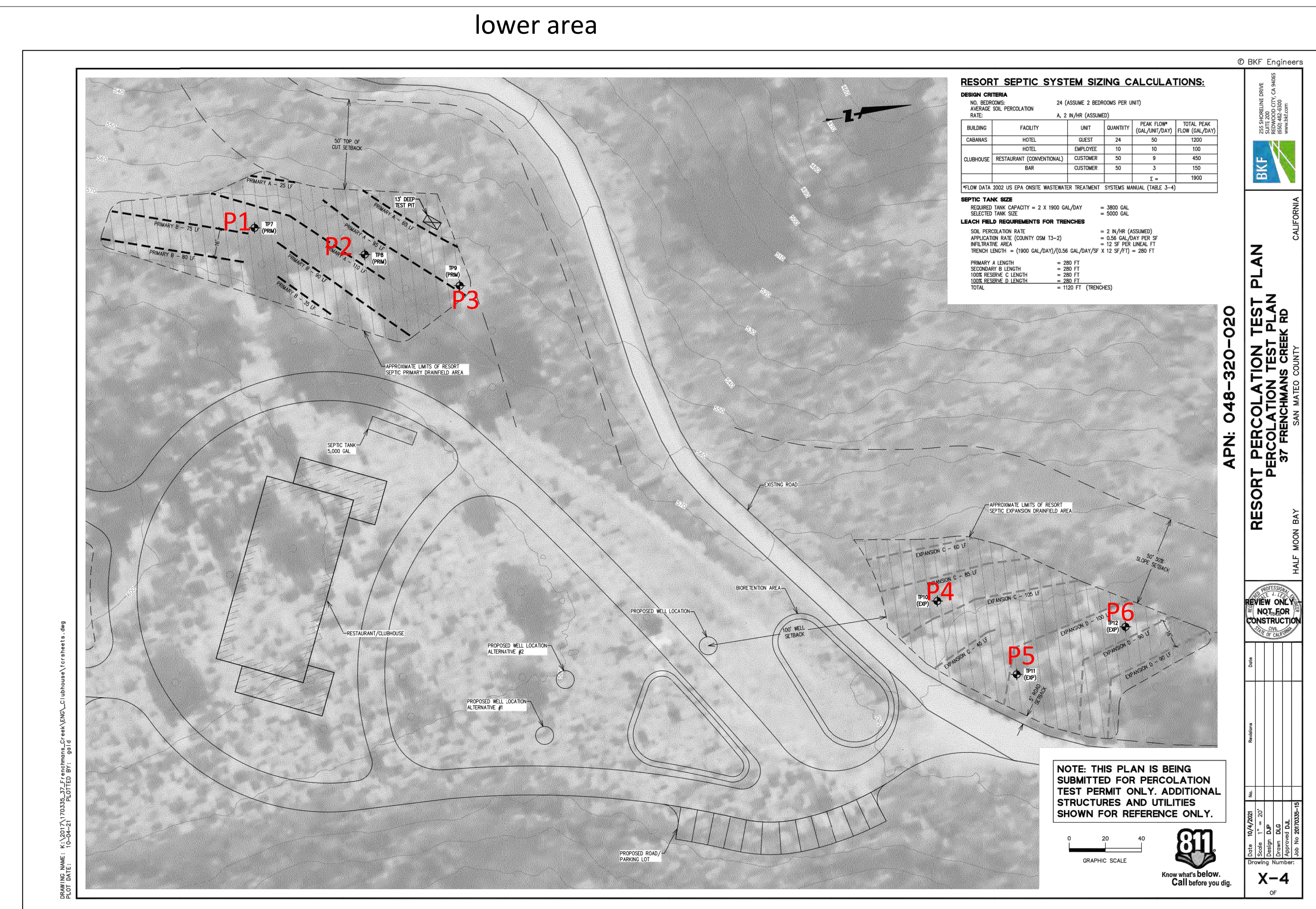
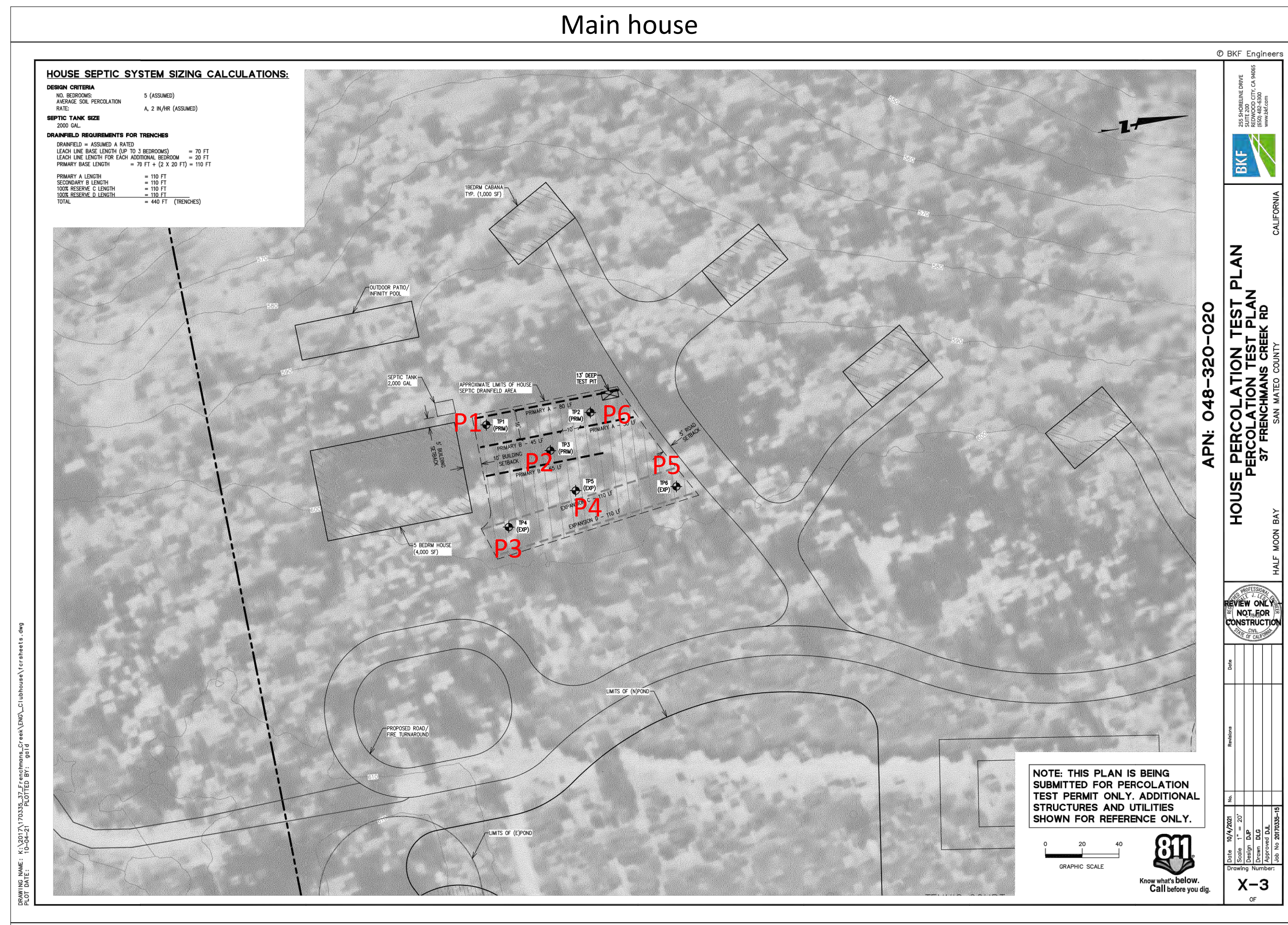


NOTE: THIS PLAN IS BEING SUBMITTED FOR PERCOLATION TEST PERMIT ONLY. ADDITIONAL STRUCTURES AND UTILITIES SHOWN FOR REFERENCE ONLY.



Know what's below.
Call before you dig.

perk test numbering used on perk test data sheets - no to scale



S.R. HARTSELL, R.E.H.S.
 202 WATERFORD DRIVE
 VACAVILLE, CA 95688
 shartsell@gmail.com (650) 888-2419



Protecting Our Health and Environment

LAND USE FIELD & DATA REPORT

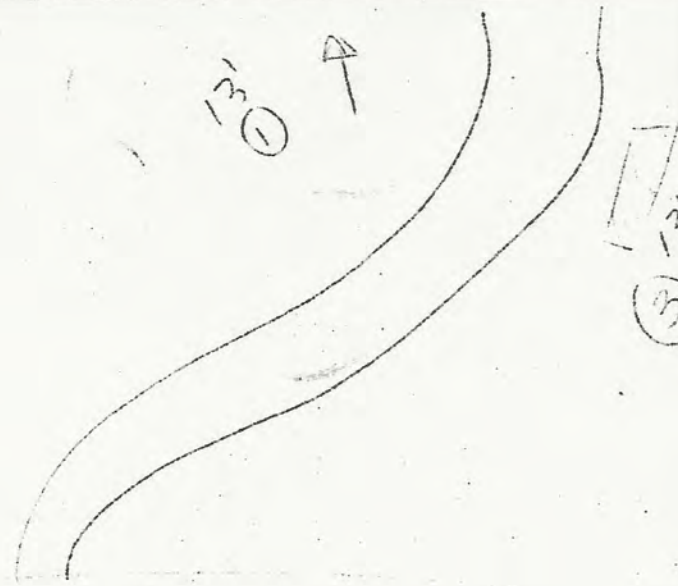
2000 Alameda de las Pulgas, Suite 100, San Mateo, CA 94403
Phone (650) 372-6200 Fax (650) 627-8244 www.smchealth.org/landuse

APN# 048 320 020	SR# 0035238	Date 11/15/21
Site Address 37 FRENCHMANS CREEK		Owner SKRRR LLC
City HALF MOON BAY	Zip 94028	Contractor LHW

1410: TO DO ON SITE. OBSERVED 13' DEEP SOIL PROFILE TEST. SANDY WITH NO WATER AND DRY. TEST HOLE IS #2.

1430: OBSERVED 13' DEEP SOIL PROFILE TEST #1. SANDY, NO WATER AND DRY.

1500: OBSERVED 13' DEEP SOIL PROFILE TEST #3



[Signature]

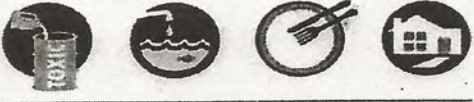
COUNTY STAFF

[Signature]

CONTRACTOR RECEIVED BY

LAND USE FIELD & DATA REPORT

2000 Alameda de las Pulgas, Suite 100, San Mateo, CA 94403
Phone (650) 372-6200 Fax (650) 627-8244 www.smchealth.org/landuse



Protecting Our Health and Environment

APN # 048 320 020	SR #	Date 11/23/21
Site Address 37 FRENCHMAN'S CREEK		Owner SKRRR INC
City HALF MOON BAY	Zip 94019	Contractor LHO + HARTSELL BERK

1050: ALL ON SITE OBSERVED LAST 3 READINGS. PERC HOLES 1-6 (LOWER HALF NEAR ROAD).

1130: OBSERVED READING

1200: OBSERVED READING. HOLE 3 DID NOT HOLD ANY WATER. CALLED TO STABILIZE PERC RATE IS 5.30 INCHES/HOUR. A RATE.

1210: SLJ OFFSITE

	1	2	3	4	5	6	
1100	2.75	4.75	EMPTY	2.25	2.625	1.5	
1130	2.75	5.0	EMPTY	2.0	2.625	1.25	
1200	2.625	4.75	EMPTY	2.0	2.625	1.25	
	✓	✓	X	✓	✓	✓	$= \frac{15.25}{5} = 3.05$ $\frac{3.05}{2} = 1.525$ <p>5.3 inches hour</p>

[Signature]
COUNTY STAFF

CONTRACTOR RECEIVED BY



SAN MATEO COUNTY
ENVIRONMENTAL HEALTH SERVICES DIVISION

MEASUREMENTS

1/2 HOUR INTERVALS	READINGS	HOLE #1	HOLE #2	HOLE #3	HOLE #4	HOLE #5	HOLE #6
800 1	FINISH	22 ⁶ / ₈	21 ⁴ / ₈	MT	19 ⁴ / ₈	74	21 ⁴ / ₈
	START	28	27	23 ⁴ / ₈	23	70	25
	DIFF.	5 ⁷ / ₈	5 ⁴ / ₈		3 ⁴ / ₈	4	3 ⁴ / ₈
830 2	FINISH	23 ⁵ / ₈	21 ⁴ / ₈	MT	20 ² / ₈	73 ⁴ / ₈	22
	START	28	27	24 ⁴ / ₈	23	70	25
	DIFF.	4 ³ / ₈	5 ⁴ / ₈		2 ⁶ / ₈	3 ⁴ / ₈	3
900 3	FINISH	24 ⁶ / ₈	21 ⁶ / ₈	MT	21 ⁴ / ₈	73 ² / ₈	23
	START	28	27	25	24	70	25
	DIFF.	3 ⁷ / ₈	5 ² / ₈		2 ⁴ / ₈	3 ² / ₈	2
930 4	FINISH	25	21 ⁷ / ₈	MT	21 ⁴ / ₈	73	23 ² / ₈
	START	28	27	25	24	70	25
	DIFF.	3	5 ¹ / ₈		2 ⁴ / ₈	3	1 ⁶ / ₈
1000 5	FINISH	25	22	MT	21 ⁶ / ₈	72 ⁶ / ₈	23 ⁴ / ₈
	START	28	27	25	24	70	25
	DIFF.	3	5		2 ² / ₈	2 ⁶ / ₈	1 ⁴ / ₈
1030 6	FINISH	25 ² / ₈	22 ⁴ / ₈	MT	21 ⁶ / ₈	72 ⁵ / ₈	23 ⁴ / ₈
	START	28	27	25	24	70	25
	DIFF.	2 ⁴ / ₈	4 ⁶ / ₈		2 ² / ₈	2 ⁵ / ₈	1 ⁴ / ₈
1100 7	FINISH	25 ² / ₈	22		22	72 ⁵ / ₈	23 ⁶ / ₈
	START	28	27		24	70	25
	DIFF.	2 ⁶ / ₈	5		2	2 ⁵ / ₈	1 ² / ₈
1130 8	FINISH	25 ³ / ₈	22 ⁴ / ₈		22	72 ⁵ / ₈	23 ⁶ / ₈
	START	28	27		24	70	25
	DIFF.	2 ⁵ / ₈	4 ⁶ / ₈		2	2 ⁵ / ₈	1 ² / ₈

PERC RATE = 5.30 INCHES/HOUR, A RATE ESTD

SITE INFORMATION

Site Address: 37 Frenchman's Creek APN: 048 320 020

Size Of Parcel: 164.23 Acres Subdivision Number: NA

Soil Log: See soil logs by others Water Source: TBD

Depth To Ground Water: 13 +

Wet Weather Testing Required? YES NO

Tested By: Steven R Handbell Tester #: NA

Observed in Field By: Elizabeth Whitford Date: 11/23/21

2000 Alameda de las Pulgas, Suite 100, San Mateo, CA 94403
Phone (650) 372-6200 Fax (650) 627-8244 www.smchealth.org/landuse

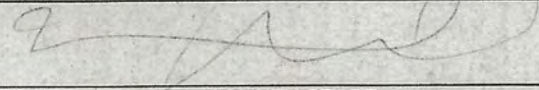


Protecting Our Health and Environment

APN #	048 320 020	SR #	0035238	Date	11/17/21
Site Address	37 FRENCHMAN'S CREEK			Owner	SKRRR INC
City	HALF MOON BAY	Zip	94019	Contractor	(H) / IMPSELL

1045: FLW ON SITE. OBSERVED LAST 3 READINGS.
 1130: OBSERVED READINGS
 1200: OBSERVED READINGS. ALL HOLES STABILIZED, INCLUDED IN PERC RATE = 7.88
 INCHES/HOUR, A RATING
 1230: FLW OFF SITE.

	1	2	3	4	5	6	
1100	8.75	2.75	4.5	6.75	5.75	3.0	
1130	8.75	2.75	4.5	6.875	5.75	2.875	
1200	8.75	2.75	4.5	6.875	5.75	2.875	= 23.675 / 6 = 3.94 x 2 7.875 inches/ hour
	✓	✓	✓	✓	✓	✓	


 COUNTY STAFF

CONTRACTOR
 RECEIVED BY



**SAN MATEO COUNTY
ENVIRONMENTAL HEALTH SERVICES DIVISION**

MEASUREMENTS

1/2 HOUR INTERVALS	READINGS	HOLE #1	HOLE #2	HOLE #3	HOLE #4	HOLE #5	HOLE #6
800 1	FINISH	72	73 6/8	74 2/8	78 3/8	75 2/8	73 4/8
	START	70 4/8	71	70	71 4/8	70	70
	DIFF.	1 4/8	2 6/8	4 2/8	6 7/8	5 2/8	3 4/8
830 2	FINISH	71 2/8	73 3/8	74 5/8	79 2/8	75 5/8	73 4/8
	START	70	70 4/8	70	72	70	70
	DIFF.	1 2/8	2 7/8	4 5/8	7 2/8	5 5/8	3 4/8
900 3	FINISH	71	73 3/8	74 5/8	78 7/8	75 4/8	73 2/8
	START	70	70 4/8	70	72	70	70
	DIFF.	1	2 7/8	4 5/8	6 7/8	5 4/8	3 2/8
930 4	FINISH	71	73 1/8	74 6/8	79	75 6/8	73
	START	70	70 4/8	70	72	70	70
	DIFF.	1	2 5/8	4 6/8	7	5 6/8	3
1000 5	FINISH	70 7/8	73 4/8	74 5/8	78 6/8	75 6/8	73
	START	70	70 4/8	70	72	70	70
	DIFF.	7/8	3	4 5/8	6 6/8	5 6/8	3
1030 6	FINISH	70 7/8	73 2/8	74 4/8	78 6/8	75 6/8	73
	START	70	70 4/8	70	72	70	70
	DIFF.	7/8	2 6/8	4 4/8	6 6/8	5 6/8	3
11 7	FINISH	70 7/8	73	74 4/8	78 7/8	75 6/8	72 7/8
	START	70	70 2/8	70	72	70	70
	DIFF.	7/8	2 6/8	4 4/8	6 7/8	5 6/8	2 7/8
1130 8	FINISH	70 7/8	73	74 4/8	78 7/8	75 6/8	72 7/8
	START	70	70 2/8	70	72	70	70
	DIFF.	7/8	2 6/8	4 4/8	6 7/8	5 6/8	2 7/8

PERC RATE = 7.88 INCHES/HOUR
(GHW)

SITE INFORMATION

Site Address: 37 Frenchmans Creek Road APN: 048-320-020
main house septic area

Size Of Parcel: 164 acres Subdivision Number: _____

Soil Log: see Water Source: IBD

Depth To Ground Water: > 13'

Wet Weather Testing Required? YES NO

Tested By: Steven Hartsell Tester #: NA

Observed in Field By: Elizabeth Whitford Date: 11.17.2021



APPENDIX 6

37 FRENCHMANS DENSITY ANALYSIS



BKF No. 20170335-10
 June 22, 2023

SUBJECT: AG DENSITY CREDITS NARRATIVE
37 FRENCHMANS CREEK ROAD HALF MOON BAY, CA 94019

The purpose of this letter is to provide a brief explanation of density credits available at 37 Frenchmans Creek Road per the San Mateo County (SMCo) Zoning Regulations dated January 2022.

The 37 Frenchmans Creek Road property is within the Planned Agricultural District (PAD) and per the SMCo Zoning Regulations is allocated density credits that may be applied towards non-agriculture uses. These density credits are allocated by splitting up the property into the areas listed under the criteria in Chapter 21A of the SMCo Zoning Regulations and adding up the density credits allotted to each area. Once a portion of the property is considered under a criterion, it cannot be considered for a subsequent criteria listed in Chapter 21A. The sum of density credits is rounded up if 0.5 or greater and each parcel is allocated a minimum of 1 density credit. There are also provisions to collect bonus density credits for consolidating parcels, developing ag water improvements and transferring credits.

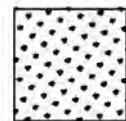
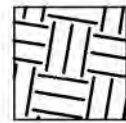
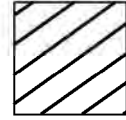




The 37 Frenchmans Creek Road property is allotted as follows:

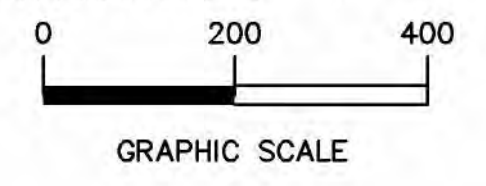
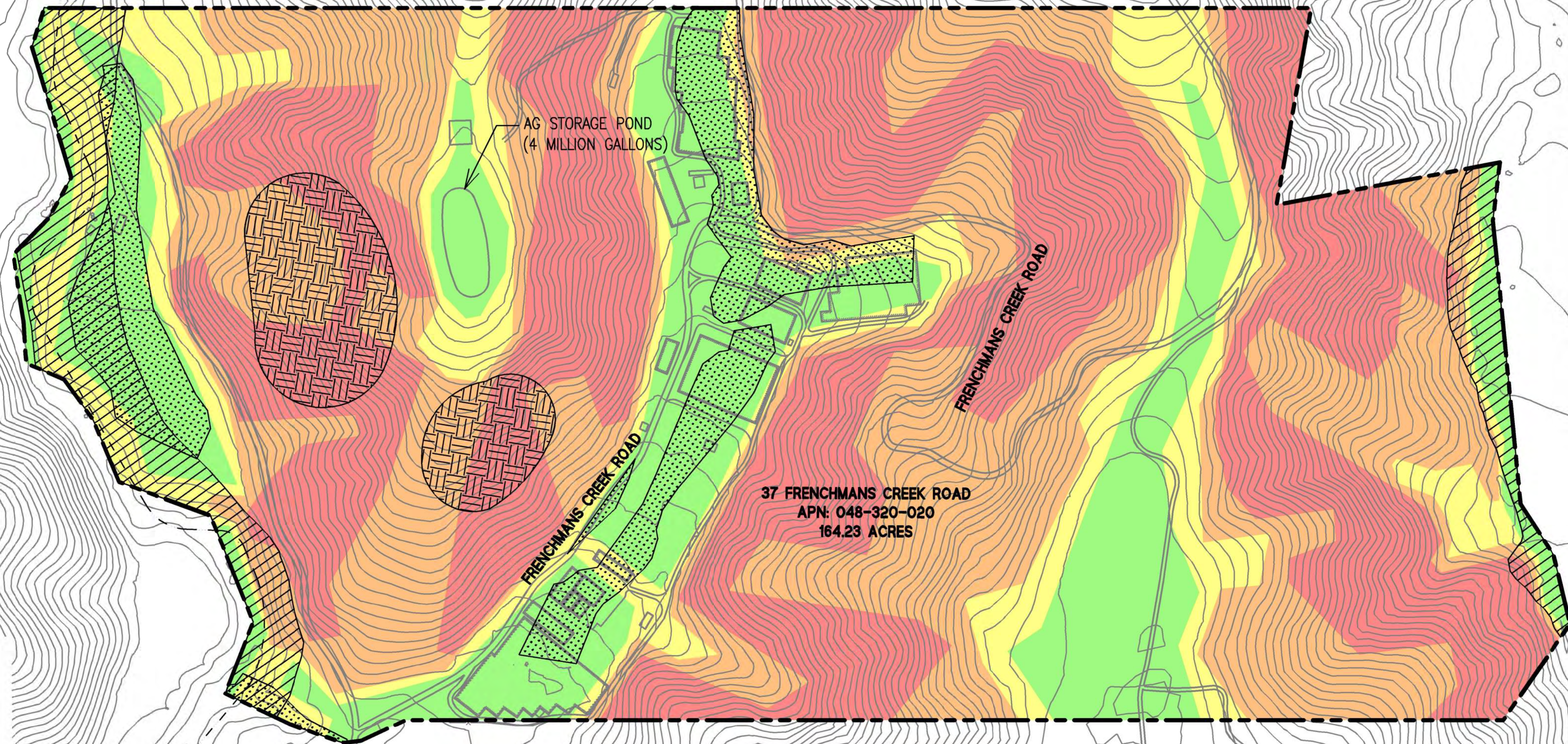
Criteria	Land Use	Area		Density Credits (credit/acre)	Credits (credits)	
		(sf)	(acre)			
A	Prime Agricultural Lands	482360	11.07	1/160	0.07	
B	Landslide Susceptibility	307880	7.07	1/160	0.04	
C	Slope > 50%	2321130	53.29	1/160	0.33	
D	Remote Lands	0	0.00	1/160	0.00	
E	30% < Slope < 50%	2054460	47.16	1/80	0.59	
F	Rift Zones or Active Faults	0	0.00	1/80	0.00	
G	Flood Hazard Area	391250	8.98	1/60	0.15	
H	15% < Slope < 30%	993600	22.81	1/60	0.38	
I	Ag Preserves or Exclusive Ag District	603170	13.85	1/60	0.23	
J	All Other Lands	0	0.00	1/40	0.00	
TOTAL		7153850	164.23		1.80	
					Rounded Credits	2

In addition to the 2 density credits, the development of the 25.7 acre-ft increase in storage volume for the 2 onsite reservoirs will grant 1.5 bonus density credit for providing new storage capacity between 24.50 and 36.74 acre-ft. Therefore a total of 3.5 density credits are available for non-agricultural uses on the 37 Frenchmans Creek Road property.

DRAWING NAME: \\bki-rs\dot\2017\170335_37_Frenchmans_Creek\ENG\EXHIBITS\2021-06-03_Ag_Density_Credits\csheds_dens1ty.dwg
 PLOT DATE: 06-03-21 PLOTTED BY: polt

HATCH LEGEND:

-  PRIME AGRICULTURAL LANDS PER SAN MATEO COUNTY GIS
-  LANDSLIDE SUSCEPTIBILITY AREAS PER USGS LANDSLIDE SUSCEPTIBILITY IN SAN MATEO COUNTY DATED 1978
-  FLOOD HAZARD AREA PER FEMA FLOOD MAP
-  LANDS WITH SLOPES > 50%
-  LANDS WITH 30% < SLOPES < 50%
-  LANDS WITH 15% < SLOPES < 30%
-  ALL OTHER LANDS WITH SLOPES < 15%



Date	06/03/2021	No.	
Scale	1" = 200'		
Design	DJP		
Drawn	DJG		
Approved	D.J.L.		
Job No.	20170335		
Revisions			
Date			

EX-1
OF

SITE PLAN
PAD DENSITY CREDITS
37 FRENCHMANS CREEK RD

HALF MOON BAY

SAN MATEO COUNTY

CALIFORNIA



255 SHORELINE DRIVE
 SUITE 200
 REDWOOD CITY, CA 94065
 (650) 482-6300
 www.bkf.com



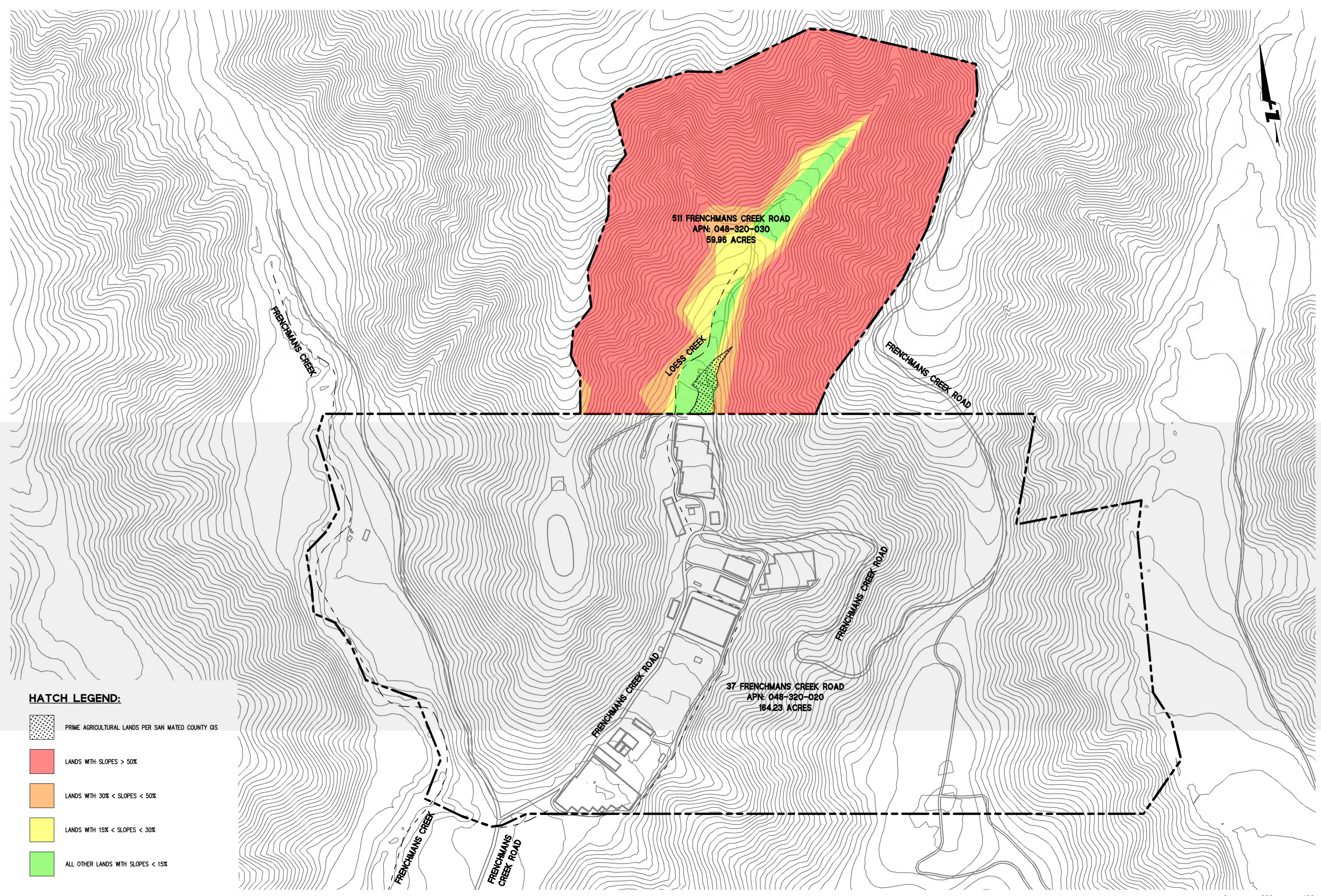
APPENDIX 7

511 FRENCHMANS TRANSFER ANALYSIS

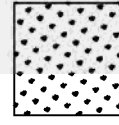


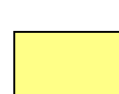



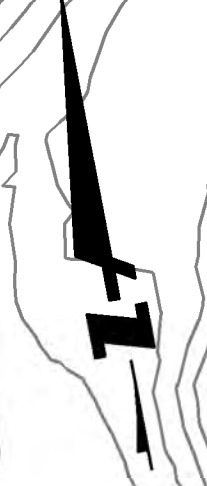
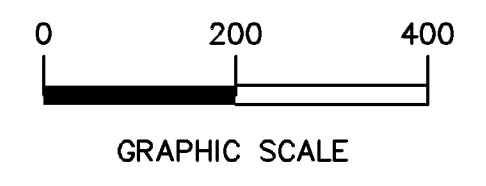
**TRANSFER PARCEL EXHIBIT
PAD DENSITY CREDITS
511 FRENCHMANS CREEK RD**

DRAWING NAME: K:\2017\170335_37_Frenchmans_Creek\ENG\EXHIBITS\2022-06-08_08_511_Ag_Density_Credits\craheets_density.dwg
PLOT DATE: 06-13-22 PLOTTED BY: gald



HATCH LEGEND:

-  PRIME AGRICULTURAL LANDS PER SAN MATEO COUNTY GIS
-  LANDS WITH SLOPES > 50%
-  LANDS WITH 30% < SLOPES < 50%
-  LANDS WITH 15% < SLOPES < 30%
-  ALL OTHER LANDS WITH SLOPES < 15%



Date	No.	Revisions	Date
06/13/2022			
Scale 1" = 200'			
Design: DJP			
Drawn: DLG			
Approved: DJL			
Job No. 20170335			



APPENDIX 8

WILLIAMSON ACT CANCELLATION

May 17, 2023
BKF No. 20170335



San Mateo County
Planning & Building Dept.
455 County Center, 2nd Floor
Redwood City, CA 94063
Transmitted Via Email

Subject: Williamson Act Cancellation
37 Frenchmans Creek Road, Half Moon Bay, CA

To whom it may concern:

On behalf of the owners of 37 Frenchmans Creek Road, SKRRR LLC, BKF Engineers is requesting consideration for cancellation of the Williamson Act Contract for 37 Frenchmans Creek Road. The cancellation of the Williamson Act is in conjunction with the proposed Stonewood Resort project at 37 Frenchmans Creek Road. The Stonewood Resort project includes farm labor housing, reservoir expansion, agriculture reconfiguration, campgrounds, a restaurant, and a resort clubhouse to go along with other planned amenities. Existing agriculture operations onsite will remain and be unimpacted by the proposed development.

1. Consistency with the Purposes of the Williamson Act (GC §51282(b)).
 - a. *That the cancellation is for land on which a notice of nonrenewal has been served pursuant to Section 51245.*
 - See the attached Williamson Act Contract Non-Renewal Application Form that was submitted to the county on March 26, 2023.
 - b. *That cancellation is not likely to result in the removal of adjacent lands from agricultural use.*
 - The Stonewood Resort project will not impact agricultural operations, water rights, or water access to the adjacent lands. The project also has the potential of supporting surrounding agriculture by providing new farm labor housing and additional water storage.
 - c. *That cancellation is for an alternative use which is consistent with the applicable provisions of the city or county general plan.*
 - The proposed development will be consistent with County Zoning and General Plan land use designations and the Local Coastal Program. It will not infringe on any existing agricultural use and will not reduce the footprint of prime agriculture soils on the property.
 - d. *That cancellation will not result in discontinuous patterns of urban development.*
 - The property is located approximately three miles from Downtown Half Moon Bay and one mile from Cabrillo Highway (CA-1). There are multiple residential neighborhoods within a mile of the property. The property's proximity to the City of Half Moon Bay makes it the ideal location for the development of a resort to serve its residents and visitors to the Coastside.

e. *That there is no proximate noncontracted land which is both available and suitable for the use to which it is proposed the contracted land be put, or, that development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land.*

- There are no proximate, noncontracted lands that are both available and suitable for the proposed use. Adjacent parcels to the east and south are constrained by the Scenic Corridor overlays, existing Williamson Act contracts, and/or mapped prime agricultural land. Adjacent lands to the north are also constrained by prime agricultural land along with constrained access from a public street. The adjacent land to the west has infrastructure challenges due to its steep topography and lack of any previous development on the site. The land to the west is also incorporated into the City of Half Moon Bay and zoned as Open Space Reserve, which would prohibit development.

2. Cancellation is in the Public Interest (GC §51282(c)).

a. *That other public concerns substantially outweigh the objectives of the Williamson Act.*

- The development will allow for continued and expanded agriculture on the property and serve as a marquee destination on the Coastside and the greater Bay Area, providing visitor serving coastal recreation opportunities and enhanced ties to local agriculture.

b. *That there is no proximate noncontracted land which is both available and suitable for the use to which it is proposed the contracted land be put, or that development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land.*

- See response to item 1.e.

Sincerely,



Darren Gallagher, EIT
Design Engineer
(650)-482-6488
dgallagher@bkf.com



cc: Dale Leda, PE
Project Manager
(650) 482-6457
dleda@bkf.com

Attachment(s):

- Williamson Act Contract Non-Renewal Application Form



Planning and Building Department

455 County Center, 2nd Floor • Redwood City CA 94063
Mail Drop: PLN 122 • TEL (650) 363-4161 • FAX (650) 363-4849

Williamson Act Contract
Non-Renewal Application
Form

Permit Numbers
Primary:

Applicant/Owner Information

Applicant: SKRRR, LLC.

Mailing Address: 37K Frenchmans Creek Rd. Half Moon

Zip: 94019

Phone,W: 6,266,739,000

H:

E-mail Address: aneesetb@gmail.com

FAX:

Name of Owner (1): SKRRR, LLC.

Mailing Address: 37K Frenchmans Creek Rd.

Half Moon Bay

Zip: 94019.00

Phone,W: 6266739000

H:

E-mail Address: aneesetb@gmail.com

Name of Owner (2):

Mailing Address:

Zip:

Phone,W:

H:

E-mail Address:

Project Information

Project Location (address): 37K Frenchmans Creek Rd
Half Moon Bay, CA 94019

Assessor's Parcel Numbers (to be non-renewed):

048 — 320 — 20 , — —

— — , — —

Parcel/lot size: 164

Original Ag. Preserve File #: 5182.388

Zoning:

Application Requirements:

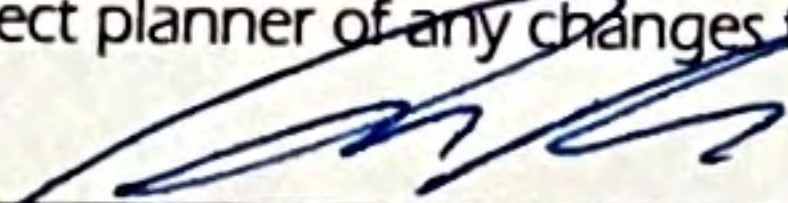
- Fees
- Proof of Ownership (current tax bill or deed - or title report)

Check whether applicant has submitted the following; if not (& application is accepted), it will be deemed **Incomplete** until such information is retrieved and submitted.

- Deed description (see Non-Renewal template for option/details on this).
- Copy of original recorded contract, including date, Document #, Book/Page data (if this is not available, check the County's AP file; if not there, see Non-Renewal document template for details). The NR document cannot be recorded without this information.

Signatures

We hereby certify that the information stated above and on forms, plans and other materials submitted herewith in support of the application is true and correct to the best of our knowledge. It is our responsibility to inform the County of San Mateo through our assigned project planner of any changes to information represented in these submittals.

Owner's signature: 

Owner's signature:

Applicant's signature: 



APPENDIX 9

GEOTECHNICAL STUDY



June 24, 2022

Aneese Bishara and Edward Wilkinson
SKRRR LLC
37 Frenchmans Creek Road
Half Moon Bay, CA 94019

Subject: Geologic Hazard Evaluation: Frenchmans Creek Hillside Resort, 37
Frenchmans Creek Road, Half Moon Bay.

Dear Mr. Bishara and Mr. Wilkinson:

This letter presents our consideration of the typical geologic hazards that may exist at a site, and the potential for these hazards to exist at the site of the proposed Frenchmans Creek Hillside Resort.

SITE DESCRIPTION

The property is located at 37 Frenchmans Creek Road, 1.2 miles inland from Highway 1 on a broad ridge, as shown in Figure 1. A lodge and eleven small cabins are proposed, at the approximate locations shown in Figure 2. The ridge is fairly level and vegetated with wild grasses, shrubs, and some trees. A dense eucalyptus forest occupies the western slope of the ridge.

As shown in Figure 3, the site is underlain by middle Miocene age Monterey formation with some granitic bedrock nearby or possibly underlying the lodge area. The Monterey formation is described as indicated in Figure 3.

POTENTIAL GEOLOGIC HAZARDS

Slope Stability

The proposed development site is confined to a broad, gently sloping ridge that is bordered on the east and west by moderately steep slopes. Figure 4 shows areas of differing slope failure susceptibility. The proposed structures, as well as the proposed tennis court and the existing reservoir, are all in the area mapped as level I, where less than 1 percent of those areas have experienced slope instability. The east and west slopes of the ridge are mapped as level II, where 2 to 8 percent of those areas have experienced slope instability. Figure 5 shows areas identified as potential landslide hazard zone during an earthquake. None of the proposed development is within the landslide hazard zones. Some of the cabins may be near potentially unstable slopes, but they can be moved away from such slopes if deemed necessary, or foundations can be designed to minimize the threat. In any case, with proper building locations and engineering design, the threat of slope instability can be mitigated to an acceptable level.



Faulting

The nearest active fault is the San Gregorio-Seal Cove fault, located about 5 km to the southwest. Although it would result in strong ground shaking during its maximum probable earthquake, it would not create fault ruptures across the site.

Flooding

The site is on a high ridge not subject to flooding.

Liquefaction

The site on a high ridge and underlain by bedrock, with a thin soil cover far from any mapped potential liquefaction zones, as shown in Figure 5. The potential for liquefaction on the site is extremely low.

Expansive Soil

Expansive soil is clayey soil that is prone to shrinking and swelling with changes in moisture content. This is a very common hazard throughout San Mateo County and may be present at the site. The presence of expansive soil will be determined during the building permit process. Foundations can be designed to economically counter the detrimental effects of expansive soil.

In conclusion, there are no potential geologic hazards that are likely to render the property infeasible for development. If you have any questions, please call me at (650) 728-3590.

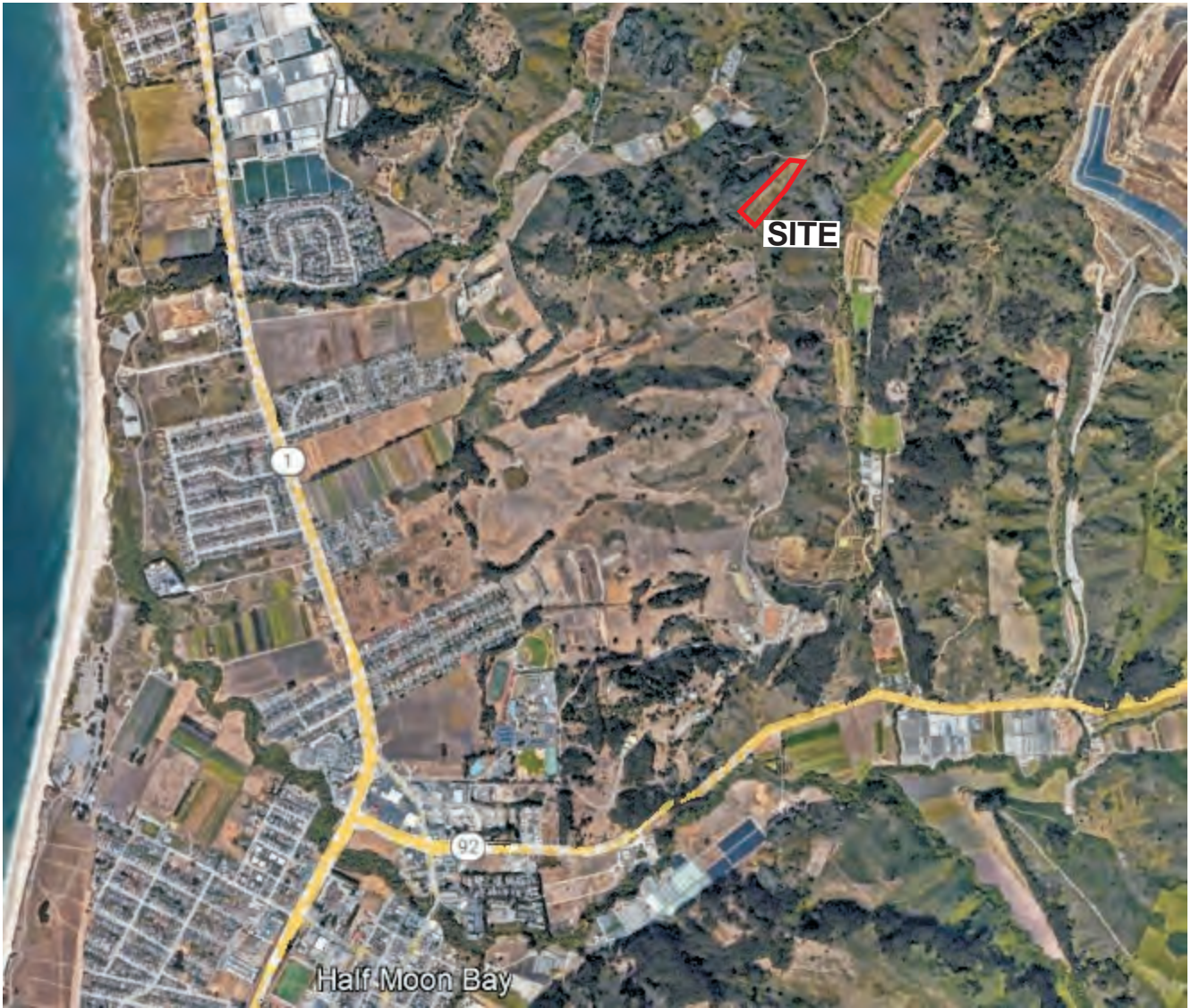
Yours,
Sigma Prime Geosciences

Charles Kissick, CEG



References:

- Brabb, Earl E., Pampeyan, Earl H., and Bonilla, Manuel G., 1978, Landslide Susceptibility in San Mateo County, California, USGS Miscellaneous Field Studies Map MF-360.
- Brabb, Earl E., Graymer, R.W., and Jones, D.L., 1998, Geology of the Onshore Part of San Mateo County, California, Derived from the Digital Database Open-File 98-137.

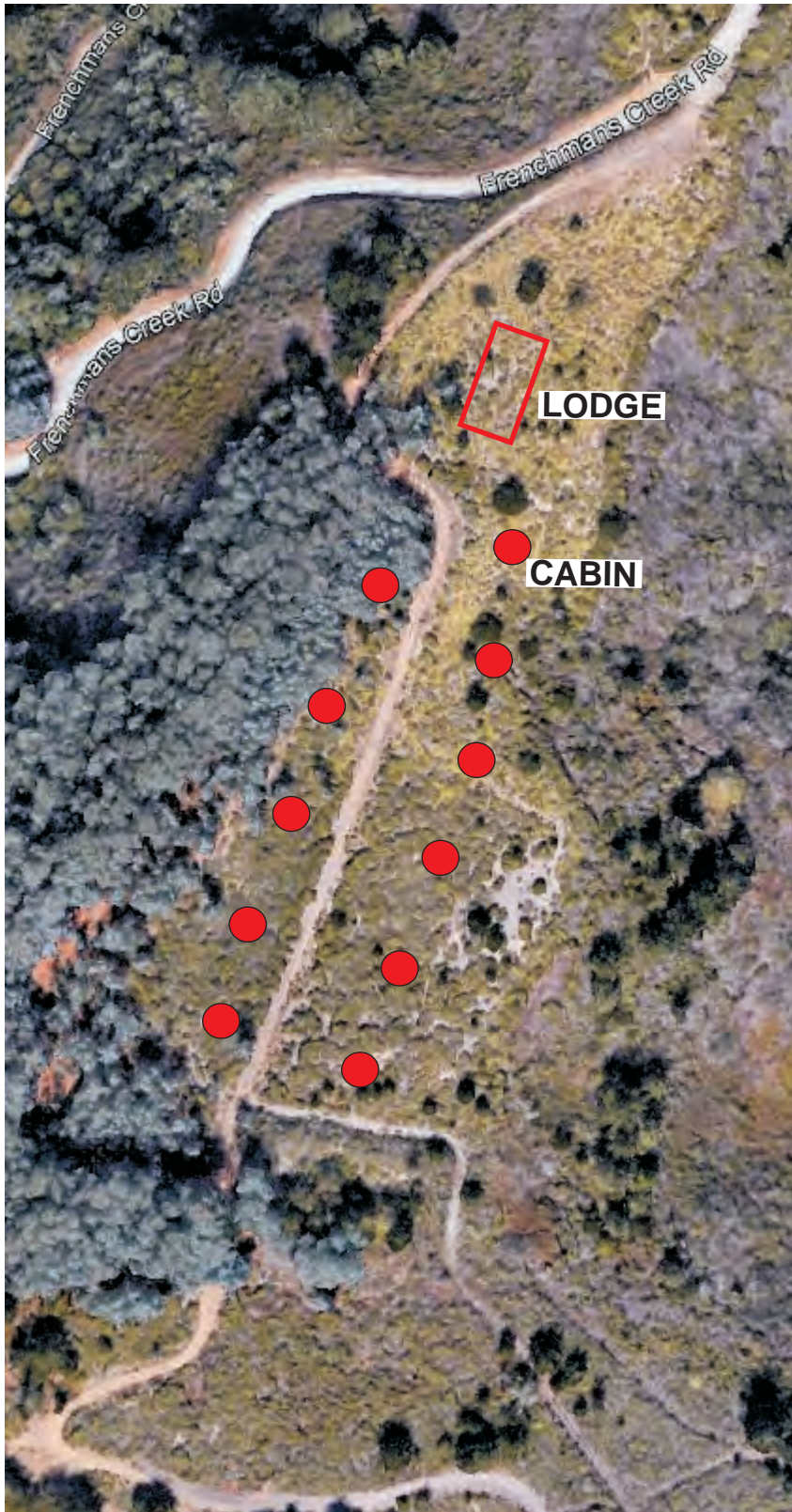


Sigma Prime Geosciences, Inc.

Figure	1
Date:	6/24/22
Job No.:	18-207

Location Map

37 Frenchman's Creek Rd., Half Moon Bay

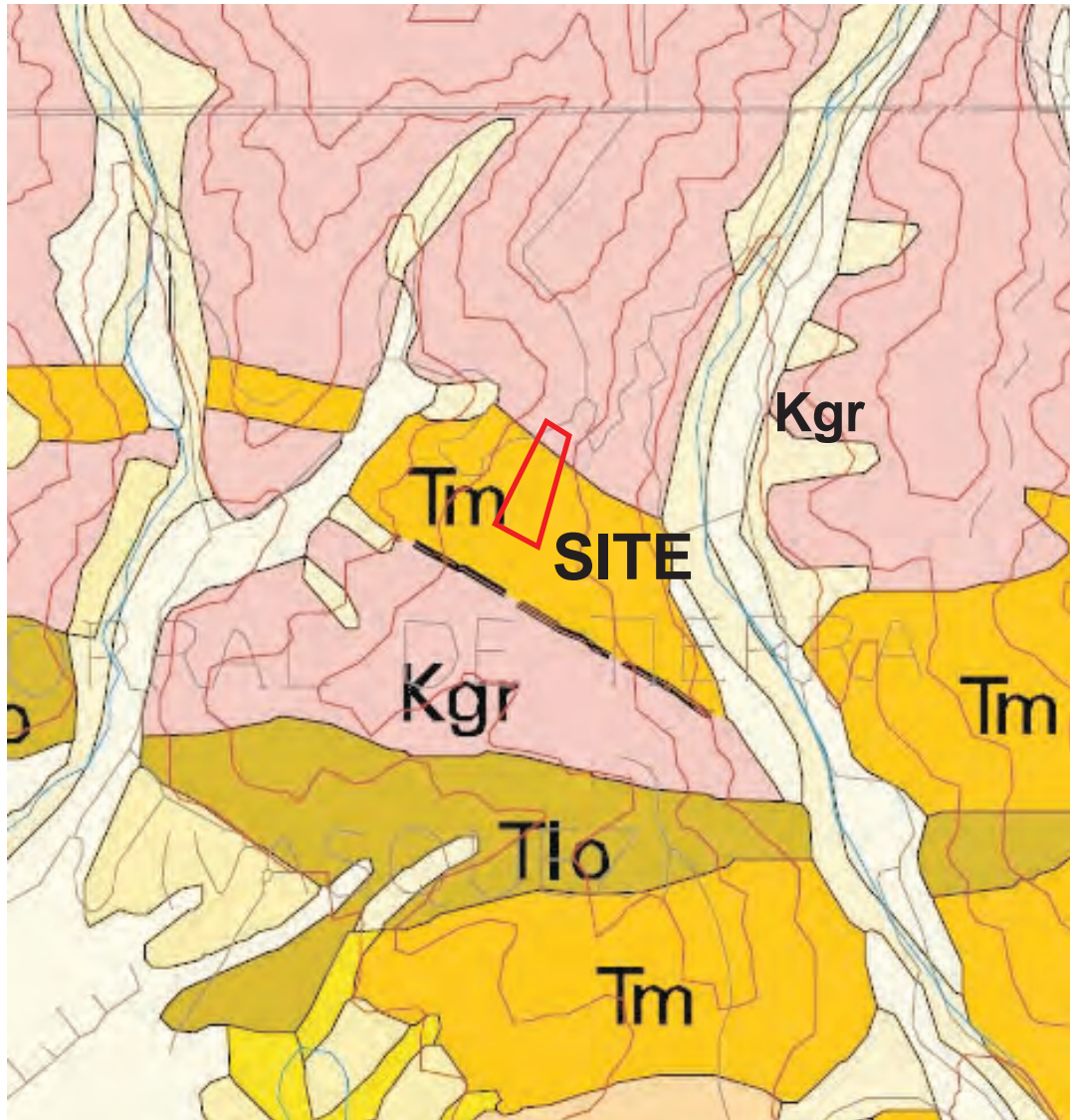


Sigma Prime Geosciences, Inc.

Figure	2
Date:	6/24/22
Job No.:	18-207

Site Plan

37 Frenchman's Creek Rd., Half Moon Bay



Kgr: Granitic Rocks of Montara Mountain (Cretaceous); Very light gray to light brown, medium to coarsely crystalline foliated granitic rock, largely quartz diorite with some granite. Highly fractured and deeply weathered.

Tm: Monterey Formation (middle Miocene); grayish brown and brownish black to very pale orange and white, porcelaneous shale with chert, porcelaneous mudstone, impure diatomite, and calcareous claystone.

Tlo: Lompico Sandstone (middle Miocene); very pale orange, fine to coarse grained, mostly well cemented and hard arkosic sandstone.



Ref.: Brabb at al, 1998



Sigma Prime Geosciences, Inc.

Figure	3
Date:	6/24/22
Job No.:	18-207

Geologic Map

37 Frenchman's Creek Rd., Half Moon Bay



Explanation:

I: <1 percent has failed
 II: 2 to 8 percent has failed
 IV: 26 to 42 percent has failed
 L: Landslide Deposit



Ref.: Brabb et al, 1978



Sigma Prime Geosciences, Inc.

Figure	4
Date:	6/24/22
Job No.:	18-207


Landslide Map

37 Frenchman's Creek Rd., Half Moon Bay



- Seismically-induced Landslide Hazard
- Seismically-induced Liquefaction



 Sigma Prime Geosciences, Inc.	Figure 5
	Date: 6/24/22
	Job No.: 18-207
Geologic Hazard Map 37 Frenchman's Creek Rd., Half Moon Bay	



APPENDIX 10

TRANSPORTATION STUDY



HEXAGON TRANSPORTATION CONSULTANTS, INC.

Memorandum

Date: March 30, 2023

To: Edward Wilkinson, SKRRR LLC

From: Gary Black
Nivedha Baskarapandian

Subject: Transportation Study for the Proposed Stoneridge Lodge Resort at 37 Frenchmans Creek Road in San Mateo County, California

Hexagon Transportation Consultants, Inc. has completed a transportation study for the proposed Stonewood Lodge Resort at 37 Frenchmans Creek Road in San Mateo County, California. The project site is located in the hills on the east side of Highway 1 north of Half Moon Bay (see Figure 1.) The project would build a resort on site with a clubhouse, wellness center, restaurant, and lodging units. The project also includes farm labor housing for the existing farm operations (see Figure 2). Access to the site is provided via Frenchmans Creek Road.

The purposes of this study are to quantify the number of trips generated by the project, identify any vehicle miles traveled (VMT) impacts and to identify any potential traffic operational issues that could occur as a result of the project. The methodology, results, and conclusions of the transportation study are discussed below.

Project Description

The project is intended to be a destination resort. It will include 12 guest villas and 12 campsites . Guests will use the on-site clubhouse, wellness center, and restaurant. These facilities also will be open for non-guests. However, most of the restaurant customers and almost all of the wellness center patrons are expected to be overnight guests. The project also proposes an owner/operator residence and four housing units for eight existing farm employees. The new resort would have 16 employees during peak times. Table 1 shows estimates of the usage of the resort facilities on weekdays and weekends. Note that while there would be 12 campsites, the annual average weekend usage is expected to be equivalent to six sites. The campsites mostly would be used in the summer. Also, while not part of the project, Stoneridge plans to add four employees for increased farm-to-table food production.

VMT Analysis

On September 23, 2020, San Mateo County adopted VMT interim guidelines to be used with new development projects. The County's VMT interim guidelines are intended to satisfy the California Environmental Quality Act (CEQA) VMT impact analysis requirements. The County's VMT interim guidelines provide VMT thresholds, baselines, and criteria to evaluate VMT impacts for new development projects. The guidelines also provide screening criteria for new developments.



Figure 1
Site Location and Study Intersections

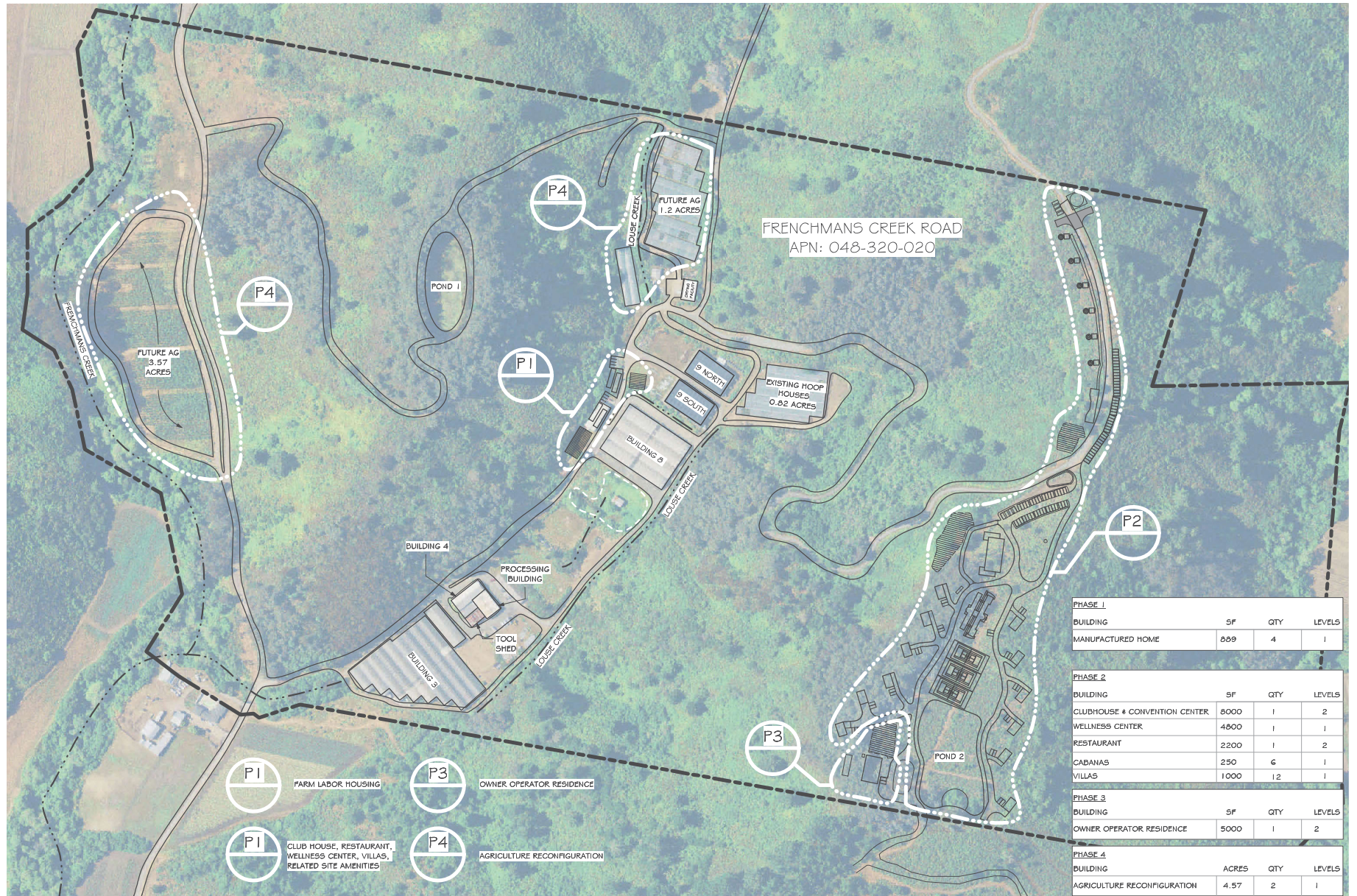


Figure 2
Site Plan

Small Projects

San Mateo County’s VMT interim guidelines provide screening criteria that exempt developments from further CEQA transportation impact analysis. Per these guidelines, projects that meet all the listed thresholds for Small Projects are not expected to create a significant VMT impact.

- Generate or attract fewer than 110 trips per day.
- Consistent with General Plan
- No substantial evidence indicating a potentially significant level of VMT would result.

**Table 1
Project Attendance Data**

Use	Friday-Sunday	Monday-Thursday	Average Daily Trips
Villas	24 trips (24 guests in/out) (2 guests per car)	12 trips (12 guests in/out) (1 car per 2 guests)	17
Campsites	12 trips. 12 guests. 2 per car.	4 trips. 4 guests. 2 per car.	8
Clubhouse	50 trips. 50 guests in/out. 2 guests per car.	20 trips. 20 guests in/out. 2 guests per car.	33
Restaurant	Note: Villa guests will use restaurant. 26 additional trips. (26 guests in/out) (2 guests per car)	Note: Villa guests will use restaurant. 10 additional trips. (10 guests in/out) (2 guests per car)	17
Wellness Center	Note: 90% overlap with above uses. 6 additional trips per day.	Note: 90% overlap with above uses. 4 additional trips per day.	5
Farm Staff	Farm labor housing will decrease number of trips for current use. -8 trips per day.	Farm labor housing will decrease number of trips for current use. -8 trips per day.	(4)
Resort Staff	16 employees. 32 trips per day	8 employees. 16 trips per day	22
Owner/Operator Residence	8 trips per day	8 trips per day	8
Average Daily Trips			106

Project Trip Generation

Estimates of trips to be added to the surrounding roadway network by the proposed resort were calculated using attendance data provided by the client. The following were assumed about the trips for each use:

- **Clubhouse.** An estimate of 33 average daily trips assumed some trips would come from on-site guests.
- **Wellness Center.** It was assumed most trips would come from on-site guests. It was estimated that five average daily trips would come from off-site visitors.
- **Restaurant.** It assumed most trips would come from on-site guests. It was estimated that 26 average daily trips would come from off-site visitors.
- **Villas and Campsites.** All trips would come from guests.

As shown in Table 2 the average number of project trips generated by the proposed resort would be 106 daily trips, including 15 AM and 15 PM peak hour trips.

**Table 2
Project Trip Generation**

Land Use	Size	Units	Daily Trips ¹	AM Peak-Hour Trips ²			PM Peak-Hour Trips ²			
				In ³	Out	Total	In ³	Out	Total	
Proposed										
Staff ⁴	28	employees	18	5	0	5	0	5	5	
Clubhouse	50	guests	33	2	1	3	1	2	3	
Wellness Center ⁵	5	guests	5	1	0	1	0	1	1	
Restaurant ⁵	50	guests	17	1	1	2	1	1	2	
Operator Residence	1	unit	8	0	1	1	1	0	1	
Villas	24	guests	17	1	1	2	1	1	2	
Campsites ⁶	12	guests	8	0	1	1	1	0	1	
New Vehicle Trips			106	10	5	15	5	10	15	

Notes:

- ¹ Daily trips were provided by the client in coordination with Hexagon.
- ² AM and PM trips were calculated using the ratio between the AM/PM rates to the daily trip rate for Business Hotel (Land Use Code 312) from the ITE *Trip Generation Manual, 11th Edition (2021)*.
- ³ Inbound trip ratios were based on Business Hotel (Land Use Code 312) from the ITE *Trip Generation Manual, 11th Edition (2021)*.
- ⁴ Staff daily trips are net trips due to labor housing being provided for eight farm employees on the project site. Four farm to table staff trips were added during AM inbound and PM outbound
- ⁵ Trips will overlap with on-site guests.
- ⁶ Trips were estimated using six campsites instead of the proposed 12 campsites. It was assumed an annual average of six campsites would be occupied during the weekend.

The proposed project would generate fewer than 110 trips per day and therefore would meet the threshold for the Small Projects screening criteria set forth in the San Mateo County VMT interim guidelines. Therefore, the project’s VMT impact would be less than significant.

Study Intersection and Data Collection

This transportation study includes an analysis of weekday AM and PM peak-hour traffic conditions at the intersection of Highway 1 and Frenchmans Creek Road, which provides access to the site.

Traffic conditions at the study intersection were analyzed for both the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour typically occurs between 7:00 AM and 9:00 AM, and the PM peak hour typically occurs between 4:00 PM and 6:00 PM on a regular weekday. These are the peak commute hours during which the highest weekday traffic volume occurs on the roadways in the study area.

This transportation study includes an analysis of the scenarios listed below.

Scenario 1: *Existing Conditions*. Existing conditions are based on new traffic counts. The new traffic counts were collected on Tuesday, January 31, 2023, and Friday February 3, 2023, and are provided as Attachment 1. The analysis used Tuesday's counts as they represented the highest peak hour volumes.

Scenario 2: *Existing Plus Project Conditions*. Existing plus project conditions were estimated by adding the additional traffic generated by the project to existing traffic volumes. Existing plus project conditions were evaluated relative to existing conditions in order to determine potential traffic operational issues that could occur as a result of the project.

Project Distribution and Assignment

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. As shown in the trip generation section above, the project is estimated to generate 106 daily trips, on average, including 15 vehicle trips during the AM peak hour and 15 vehicle trips during the PM peak hour (see Table 2).

Trip Distribution and Assignment

The trip distribution pattern for the project was estimated based on existing travel patterns on the surrounding roadway network that reflect typical weekday AM and PM peak commute patterns. (see Figure 3). The peak-hour trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern (see Figure 3).

Intersection Operations Analysis

The intersection operations analysis quantifies the operations of the study intersections and identifies potential adverse effects due to the addition of project traffic. The intersection operations analysis methodology, standards, and results are discussed below.

Level of Service Methodology

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays.

This study utilized the Synchro software developed by Trafficware to analyze the level of service at the study intersection. This software evaluates intersection operations based on the *Highway Capacity Manual, 6th Edition* (HCM) methodology. Table 3 shows intersection LOS definitions as defined in the HCM.

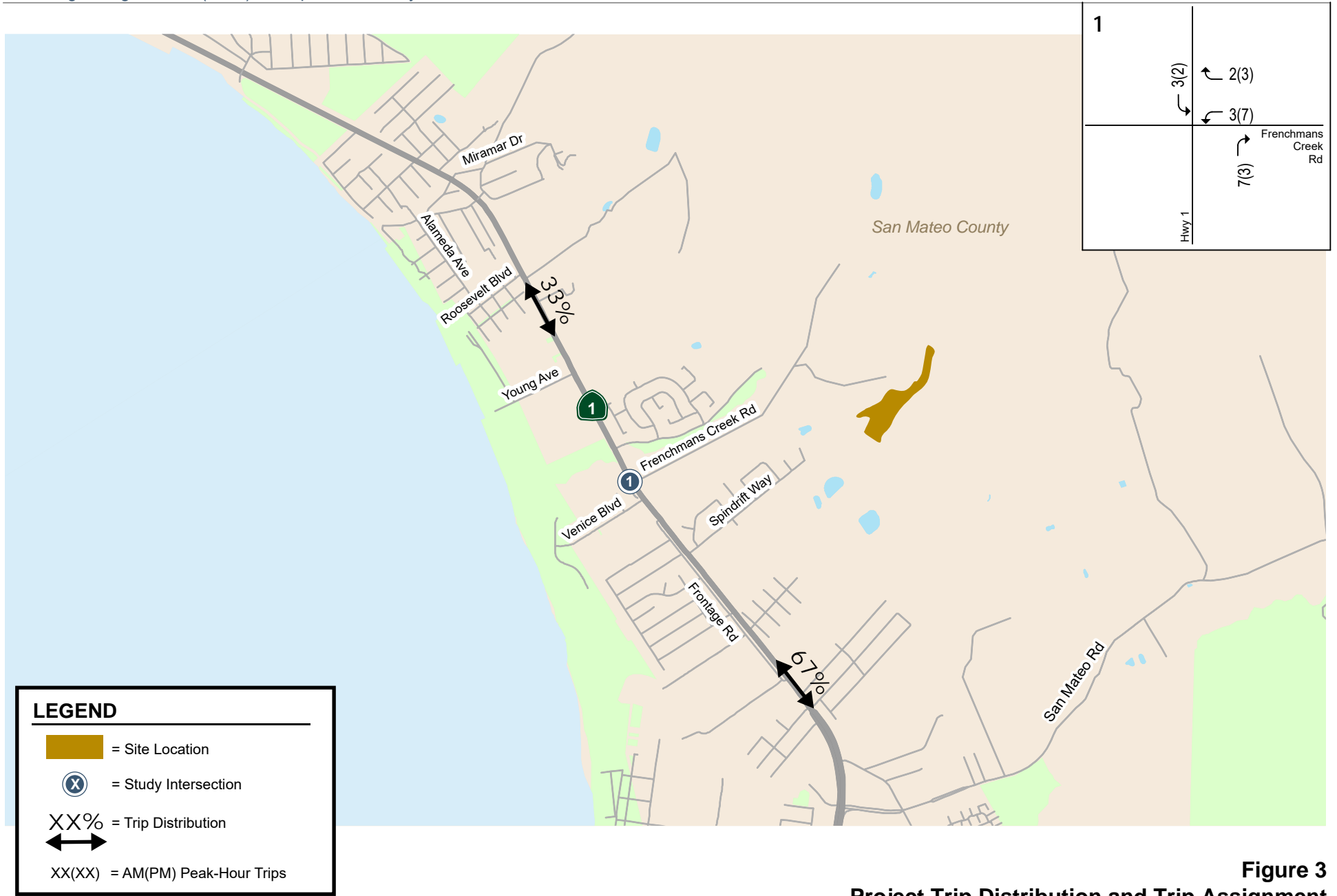


Figure 3
Project Trip Distribution and Trip Assignment

**Table 3
Unsignalized Intersection Level of Service**

Level of Service	Description	Average Delay Per Vehicle (sec.)
A	Little or no traffic delay	10.0 or less
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0

Source: *Highway Capacity Manual, 6th Edition*

Level of Service Analysis

The level of service analysis for each scenario is presented below. The level of service calculations for each scenario are provided in Attachment 2.

Existing Conditions

The existing conditions peak-hour traffic volumes at the study intersections are shown on Figure 4. The LOS for side-street stop-controlled intersections is based on the average delay for the worst movement. The worst movement for the study intersection is westbound Frenchmans Creek Road, which is shown to operate at LOS C. The analysis assumes two-stage left turns for both the eastbound and westbound traffic. Vehicles turning left from Frenchmans Creek Road could make a two-stage left turn by utilizing the two-way left turn lane on Highway 1. The results of the existing conditions level of service analysis show that with the existing traffic volumes, the worst movement at the study intersection operates at an LOS C during the AM and PM peak hours (see Table 4).

**Table 4
Existing and Existing Plus Project Level of Service Summary**

ID #	Intersection	Control	Peak Hour	Existing		Existing + Project	
				avg. delay (sec/veh) ¹	LOS	avg. delay (sec/veh) ¹	LOS
1	Highway 1 and Frenchmans Creek Road	Side-Street Stop	AM	21.4	C	21.1	C
			PM	23.8	C	25.2	D

Notes:
¹ For the side-street stop controlled intersections, LOS is based on the average delay experienced by the worst movement.

Existing Plus Project Conditions

The existing plus project peak-hour traffic volumes at the study intersections are shown on Figure 5. The results of the level of service analysis under existing plus project conditions are summarized in Table 4. The results show that the worst movement at the study intersection would continue to operate at an LOS C during the AM and would operate at an LOS D during the PM peak hours with the addition of the project generated traffic.



Figure 4
Existing Traffic Volumes



Figure 5
Existing Plus Project Traffic Volumes

Queuing Analysis

Queuing was analyzed at the intersection of Highway 1 & Frenchmans Creek Road to see if the added southbound left turns for the project would cause the queue length to extend beyond the available left turn storage length on southbound Highway 1. The existing left turn pocket on southbound Highway 1 turning in to Frenchmans Creek Road is 165 feet long, which is sufficient for six vehicles. The existing peak hour count was 7 left turns. The project would add 2 left turns.

An evaluation of vehicle queuing was conducted using Synchro software. The basis of the analysis is as follows: (1) Synchro is used to estimate the 95th percentile maximum number of queued vehicles for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement. The queuing analysis included the southbound left movement at the on Highway 1. The queuing analysis results are included in Attachment 2.

Under the existing and project conditions, the queuing analysis shows a maximum queue length of one car, which would not change with the project. Therefore, the project is not expected to have a queue extending beyond the southbound left storage length on Highway 1.

Frenchmans Creek Road

Existing daily traffic on Frenchmans Creek Road was estimated assuming the existing AM and PM peak hour volumes together are 20% of the daily volume. The estimated daily traffic on Frenchmans Creek Road is 325 trips. The project would add 99 daily trips, bringing the total daily traffic to 424 trips, which is a relatively low daily trip count. Frenchmans Creek Road is very narrow, about 20 feet wide, but is wide enough for two vehicles to pass each other. Even though the road is narrow, traffic operations are expected to be acceptable because of the low volume. The narrow street tends to slow down traffic.

Fire Access

Fire access on Frenchmans Creek Road was previously addressed with the Coastside Fire Protection District for a previous development at the project site. The roadway was approved for a reduced width of 18 feet in exchange for enhanced water supply and fire water improvements (hydrants) to be installed onsite. Construction was completed in February 2021 which included widening, installation of turnouts, no parking signage, striping, speed tables, road surfacing, minor grading, and drainage improvements.

Conclusions

The results of the transportation study for the Stoneridge Lodge Resort project are summarized below.

- The project would generate 106 daily trips, including 15 trips each during the AM and PM peak hours.
- Since the project would generate fewer than 110 trips per day, its impact on VMT would be less than significant according to County standards.
- The level of service analysis shows that the worst movement at the Highway 1 and Frenchmans Creek Road intersection currently operates and would continue to operate at LOS C during the AM and PM peak hours with the project.

- Fire access is sufficient and meets the Coastside Fire Protection District's requirements.

Attachments:

Attachment 1 – New Traffic Counts

Attachment 2 – Level of Service Calculations

Attachment 1
New Traffic Counts

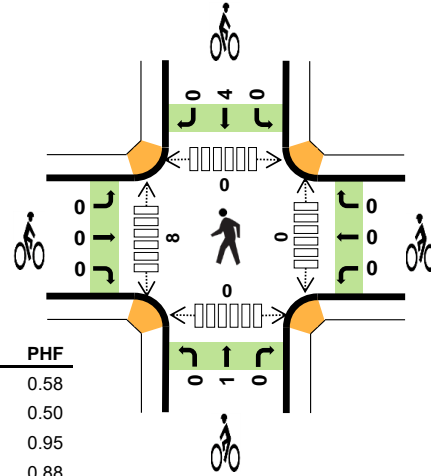
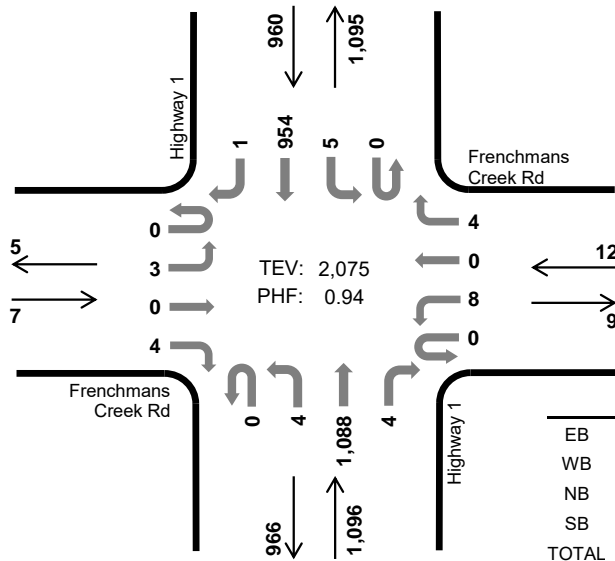
Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Frenchmans Creek Rd				Frenchmans Creek Rd				Highway 1				Highway 1				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	1	0	11	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	5	0	12	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	4	0	14	0
7:45 AM	0	0	0	1	0	0	0	0	0	0	5	0	0	0	6	1	13	50
8:00 AM	0	0	0	1	0	0	0	0	0	0	7	0	0	0	5	1	14	53
8:15 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	15	0	19	60
8:30 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	5	0	11	57
8:45 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	10	0	17	61
Count Total	0	0	0	2	0	0	0	0	0	0	56	0	0	0	51	2	111	0
Peak Hour	0	0	0	1	0	0	0	0	0	0	24	0	0	0	35	1	61	0
Two-Hour Count Summaries - Bikes																		
Interval Start	Frenchmans Creek Rd			Frenchmans Creek Rd			Highway 1			Highway 1			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	3
Count Total	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	0	0	0
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																		

Highway 1 Frenchmans Creek Rd



Peak Hour

Date: 01/31/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	14.3%	0.58
WB	0.0%	0.50
NB	0.6%	0.95
SB	1.4%	0.88
TOTAL	1.0%	0.94

Two-Hour Count Summaries

Interval Start	Frenchmans Creek Rd				Frenchmans Creek Rd				Highway 1				Highway 1				15-min Total	Rolling One Hour	
	Eastbound		Westbound		Northbound		Southbound		UT		LT		TH		RT				
4:00 PM	0	2	0	1	0	2	0	1	0	2	257	2	0	3	236	1	507	0	
4:15 PM	0	1	0	0	0	2	0	1	0	0	275	0	0	1	273	0	553	0	
4:30 PM	0	0	0	2	0	0	0	0	0	2	285	2	0	0	242	0	533	0	
4:45 PM	0	0	0	1	0	4	0	2	0	0	271	0	0	1	203	0	482	2,075	
5:00 PM	0	0	0	1	0	3	0	0	0	2	276	3	0	0	191	1	477	2,045	
5:15 PM	0	0	0	1	0	3	0	6	0	1	263	2	0	1	200	1	478	1,970	
5:30 PM	0	1	0	2	0	3	0	1	0	4	258	1	0	0	181	0	451	1,888	
5:45 PM	0	0	0	4	0	0	0	2	0	1	259	3	0	1	206	1	477	1,883	
Count Total	0	4	0	12	0	17	0	13	0	12	2,144	13	0	7	1,732	4	3,958	0	
Peak Hour	All	0	3	0	4	0	8	0	4	0	4	1,088	4	0	5	954	1	2,075	0
	HV	0	1	0	0	0	0	0	0	0	0	7	0	0	0	13	0	21	0
	HV%	-	33%	-	0%	-	0%	-	0%	-	0%	1%	0%	-	0%	1%	0%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	0	1	3	5	0	0	0	1	1	0	6	0	0	6
4:15 PM	0	0	3	5	8	0	0	0	0	0	0	1	0	0	1
4:30 PM	0	0	3	3	6	0	0	1	1	2	0	1	0	0	1
4:45 PM	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0
5:00 PM	0	0	4	2	6	0	0	0	2	2	0	3	0	0	3
5:15 PM	0	1	6	5	12	0	0	1	0	1	0	1	0	0	1
5:30 PM	0	0	2	2	4	0	0	0	0	0	0	1	0	0	1
5:45 PM	0	0	0	1	1	0	0	0	0	0	0	2	0	0	2
Count Total	1	1	19	23	44	0	0	2	6	8	0	15	0	0	15
Peak Hour	1	0	7	13	21	0	0	1	4	5	0	8	0	0	8

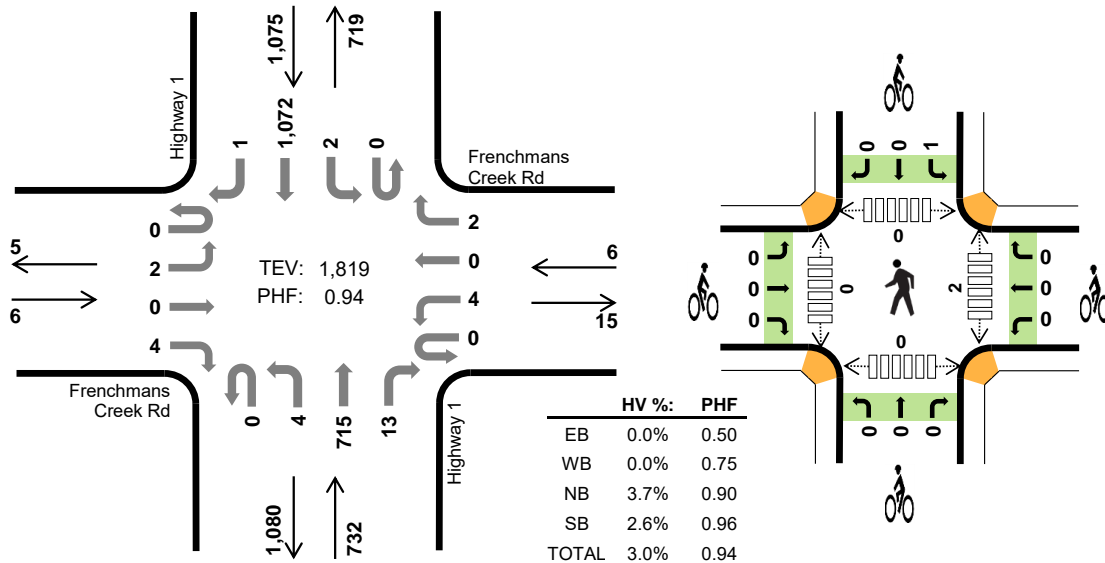
Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Frenchmans Creek Rd				Frenchmans Creek Rd				Highway 1				Highway 1				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	3	0	5	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	5	0	8	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	6	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	21
5:00 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	6	22
5:15 PM	0	0	0	0	0	0	0	1	0	0	5	1	0	0	4	1	12	26
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	24
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	23
Count Total	0	1	0	0	0	0	0	1	0	0	18	1	0	0	21	2	44	0
Peak Hour	0	1	0	0	0	0	0	0	0	0	7	0	0	0	13	0	21	0
Two-Hour Count Summaries - Bikes																		
Interval Start	Frenchmans Creek Rd			Frenchmans Creek Rd			Highway 1			Highway 1			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	5		
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	6		
5:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	7		
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5		
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3		
Count Total	0	0	0	0	0	0	0	0	2	0	0	0	6	0	8	0		
Peak Hour	0	0	0	0	0	0	0	0	1	0	0	0	4	0	5	0		
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																		

Highway 1 Frenchmans Creek Rd



Peak Hour

Date: 02/03/2023
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



Two-Hour Count Summaries

Interval Start	Frenchmans Creek Rd				Frenchmans Creek Rd				Highway 1				Highway 1				15-min Total	Rolling One Hour	
	Eastbound		Westbound		Northbound		Southbound		UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	1	0	0	0	2	0	0	0	0	84	3	0	0	143	0	233	0	
7:15 AM	0	2	0	3	0	4	0	0	0	0	89	1	0	0	159	0	258	0	
7:30 AM	0	0	0	1	0	2	0	0	0	0	102	1	0	1	220	0	327	0	
7:45 AM	0	0	0	1	0	0	0	1	0	0	154	1	0	0	274	0	431	1,249	
8:00 AM	0	0	0	1	0	2	0	0	0	3	195	5	0	1	279	0	486	1,502	
8:15 AM	0	1	0	0	0	1	0	0	0	0	168	2	0	0	274	1	447	1,691	
8:30 AM	0	1	0	2	0	1	0	1	0	1	198	5	0	1	245	0	455	1,819	
8:45 AM	0	0	0	2	0	0	0	0	0	0	171	7	0	1	156	0	337	1,725	
Count Total	0	5	0	10	0	12	0	2	0	4	1,161	25	0	4	1,750	1	2,974	0	
Peak Hour	All	0	2	0	4	0	4	0	2	0	4	715	13	0	2	1,072	1	1,819	0
	HV	0	0	0	0	0	0	0	0	0	0	27	0	0	0	28	0	55	0
	HV%	-	0%	-	0%	-	0%	-	0%	-	0%	4%	0%	-	0%	3%	0%	3%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	5	1	6	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	7	4	11	0	0	0	1	1	0	2	0	0	2
7:30 AM	0	0	7	6	13	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	9	6	15	0	0	0	1	1	0	0	0	0	0
8:00 AM	0	0	7	4	11	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	5	9	14	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	6	9	15	0	0	0	0	0	2	0	0	0	2
8:45 AM	0	0	6	4	10	0	0	0	1	1	0	1	0	0	1
Count Total	0	0	52	43	95	0	0	0	3	3	2	3	0	0	5
Peak Hour	0	0	27	28	55	0	0	0	1	1	2	0	0	0	2

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Frenchmans Creek Rd				Frenchmans Creek Rd				Highway 1				Highway 1				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	1	0	6	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	4	0	11	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	6	0	13	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	9	0	0	0	6	0	15	45
8:00 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	4	0	11	50
8:15 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	9	0	14	53
8:30 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	9	0	15	55
8:45 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	10	50
Count Total	0	0	0	0	0	0	0	0	0	0	52	0	0	0	43	0	95	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	27	0	0	0	28	0	55	0
Two-Hour Count Summaries - Bikes																		
Interval Start	Frenchmans Creek Rd			Frenchmans Creek Rd			Highway 1			Highway 1			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																		

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Frenchmans Creek Rd				Frenchmans Creek Rd				Highway 1				Highway 1				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	8	0	11	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	5	0	0	0	6	0	12	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	1	0	7	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	5	35
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	25
5:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	6	0	10	23
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	18
5:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	4	17
Count Total	0	0	0	0	0	0	0	1	0	0	23	0	0	0	28	0	52	0
Peak Hour	0	0	0	0	0	0	0	1	0	0	15	0	0	0	19	0	35	0

Two-Hour Count Summaries - Bikes																
Interval Start	Frenchmans Creek Rd			Frenchmans Creek Rd			Highway 1			Highway 1			15-min Total	Rolling One Hour		
	Eastbound			Westbound			Northbound			Southbound						
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT				
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	0		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	2	3		
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	3		
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3		
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3		
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
Count Total	0	0	0	0	0	0	0	1	0	3	0	0	4	0		
Peak Hour	0	0	0	0	0	0	0	0	0	3	0	0	3	0		

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Attachment 2
Level of Service Calculations

HCM 6th TWSC
1: Highway 1 & Frenchmans Creek Rd

02/10/2023

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	5	5	0	1	1	813	18	7	1030	2
Future Vol, veh/h	1	0	5	5	0	1	1	813	18	7	1030	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	5	5	0	1	1	813	18	7	1030	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1870	1878	1031	1872	1870	822	1032	0	0	831	0	0
Stage 1	1045	1045	-	824	824	-	-	-	-	-	-	-
Stage 2	825	833	-	1048	1046	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	55	71	283	55	72	374	673	-	-	801	-	-
Stage 1	276	306	-	367	387	-	-	-	-	-	-	-
Stage 2	367	384	-	275	305	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	54	69	283	53	70	374	673	-	-	801	-	-
Mov Cap-2 Maneuver	212	231	-	208	233	-	-	-	-	-	-	-
Stage 1	275	300	-	366	386	-	-	-	-	-	-	-
Stage 2	365	383	-	265	299	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	18.7		21.4		0		0.1	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	673	-	-	268	225	801	-	-
HCM Lane V/C Ratio	0.001	-	-	0.022	0.027	0.009	-	-
HCM Control Delay (s)	10.4	-	-	18.7	21.4	9.5	-	-
HCM Lane LOS	B	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

HCM 6th TWSC
 1: Highway 1 & Frenchmans Creek Rd

02/10/2023

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↔			↔	
Traffic Vol, veh/h	3	0	4	8	0	4	4	1096	4	5	954	1
Future Vol, veh/h	3	0	4	8	0	4	4	1096	4	5	954	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	4	8	0	4	4	1096	4	5	954	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2073	2073	955	2073	2071	1098	955	0	0	1100	0	0
Stage 1	965	965	-	1106	1106	-	-	-	-	-	-	-
Stage 2	1108	1108	-	967	965	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	40	54	313	40	54	259	720	-	-	635	-	-
Stage 1	306	333	-	255	286	-	-	-	-	-	-	-
Stage 2	255	286	-	306	333	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	38	52	313	39	52	259	720	-	-	635	-	-
Mov Cap-2 Maneuver	181	205	-	183	206	-	-	-	-	-	-	-
Stage 1	302	327	-	251	282	-	-	-	-	-	-	-
Stage 2	248	282	-	297	327	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	20.6		23.8		0		0.1	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	720	-	-	238	203	635	-	-
HCM Lane V/C Ratio	0.006	-	-	0.029	0.059	0.008	-	-
HCM Control Delay (s)	10	-	-	20.6	23.8	10.7	-	-
HCM Lane LOS	B	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

HCM 6th TWSC
1: Highway 1 & Frenchmans Creek Rd

03/30/2023

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↔			↔	
Traffic Vol, veh/h	1	0	5	8	0	3	1	813	25	10	1030	2
Future Vol, veh/h	1	0	5	8	0	3	1	813	25	10	1030	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	5	8	0	3	1	813	25	10	1030	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1880	1891	1031	1882	1880	826	1032	0	0	838	0	0
Stage 1	1051	1051	-	828	828	-	-	-	-	-	-	-
Stage 2	829	840	-	1054	1052	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	54	70	283	54	71	372	673	-	-	796	-	-
Stage 1	274	304	-	365	386	-	-	-	-	-	-	-
Stage 2	365	381	-	273	303	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	52	68	283	52	69	372	673	-	-	796	-	-
Mov Cap-2 Maneuver	209	227	-	205	230	-	-	-	-	-	-	-
Stage 1	273	295	-	364	385	-	-	-	-	-	-	-
Stage 2	361	380	-	260	294	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	18.8		21.1		0		0.1	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	673	-	-	267	234	796	-	-
HCM Lane V/C Ratio	0.001	-	-	0.022	0.047	0.013	-	-
HCM Control Delay (s)	10.4	-	-	18.8	21.1	9.6	-	-
HCM Lane LOS	B	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

HCM 6th TWSC
1: Highway 1 & Frenchmans Creek Rd

03/30/2023

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↔			↔	
Traffic Vol, veh/h	3	0	4	15	0	7	4	1096	7	7	954	1
Future Vol, veh/h	3	0	4	15	0	7	4	1096	7	7	954	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	4	15	0	7	4	1096	7	7	954	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2080	2080	955	2079	2077	1100	955	0	0	1103	0	0
Stage 1	969	969	-	1108	1108	-	-	-	-	-	-	-
Stage 2	1111	1111	-	971	969	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	39	53	313	39	54	258	720	-	-	633	-	-
Stage 1	305	332	-	255	286	-	-	-	-	-	-	-
Stage 2	254	285	-	304	332	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	37	51	313	37	52	258	720	-	-	633	-	-
Mov Cap-2 Maneuver	178	203	-	181	206	-	-	-	-	-	-	-
Stage 1	301	324	-	251	282	-	-	-	-	-	-	-
Stage 2	244	281	-	293	324	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	20.7		25.2		0		0.1	
HCM LOS	C		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	720	-	-	236	200	633	-	-
HCM Lane V/C Ratio	0.006	-	-	0.03	0.11	0.011	-	-
HCM Control Delay (s)	10	-	-	20.7	25.2	10.8	-	-
HCM Lane LOS	B	-	-	C	D	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0	-	-



APPENDIX 11

BIOLOGICAL STUDY



BIOLOGICAL RESOURCES REPORT

Stonewood Lodge Project
37 Frenchmans Creek Road
Half Moon Bay, San Mateo
County, CA

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LIST OF ACRONYMS AND ABBREVIATIONS

CDFG/CDFW	California Department of Fish and Game/Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRLF	California red-legged frog
ESA	Federal Endangered Species Act
MBTA	Migratory Bird Treaty Act
NRCS	Natural Resources Conservation Service
OHWM	Ordinary High Water Mark
PRMD	Permit & Resource Management Department
RWQCB	Regional Water Quality Control Board
SFDW	San Francisco dusky-footed woodrat
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WBWG	Western Bat Working Group
WEF	Wildlife Exclusion Fencing

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1.0 INTRODUCTION

Sol Ecology, Inc. performed biological resources surveys for the Stonewood Lodge Project located at 37 Frenchmans Creek Road in San Mateo County, California (Project Site) in the spring and winter of 2021 and 2022. The Project Study Area includes the proposed Project Site or “footprint” and surrounding habitat subject to potential indirect effects of the proposed project. The proposed project includes the construction of a commercial recreational use facility (facility) on a ridgetop, the construction of a campground, and construction of farm labor housing in the vicinity of an existing agricultural operation (Appendix A, Figure 1).

The purpose of the assessment was to gather information necessary to complete a review of potential biological resource impacts from development of the proposed Project, under the guidelines of the California Environmental Quality Act (CEQA) and the County of San Mateo Local Coastal Program (LCP). This report describes the results of the site survey and assessment of the Project Study Area for the presence of sensitive biological resources protected by local, state, and federal laws and regulations. This report also contains an evaluation of potential impacts to sensitive biological resources that may occur from the proposed project and potential mitigation measures to compensate for those impacts as warranted. This assessment is based on information available at the time of the study and on-site conditions that were observed on the date of the site visit.

1.1 Project Setting

The Project Site is located in a small valley approximately 1.25 miles from the coast, northeast of the town of Half Moon Bay, at 37 Frenchmans Creek Road, San Mateo County, California (Appendix A, Figure 1). The facility site is situated on a ridgetop at about 550 feet above Mean Sea Level, immediately east and upslope of a commercial cannabis cultivation operation also on the property.

The Project Site property in general was developed in the 1960s for agricultural purposes and until the purchase of the property by the current owners, was operated as a large nursery specializing in orchids, ornamental flowers, and cherry trees. Historical imagery reveals that the ridgetop was cleared of native vegetation and planted with row crops through the 1990s (Appendix B, Photo 1). The site was later cleared again around 2002 and planted with pampas grass (*Jubata* sp.) and eucalyptus (*Eucalyptus* sp.) as part of the nursery stock around 2005. The larger property was adapted and permitted to house and service the commercial cannabis operation in 2017. Pampas grass and other non-native vegetation was removed from this area in March of 2021, following nesting bird surveys to ensure impact avoidance.

1.2 Project Description

The proposed project analyzed in this report includes three separate phases of development:

- Phase I: Construction of up to (4) units of farm labor housing, each accommodating 2 to 3 residents. Farm labor housing is intended to support current and expanded operations for agriculture and agritourism enterprises onsite and at adjacent parcels. Farm labor housing would be located in the valley floor to the northwest of Building 8 adjacent to existing agriculture/cultivation activities. Construction of a 12-lot campground located in the northwest corner of the parcel, along Frenchmans Creek Road. Expansion and lining of an existing man-made lined pond located along the ridgeline in the southeast area of the parcel.
- Phase II: Development of a clubhouse, restaurant, and wellness center, six (6) cabanas, and up to twelve (12) stand-alone villas located along the eastern ridge of the property. This phase would also include related infrastructure improvements along the ridge, access improvements, water reservoir expansion, domestic/fire water treatment and storage equipment and related recreational amenities.
- Phase III: Construction of the owner/operator single family residence, located on the oceanside of the east ridge, due southwest of the proposed clubhouse and spa buildings. The single-family residence would also provide accessory use as staging/overflow facilities to support the clubhouse operations, restaurant, wellness center, and visitor serving space during events.

Proposed project development will require limited tree and vegetation removal and only non-native trees will be removed. Existing roadways will be utilized. All work will be performed within previously disturbed portions of the property and no new undisturbed areas will be developed.

2.0 METHODS

On March 17, 2021, March 18, and December 13, 2022, the Project Study Areas were traversed on foot to determine the presence of (1) plant communities both sensitive and non-sensitive, (2) special status plant and wildlife species, and (3) presence of essential habitat elements for any special-status plant or wildlife species. Photographs of the site are provided in Appendix B. Species identified during the site visit are provided in Appendix C.

2.1 Literature Review

Prior to the site visit, the Soil Survey of San Mateo County, California U.S. Department of Agriculture (USDA) Web Soil Survey, Google Earth aerial images, and USGS topographic quadrangle maps were examined to determine if any unique soil types that could support sensitive plant communities and/or aquatic features were present in the Project Site. *A Manual of California Vegetation, Online Edition* (CNPS 2023a) was reviewed to assess the potential for sensitive biological communities to occur in the Project Site. All alliances within the Project Site with a ranking of 1 through 3 were considered sensitive biological communities and mapped if present.

Potential occurrence of special-status species in the Project Site was evaluated by first determining which special-status species occur near the Project Site through a literature and database search. Database searches for known occurrences of special-status species focused on the Half Moon Bay 7.5-minute USGS quadrangle and the five surrounding USGS quadrangles. The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur in the surrounding vicinity of the Project Site:

- California Native Plant Society's (CNPS's) *A Manual of California Vegetation Online Edition* (CNPS 2023a)
- USFWS Information for Planning and Conservation Species Lists (USFWS 2023a)
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory, Wetlands Mapper (USFWS 2023b)
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Web Soil Survey (USDA 2011)
- CNPS's Inventory of Rare and Endangered Plants of California search for U.S. Geological Survey (USGS) 7.5-minute Half Moon Bay quadrangle and five adjacent quadrangles (CNPS 2023b)
- California Natural Diversity Database (CNDDB) search for USGS 7.5-minute Half Moon Bay quadrangle and five adjacent quadrangles (CDFW 2023)
- California Department of Fish and Game (CDFG) publication *California Bird Species of Special Concern* (Shuford and Gardali 2008)
- California Department of Fish and Wildlife (CDFW) and University of California Press publication *California Amphibian and Reptile Species of Special Concern* (Thomson et al. 2016)
- Western Bat Working Group Online Species Accounts (WBWG 2015).

2.2 Field Survey

The Project Site was evaluated for the presence of sensitive biological communities, including riparian areas, sensitive plant communities recognized by CDFW, and environmentally sensitive habitat communities (ESHAs) recognized by the LCP. Sensitive communities were identified following *A Manual of California Vegetation, Online Edition* and includes California Wildlife Habitat Relationships habitat classifications.

Sol Ecology biologists performed a site assessment and reconnaissance-level surveys for special status species on and adjacent to the Project Study Areas on March 17 and 24, 2021, and on March 18, 2022; the proposed campground area was surveyed on December 13, 2022. The focus of the assessment and surveys was to identify whether suitable habitat elements for each of the special status species documented in the surrounding vicinity are present on the Project Study Areas or not and whether the project would have the potential to result in impacts to any of these species and/or their habitats either on- or off-site. Habitat elements examined for the potential presence of sensitive plant species included: soil type, elevation, vegetation community, and dominant plant species. For wildlife species, habitat elements examined included the presence of dispersal habitat, foraging habitat, refugia or estivation habitat, and breeding (or nesting) habitat.

Botanical surveys for special status plants with potential to occur were performed on March 24, 2021, and March 18, 2022, in accordance with state guidelines for floristic plant surveys (CDFW 2018). The entire Project Study Area was traversed on foot and all observed plant species were recorded and identified with Jepson eFlora to a taxonomic level sufficient to determine rarity. All observed plant species were recorded (Appendix C – Observed Species Table).

In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of Sol Ecology biologists with experience working with the species and habitats. If a special-status species was observed during the site visit, its presence is recorded and discussed. For some threatened and endangered species, a site survey at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies.

2.2.1 Wetland Delineation

The Project Study Area was also surveyed to determine if any wetlands and waters potentially subject to jurisdiction by the U.S Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), or CDFW are present, or any coastal wetland (one-parameter rule) is present. Coastal wetlands are defined as an area where the water table is at, near, or above the land surface long enough to bring about the formation of hydric soils or to support the growth of plants which normally are found to grow in water or wet ground (also known as hydrophytic); in either case, hydrology must also be present.

Hydrophytic plants commonly found in wetlands in San Mateo County include cordgrass, pickleweed, jaumea, frankenia, marsh mint, tule, bullrush, narrow-leaf cattail, broadleaf cattail,

pacific silverweed, salt rush, and bog rush. To qualify, a wetland must contain at least a 50% cover of some combination of these or other obligate plants, unless it is a mudflat. This preliminary assessment was based primarily on the presence of wetland plant indicators, hydrology, or wetland soils. A preliminary waters assessment was based on the presence of unvegetated, ponded areas or flowing water, or evidence indicating their presence such as a high-water mark or a defined drainage course.

3.0 RESULTS

3.1 Existing Conditions and General Wildlife Use

Elevations within the Project Study Area range from approximately 570 to 610 feet (170 to 185 meters) above mean sea level. The Clubhouse site portion of the Project Study Area encompasses 2 soil map units identified by the USDA, NRCS (USDA 2023):

- **Miramar coarse sandy loam, sloping, eroded, 9 to 11 percent slopes, MmC2:** This soil map unit is well-drained and occurs on mountain slopes. Soil parent material is quartz-diorite. It is not rated as hydric. Minor components include Sheridan (10%) and Gullied land (5%).
- **Miramar coarse sandy loam, sloping, eroded, 21 to 40 percent slopes, MmE2 and E3; MmF2:** This soil map unit is well-drained and occurs on mountain slopes. Soil parent material is Residuum weathered quartz-diorite. It is not rated as hydric. Minor components include Sheridan (10%) and Gullied land (5%).

The farm labor housing portion of the Project Study Area encompasses 1 soil map unit identified by the USDA, NRCS (USDA 2023):

- **Gullied land (alluvial soil material), 2 to 15 percent slopes, Gu:** This soil map unit has occasional flooding, and it occurs in flood plains. Soil parent material is alluvium. It is not rated as hydric. Minor components include Unnamed (5%), Botella (4%), Soquel (3%) and Farallone (3%).

The campground portion of the Project Study Area encompasses 1 soil map unit identified by the USDA, NRCS (USDA 2023):

- **Miramar coarse sandy loam, very steep, eroded, MmF2:** This soil map unit is well-drained and occurs on mountain slopes. Soil parent material is Residuum weathered quartz-diorite. It is not rated as hydric. Minor components include Sheridan (10%) and Gullied land (5%).

3.1.1 Vegetation Communities

Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. Sensitive vegetation alliances are ranked 1 through 5 based on

NatureServe's (2010) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW, or USFWS must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G). No sensitive natural communities were found in the Project Study Area.

The following vegetation communities were present within or immediately adjacent to the Project Study Area (Appendix A, Figures 2 through 5):

Eucalyptus Woodland

Eucalyptus groves can be broadly defined as areas where mature *Eucalyptus* sp. trees comprise > 80% relative cover in the tree layer of the canopy. Eucalyptus groves are typically contiguous stands of the same species, and occasionally intermittent, but rarely containing a mosaic of other arborescent species. The understory of eucalyptus groves is relatively depauperate, due to a dense build-up of leaf, bark, and fruit litter, some of which may contain growth-inhibiting allelopathic chemicals. Within the ridgetop lodge portion of the Project Study Area, there is a dense and relatively extensive stand of red iron bark (*Eucalyptus sideroxylon*) along the southwestern portion of the area. Trees within this area are mostly immature and are uniform in height and density compared with the more developed stand just outside this area, indicating that they were likely planted. Aerial photographs suggest planting (or windblown seeding) occurred in 2005.

The understory is comprised of dense layers of eucalyptus detritus in certain areas, with patchy clusters of non-native wood and herbaceous species including Jade plant (*Crassula ovata*), poison hemlock (*Conium maculatum*), ripgut brome (*Bromus diandrus*), Bermuda buttercup (*Oxalis pes-caprae*), hairy cats-ear (*Hypochaeris radicata*), and cape ivy *Delairea odorata*). Native species observed included poison oak (*Toxicodendron diversilobum*), California bee plant (*Scrophularia californica*), stinging phacelia (*Phacelia malvifolia*), Calandrinia (*Calandrinia menziesii*), wild strawberry (*Fragaria vesca*), and cleavers *Galium aparine*). Wildlife species observed in the eucalyptus grove included red-tailed hawk (*Buteo jamaicensis*), American goldfinch (*Carduelis tristis*), American crow (*Corvus branchyrynchos*), dark-eyed junco (*Junco hyemalis*), and Anna's hummingbird (*Calypte anna*).

Ruderal Grassland

Disturbed ruderal grassland occurs on nearly the entirety of the proposed campground area, and a large portion of the central and southern area of the proposed ridgetop lodge area. This area is comprised of a patchwork assemblage of mostly herbaceous non-native and native forbs, with occasional woody shrubs and sub-shrubs. While some of the non-native plant species are those typically found in disturbed areas or naturalized in woodland or shrub-dominant habitat, there are others, such as Jade (*Crassula ovata*) and caper spurge (*Euphorbia lathyris*) that suggest evidence of former plantings and habitation in the vicinity. At the time of the March 2021 site visit, the dominant species in the ruderal grassland in the Ridgetop Lodge area was pampas grass, intermixed with these former plantings, and this habitat was cleared following the 2021 survey in an effort to stop the spread of these invasive species.

Other non-native herbaceous plants that were dominant in these areas included Spring vetch (*Vicia sativa*), hairy vetch (*Vicia hirsute*), four-seeded vetch (*Vicia tetrasperma*), scarlet pimpernel (*Lysimachia arvensis*), corn spurry (*Spergula arvensis*), gopher plant (*Euphorbia lathyris*), field madder (*Sherardia arvensis*), common groundsel (*Senecio vulgaris*) and foxtail barley (*Hordeum murinum*). Native herbaceous species and woody perennials that were also relatively abundant include blue-eyed grass (*Sisyrinchium bellum*), coastal sage brush (*Artemisia californica*), California poppy (*Eschscholzia californica*), common toad rush (*Juncus bufonius*), winter cress (*Barbarea orthoceras*), California blackberry (*Rubus ursinus*) and valley sky lupine (*Lupinus nanus*). Wildlife species observed included song sparrow (*Melospiza melodia*) and American goldfinch.

Chaparral

Chaparral vegetation occurs within and adjacent to all three portions of the Project Study Area. Much of these areas were historically disturbed but may have reverted to a semi-natural state following conversion from row crop to eucalyptus and pampas grass in 2005. Chaparral typically consists of an assemblage of woody shrubs, small trees, and herbaceous plants, the composition of which (on a species level) can be variable according to where in California it appears, as well as other factors such as localized precipitation and hydrologic gradients and surrounding vegetative community assembly.

Within and immediately adjacent to all portions of the Project Study Area, species such as coyote brush (*Baccharis pilularis*), blueblossom (*Ceanothus thyrsiflorus*), thimbleberry (*Rubus parviflorus*), coastal bush lupine (*Lupinus arboreus*), lizard tail (*Eriophyllum staechadifolium*), American dogwood (*Cornus sericea*), California wax myrtle (*Morella californica*) and pearly everlasting (*Anaphalis margaritacea*) are the dominant components of this largely shrub-dominant community. Wildlife species observed in the chaparral habitat included western scrub jay, wrentit (*Chamaea fasciata*), California thrasher (*Toxostoma redivivum*), and golden-crowned sparrow (*Zonotrichia atricapilla*); wrentit and California thrasher are considered USFWS Birds of Conservation Concern.

Developed Land

These areas are associated with non-native herbaceous and woody species, ornamental landscaping, and turf. The developed vegetation within the Farm Labor Housing Project Study Area consists of a patchwork of predominantly non-native forbs and grasses, ornamental plantings, occasional native forbs and shrubs (typically along the outer margins of the site), and several mature willows (*Salix lasiolepis*) along the northern and northeastern margins. Many of the species observed are often associated with disturbed environments. Dominant non-native species included cape ivy, upright veldt grass (*Ehrharta erecta*), yellow sweetclover (*Melilotus indicus*), cheeseweed (*Malva parviflora*), Spring vetch, mustard (*Hirschfeldia incana*), wild oats (*Avena fatua*), sweet fennel (*Foeniculum vulgare*), pampas grass (*Cortaderia jubata*), poison hemlock and milk thistle (*Silybum marianum*). Native species included thimbleberry, stinging nettle (*Urtica dioica*), lizard tail, California coffeeberry (*Frangula californica*) and California blackberry. Large ornamental plantings of the succulent Tuna (*Opuntia ficus-indica*) and quince

(*Cydonia oblonga*) are prominent along the western portion of the site. Additionally, a large man-made lined irrigation pond is present on the southwest portion of the upper ridgetop site. Evidence of routine maintenance was observed, and the feature lacked indicators of wetland hydrology, hydrophytic vegetation, and/or continuous ponding. Wildlife species observed in the developed community included American robin (*Turdus migratorius*), western scrub-jay (*Aphelocoma californica*), and house finch (*Carpodacus mexicanus*).

Several mature willows (*Salix lasiolepis*) occur along the northwestern edge of the existing farm labor housing building and are likely remnants of a riparian corridor that may have been associated Loess Creek prior to its undergrounding in the 1950s. These few mature trees not part of any sensitive vegetation community or alliance (e.g., coastal wetland or riparian corridor subject to Section 1600). While arroyo willow is sometimes associated with seep wetland habitats, no hydric soils are present and no hydrology indicators were observed. Furthermore, the willows make up less than 50 percent cover of hydrophytic vegetation at this location and the understory is comprised entirely of upland species. Given the absence of other hydrophytic vegetation in this area and the maturity of the trees observe, these trees likely receive enough water from the ground and coastal drip to be self-sustaining and are therefore, not considered sensitive.

3.2 Potential Jurisdictional Features

Ephemeral Drainage

Near the northwest corner of the Project property and running along the southern edge of the proposed campground lies an ephemeral drainage feature (Appendix A, Figures 2 and 3; Appendix B, Photo 7). This feature is fed by the man-made water storage pond/reservoir at the top of the hill to the east of the campground and does not support wetland or riparian vegetation. It eventually drains to Frenchmans Creek via surface runoff. Erosional features of the drainage are fragmented, yet extreme in some areas, and are interrupted by an unpaved road and trail to the southeast and southwest of the campground.

Riparian Corridor

The riparian corridor associated with Frenchmans Creek (a Waters of the U.S.) exists to the west and north of the proposed campground (Appendix A, Figures 2 and 3). This corridor was observed to be consisting primarily of willows, California blackberry, and other herbaceous plant species. While the riparian habitat immediately north of the campground is separated from Frenchmans Creek by a road, it is considered part of the riparian corridor associated with the creek.

Additional riparian habitat is also present just north of the proposed farm labor housing area alongside the upper Loess Creek drainage and culvert (Appendix A, Figure 4). Loess Creek is an intermittent drainage (and Waters of the U.S.) at this location. Just north of the farm labor housing area, the creek drops into a culvert where it flows underground and daylight on the other side of the cultivation area.

Perennial Wetland (Man-Made)

An approximately 0.6-acre perennial wetland is present in the center of the Project Site (Appendix A, Figures 2 and 4). This low-lying feature appears to be the result of man-made modifications including the discharge of steam from the adjacent boiler plant and the collapse of the underground pipe in 1998. Historical photographs suggest this feature was not present prior to the pipe collapse in 1998 and thus, this feature is considered to be man-made though still jurisdictional under the U.S. and State given its connectivity with Loess Creek. The wetland was characterized by a mix of sedges (*Carex sp.*), rush (*Juncus sp.*), and seep monkeyflower (*Mimulus guttatus*). A small channel is also present receiving water from an unknown source. The tributary was surrounded by riparian species including willow (*Salix sp.*), white alder (*Alnus rhombifolia*), Pacific dogwood (*Cornus nuttalli*), and Pacific wax myrtle (*Myrica californica*). This feature is more than 50 feet from the nearest structure.

3.3 Special-Status Plants

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed species and those that are formal candidates for listing. Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (Inventory) with California Rare Plant Ranks of 1 and 2 are also considered special-status plant species and must be considered under CEQA.

Based upon a review of the resources and databases given in Section 2.1, forty-four (44) special-status plant species have been documented within 6-quadrangle search of the Project Study Area, of which twenty-seven (27) species have been documented within a five-mile radius (Appendix A, Figure 6). Based on the presence of biological communities described above and soils at the site, as well as recent site disturbance the Project Study Area has the potential to support none of these species. Most of these species are unlikely to occur based on prior land clearing and agricultural practices on the site dating to at least 1992 and likely as far back as the 1950 based on examination of historical aerial photographs.

Species documented in the area are unlikely or have no potential to occur on the Project Study Area for one or more of the following reasons:

- Hydrologic conditions (e.g., marsh habitat, seeps, pond habitat, vernal wet meadows) necessary to support the special status plants do not exist on site (e.g., Hickman's cinquefoil, Ornduff's meadowfoam).
- Edaphic (soil) conditions (e.g., sandy, rocky soils) necessary to support the special status plants do not exist on site (e.g., King's Mountain manzanita, San Francisco champion, San Francisco collinsia, arcuate bush-mallow, fragrant fritillary, and woodland woollythreads).

- Unique pH conditions (e.g., serpentine) necessary to support the special status plant species are not present on site (e.g., Crystal Springs lessingia, fountain thistle, Hillsborough chocolate lily, Marin western flax, San Mateo thornmint).
- Associated vegetation communities (e.g., coastal prairie, coastal scrub, coastal bluffs, cismontane woodland, grassland) necessary to support the special status plants do not exist on site (e.g., bent-flowered fiddleneck, Choris' popcornflower, Kellogg's horkelia, Montara manzanita, San Francisco owl's-clover, San Mateo woolly sunflower, short-leaved evax, rose leptosiphon, coastal marsh milk-vetch, Oregon polemonium, perennial goldfields, white-rayed pentachaeta, and western leatherwood).

Adverse conditions from yearly weather patterns may prevent accurate identification of some special status plants in the Project Study Area. Disease, drought, predation, fire, herbivory, or other disturbances may also preclude presence in a given year. The timing of this survey was based on a determination of the blooming period for most special status plants in a normal (or average) rainfall year. No evidence of disease, drought, predation, or herbivory was observed.

3.4 Special Status Wildlife

In addition to wildlife listed as federal or state endangered and/or threatened, federal and state candidate species, CDFW Species of Special Concern, CDFW California Fully Protected species, USFWS Birds of Conservation Concern, and CDFW Special-status Invertebrates are all considered special-status species. Although these species generally have no special legal status, they are given special consideration under CEQA. The federal Bald and Golden Eagle Protection Act also provides broad protections to both eagle species that are roughly analogous to those of listed species. Bat species are also evaluated for conservation status by the Western Bat Working Group (WBWG), a non-governmental entity; bats named as a "High Priority" or "Medium Priority" species for conservation by the WBWG are typically considered special-status and are also considered under CEQA; bat roosts are protected under CDFW Fish and Game Code. In addition to regulations for special-status species, most native birds in the United States (including non-status species) are protected by the federal Migratory Bird Treaty Act of 1918 (MBTA) and the California Fish and Game Code (CFG), i.e., sections 3503, 3503.5 and 3513. Under these laws, deliberately destroying active bird nests, eggs, and/or young is illegal.

Sixty (60) special-status wildlife species have been documented within 6-quadrangle search of the Project Study Area, of which sixteen (16) species have been documented within a five-mile radius (Appendix A, Figure 7). Based on the presence of biological communities described above, the Project Study Area has the potential to support five (5) of these species; these species are described in Table 2 below.

The remaining species found in the review of background literature were determined to be unlikely to occur due to absence of suitable habitat elements in and immediately adjacent to the Project Study Area. Habitat elements that were evaluated but found to be absent from the immediate area of the Project Study Area or surrounding habitats subject to potential indirect impacts include the following:

- No suitable burrows on or adjacent to the Project Study Area (e.g., for burrowing owl or American badger).
- No suitable stream habitat on or immediately adjacent to the Project Study Area (e.g., for steelhead, Russian river tule perch, California giant salamander, foothill yellow-legged frog or San Francisco garter snake [SFGS]); note that Frenchmans Creek provides suitable habitat for these species but is located more than 200 feet away from any proposed activities. SFGS is not documented to occur in Frenchmans Creek.
- Ponds on-site are maintained for agricultural purposes and do not provide hydrological connectivity nor suitable basking habitat for most aquatic species such as western pond turtle nor San Francisco gartersnake.
- No suitable roosting habitat such as barns, old buildings, or large snags (e.g., for Townsend's big-eared bat) or mature trees (e.g., for pallid bat). The existing farm housing structure has been examined by a qualified bat biologist and was found to be unsuitable for roosting bats.
- No suitable north-, northwest-, or northeast-facing, sheltered tree canopy is present for wintering Monarch butterfly roosts. Eucalyptus groves on and adjacent to the site are relatively immature and are exposed and as such do not provide adequate thermal conditions for butterflies.
- Suitable vegetation communities or habitat types are not present (e.g., coastal prairie for various butterflies, coniferous forest for marbled murrelet, coastal dunes for western snowy plover), etc.

Table 1. Special Status Wildlife with Potential to Occur in the Study Area

Scientific Name/ Common Name	Status ¹	Habitat	Potential for Occurrence
Amphibians and Reptiles			
<i>Rana draytonii</i> California red-legged frog	FT, SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation.	Low Potential. This species occurs in Frenchmans Creek (CNDDDB 924). There is no suitable breeding or upland habitat in, or adjacent to the Project Study Area, however there is marginal suitable dispersal habitat in the proposed campground area and near the farm labor housing area. In both locations, there is higher quality habitat in the surrounding area resulting in a low potential for presence. The Project Site is within designated critical habitat for this species (USFWS 2010).
Birds			
<i>Chamaea fasciata</i> Wrentit	BCC	Lives in chaparral, oak woodlands, and scrub habitat. Often in areas with thick vegetation; nests on the ground.	Present. Wrentit was observed in the chaparral habitat adjacent to the Project Study Area on the ridgetop during the March 17, 2021, assessment. This species may nest year-round.
<i>Selasphorus sasin</i> Allen's hummingbird	BCC	Resident to the coast of California and Oregon during the breeding season. Nests are constructed in trees or shrubs often near shady streams in both understory and tree canopy.	High Potential: Suitable nesting habitat is present wherever Monterey pine trees are present, including on the ridgetop, and along Frenchmans Creek and Loess Creek riparian corridors.
<i>Toxostoma redivivum</i> California thrasher	BCC	Present throughout California in chaparral habitat. Requires large amounts of leaf litter in the underbrush. Inhabit open woodlands in chaparral transition zones in the northern parts of the range.	Present. California thrasher was observed nesting on the ridgetop during the March 17, 2021, assessment.

Mammals			
<p><i>Neotoma fuscipes annectens</i> San Francisco dusky-footed woodrat</p>	<p>SSC</p>	<p>Forest habitats of moderate canopy and moderate to dense understory as well as chaparral and riparian scrub habitats. Constructs nests of shredded grass, leaves, and other material. May be limited by availability of nest-building materials.</p>	<p>Moderate Potential: While no nests were observed at the site, suitable understory habitat is present throughout the site within chaparral and riparian vegetation communities on and adjacent to the Project Study Area. However, the property has a history of site disturbance, and this species, if present, is not likely to be within developed portions of the site.</p>

¹ FE/SE – Federal/State Endangered

FT/ST – Federal/State Threatened

FC – Federal Candidate for Endangered or Threatened

SCE/T – State Candidate Endangered/Threatened

SCE/T – State Candidate Endangered/Threatened

CFP – California Fully Protected

SSC – Species of Special Concern

BCC – Bird of Conservation Concern

4.0 POTENTIAL IMPACTS AND MITIGATION

The assessment of impacts under CEQA is based on the change caused by the Project relative to the existing conditions at the proposed Project Study Area. In applying CEQA Appendix G, the terms “substantial” and “substantially” are used as the basis for significance determinations in many of the thresholds but are not defined qualitatively or quantitatively in CEQA or in technical literature. In some cases, the determination requires application of best professional judgment based on knowledge of site conditions as well as the ecology and physiology of biological resources present in a given area. The CEQA and State CEQA Guidelines defines “significant effect on the environment” as “a substantial adverse change in the physical conditions which exist in the area affected by the proposed project.” Pursuant to Appendix G, Section IV of the State CEQA Guidelines, the proposed Project would have a significant impact on biological resources if it would:

- A. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game [Wildlife] or U.S. Fish and Wildlife Service.
- B. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- C. Have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- D. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
- E. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- F. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.1 Potential Impacts

4.1.1. Sensitive Biological Communities

Sensitive biological communities within the Project Study Area include an ephemeral drainage and riparian habitat. Frenchmans Creek, Loess Creek, and a perennial wetland are also present

adjacent to planned activities. Setbacks are prescribed for each of these features according to the Mid-Coast LCP as follows:

- Frenchmans Creek and associated riparian habitat: 50 feet from edge of dripline (or top of bank if no vegetation is present)
- Loess Creek and associated riparian habitat: 50 feet from edge of dripline (or top of bank if no vegetation is present)
- Perennial man-made wetland: 50 feet [reduced from 100 feet based on existing hardscape (buildings and roadway) between proposed activities and the edge of wetland habitats, which will prevent any adverse impacts to the wetland]
- Ephemeral drainage: 25 feet [based on minimum distance prescribed by Regional Water Quality Control Board in absence of prescribed setbacks in the LCP and/or Zoning Code for ephemeral waters].

The current proposed plan shows all construction/planned development is located outside prescribed setbacks as shown in Appendix A, Figures 3-5). Implementation of prescribed setbacks and general BMPs will ensure no significant impact to these features will occur as a result of the proposed project. Avoidance will also ensure no federal or state permits are required.

4.1.2. Special-Status Plant Species

No special-status plant species have potential to occur within the Project Study Area. As such, no impacts to special-status plant species are anticipated.

4.1.3. Special-Status Wildlife Species

The Project Study Area provides suitable habitat for five special-status wildlife species: California red-legged frog (dispersal habitat), wrentit, Allen's hummingbird, California thrasher, and San Francisco dusky-footed woodrat.

California Red-legged Frog (*Rana draytonii*). **Federal Threatened Species, CDFW Species of Special Concern.** The California red-legged frog (CRLF) is dependent on suitable aquatic, estivation, and upland habitat. During periods of wet weather, starting with the first rainfall in late fall, red-legged frogs disperse away from their estivation sites to seek suitable breeding habitat. Aquatic and breeding habitat is characterized by dense, shrubby, riparian vegetation and deep, still, or slow-moving water. Breeding occurs between late November and late April; while tadpoles require several months to metamorphose, typically until at least mid-June.

Following breeding during the wet season, adult frogs may disperse into upland habitats which include areas up to 300 feet from aquatic and riparian habitat and are comprised of grasslands, woodlands, and/or vegetation that provide shelter, forage, and predator avoidance. At the end

of the wet season, CRLF may disperse up to one-mile overland from upland or breeding habitats (often via riparian corridors) to aquatic non-breeding habitats (Fellers and Kleeman 2007).

There are documented occurrences of CRLF both in Frenchman's Creek and the surrounding vicinity, and the species likely breeds in Frenchman's Creek. CRLF may also utilize non-breeding aquatic habitats on the site including Loess Creek and/or the perennial wetland, and upland habitats within 300 feet where available refugia is present. There is no suitable breeding habitat on or within 300 feet of the Project Site. The ridgetop pond is lined and as such provides limited habitat for dispersing frogs. There is a low potential for CRLF to disperse through the Project Study Area at the end of the wet season with a greater chance to inhabit the upland habitat closer to water sources and/or moist riparian habitat adjacent to Frenchmans Creek. The Project Site is located within designated critical habitat for this species.

Because the project is located primarily within previously disturbed and developed areas and would not result in any permanent barriers to dispersal, the project would not adversely modify or destroy critical habitat for CRLF. However, given the potential for frogs to move overland, and the proximity of the proposed campground to Frenchmans Creek, excavation and other ground disturbance related to project construction pose a risk of mortality to CRLF dispersing through the area.

Wrentit (*Chamaea fasciata*), USFWS Bird of Conservation Concern. The wrentit lives in coastal scrub and chaparral habitats along the west coast, including suburban parks with shrub habitat. They primarily occur in shrub thickets along creeks, and in dense shrublands with coyote bush, manzanita, poison oak, and blackberry. This species nests and forages in dense low growth, usually between one and four feet above the ground. This species is considered sedentary and seldom leaves the breeding areas to migrate elsewhere.

Wrentit was observed during the March 17, 2021, visit and based on timing likely nests in chaparral habitat on or adjacent to the site. Grubbing and grading activities could destroy active nests, and construction activities could cause disturbance enough to result in the abandonment of nearby nests. Impacts to nesting birds, including wrentit is considered significant under CEQA.

Allen's hummingbird (*Selasphorus sasin*). USFWS Bird of Conservation Concern. Allen's hummingbird, common in many portions of its range, is a summer resident along the majority of California's coast and a year-round resident in portions of coastal southern California and the Channel Islands. Breeding occurs in association with the coastal fog belt, and typical habitats used include coastal scrub, riparian, woodland and forest edges, and eucalyptus and cypress groves (Mitchell 2000). It feeds on nectar, as well as insects and spiders.

There are a variety of trees within and adjacent to the Project Study Area that provide suitable nesting habitat for Allen's hummingbird; as such, there is a moderate potential for it to nest in the area. Tree removal and tree trimming could destroy active nests, and construction activities could cause disturbance enough to result in the abandonment of nearby nests. Impacts to nesting birds, including Allen's hummingbird is considered significant under CEQA.

California thrasher (*Toxostoma redivivum*), USFWS Bird of Conservation Concern. California thrashers are typically found in riparian and oak scrub or chaparral habitats. This species forages primarily on the ground but otherwise rarely flies in the open. California thrashers construct their nests about 7 feet above the ground in dense shrubbery.

California thrasher was observed (presumably nesting) during the March 17, 2021 visit in chaparral habitat on the ridgetop area. Tree removal and tree trimming could destroy active nests, and construction activities could cause disturbance enough to result in the abandonment of nearby nests. Impacts to nesting birds, including California thrasher, are considered significant under CEQA.

San Francisco Dusky-Footed Woodrat (*Neotoma fuscipes annectens*), CDFW Species of Special Concern. This subspecies of the dusky-footed woodrat occurs throughout the San Francisco Bay Area (Hall 1981). Occupied habitats are variable and include forest, woodland, riparian areas, and chaparral. Woodrats feed on woody plants, but will also consume fungi, grasses, flowers, and acorns. Foraging occurs on the ground and in bushes and trees. This species constructs robust stick houses/structures in areas with moderate cover and a well-developed understory containing woody debris. Breeding takes place from December to September. Individuals are active year-round, and generally nocturnal.

San Francisco dusky-footed woodrat (SFDW) may occur within and adjacent to the Project Study Area in both chaparral and riparian habitats, though is not likely to be present in developed areas. Any construction activities (excavation, tree removal, grading, paving, etc.) that could result in the impacts to SFDW nests have potential to significantly impact this species. Additionally, any construction activities occurring in close proximity to the nests could cause disturbance enough for SFDW to abandon their houses and disrupting their life cycle, which is considered a significant impact under CEQA.

4.1.4 Nesting and Migratory Birds

The Project Study Area provides suitable habitat for a variety of birds. Birds, nests, eggs, and young are protected by the federal Migratory Bird Treaty Act and by California Fish and Game Code 3513.

4.2 Recommended Avoidance and Minimization Measures

The following measures are recommended to be implemented in the event any of the potential impacts described in Section 4.1 cannot be completely avoided by project design and/or recommended work windows (e.g., vegetation removal between Sept. 1 and Feb. 1.). Additionally General Construction Measures or Best Management Practices are prescribed for work occurring near Frenchmans Creek and/or near any setback areas:

General Conservation Measures and Best Management Practices

- Orange construction fencing should be placed around all existing riparian vegetation and/or sensitive aquatic resource setback areas to ensure the no-disturbance buffer is maintained. No staging or stockpiling of materials, nor loitering shall be allowed in any setback area.
- A spill prevention plan will be prepared describing measures to be taken to minimize the risk of fluids or other materials used during construction (e.g., oils, transmission and hydraulic fluids, cement, fuel) from entering streams or contaminating adjacent riparian/wetland habitat areas.
- Stockpiling of materials, including portable equipment, vehicles and supplies (e.g., chemicals), will be restricted to the designated construction staging areas, exclusive of any riparian and wetland areas; refueling of any vehicles or equipment should be done at least 100 feet away from the creek.
- A worker environmental awareness program/training (WEAP) should be provided to all construction workers prior to the start of work. The training will educate workers on the biological resources present on the site, the laws and regulations that protect those resources, the consequences of non-compliance with those laws and regulations, instructions for inspecting equipment each morning prior to activities and what to do in the event a sensitive species is found, and a contact person if protected biological resources are discovered on the Project Study Area.

Species-Specific Mitigation Measures

MM-1. Nesting Birds and Raptors (Including wren tit, Allen's hummingbird, and California thrasher):

- Grubbing and vegetation removal activities should be initiated during the non-nesting season from September 1 to January 31 to the extent feasible. If work cannot be initiated during this period, then nesting bird surveys should be performed in trees proposed for removal and suitable nesting habitat within 500 feet of the project footprint.
- If nests are found, a no-disturbance buffer should be placed around the nest until young have fledged or the nest is determined to be no longer active by the biologist. The size of the buffer may be determined by the biologist based on species and proximity to activities but should generally be between 50 feet for songbirds and up to 500 feet for nesting raptors.

MM-2. California Red-Legged Frog:

- A pre-construction survey by a qualified biologist with experience identifying CRLF is recommended no more than 48 hours prior to the start of ground disturbing activities. If found, all work should be halted, and the animal should be allowed to leave the area on its own accord. If the animal does not leave, work shall remain halted and USFWS should be contacted. Work may not resume until authorized in writing by a qualified biologist and/or USFWS.
- Tightly woven fiber netting or similar material should be used for erosion control or other purposes to ensure amphibian and reptile species do not get trapped. Plastic monofilament netting (erosion control matting) rolled erosion control products, or similar material should not be used anywhere on the Project site(s). Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.
- To ensure that CRLF does not enter construction areas, wildlife exclusion fencing (WEF) should be placed between construction areas and nearby riparian or wetland habitats within 300 feet prior to the commencement of activities. Fencing should have one-way funnel exits every 100 feet that allows for wildlife to leave the construction area, and the entire length of the fence will be buried a minimum of 6 inches along the bottom to prevent wildlife from burrowing under. WEF should be installed under the direction of a qualified biologist and maintained throughout the duration of any ground-disturbing activities or work near riparian habitats.
- No construction activities work shall be performed during or within 24 hours of any rain event (greater than 0.5 inches) between October 15 and June 15 when frogs are most likely to disperse into nearby upland habitats. No work shall occur within 30 minutes of sunrise or sunset.
- Trenches and holes should be covered and inspected daily for stranded animals. Trenches and holes deeper than one foot should contain escape ramps at a maximum slope of 2:1 to allow trapped animals to escape.

MM-3. San Francisco Dusky-Footed Woodrat:

- Pre-construction surveys for San Francisco dusky-footed woodrat stick houses should be performed no less than 30 days prior to construction (including grubbing). If stick houses are found and avoidance is not feasible, the houses should be dismantled by hand under the supervision of a biologist. If young are encountered during the dismantling process, the material should be placed back on the house and a buffer of 25 feet should be established by the biologist for a minimum of 3 weeks to allow young time to mature and leave the nest. Once confirmed nesting is completed, the stick house may be dismantled, and materials should be moved to a suitable adjacent area outside the project limits for reuse.

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APPENDIX A

PROJECT FIGURES: SITE LOCATION MAP, VEGETATION COMMUNITIES, AND CNDDDB RESULTS

Figure 1: Project Location

Stonewood Lodge Project, 37 Frenchmans Creek Road, Half Moon Bay, CA 94019



Figure 2: Project Vegetation Communities Overview
 Stonewood Lodge Project, 37 Frenchmans Creek Road, Half Moon Bay, CA 94019

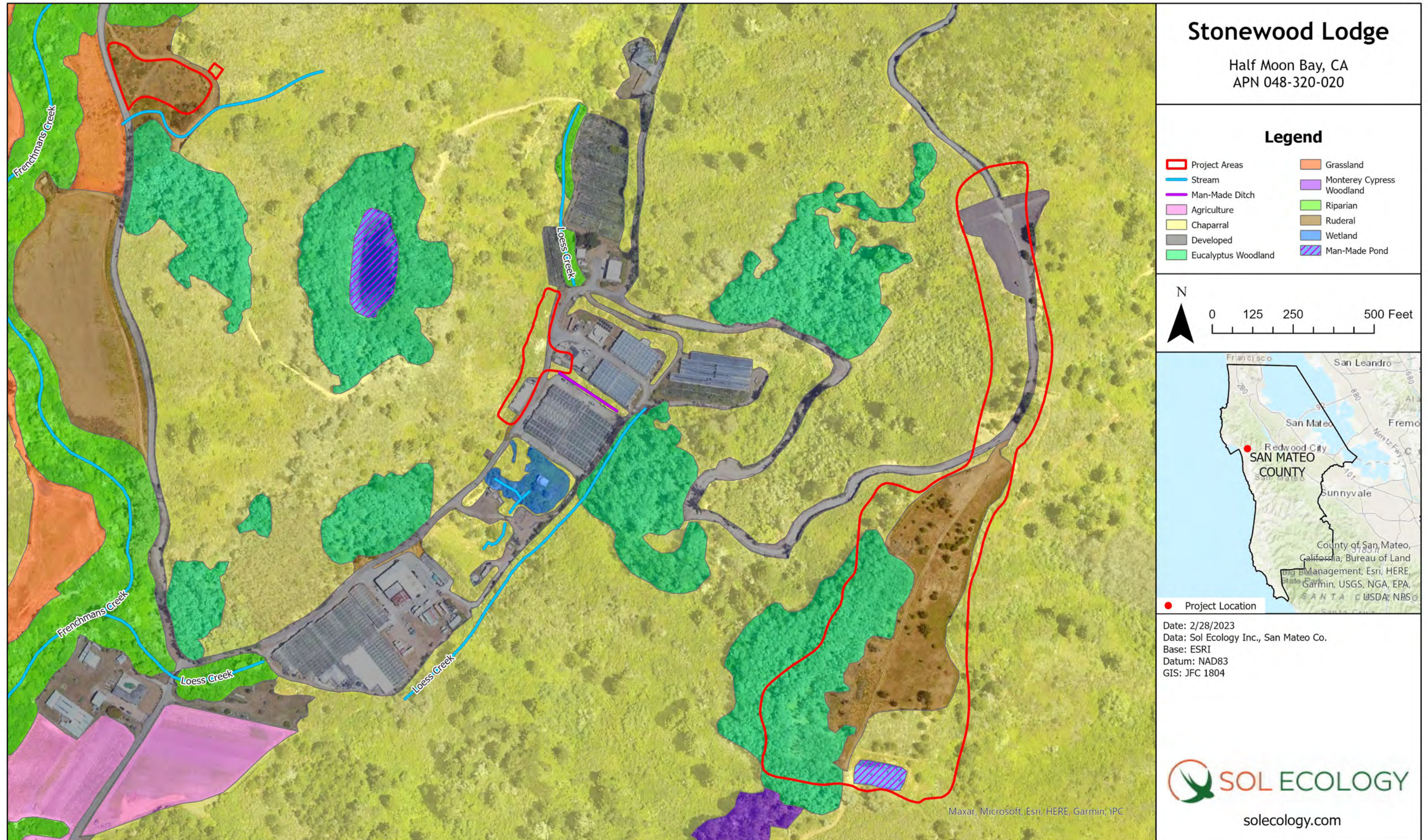


Figure 4: Project Vegetation Communities - Farm Labor Housing
 Stonewood Lodge Project, 37 Frenchmans Creek Road, Half Moon Bay, CA 94019

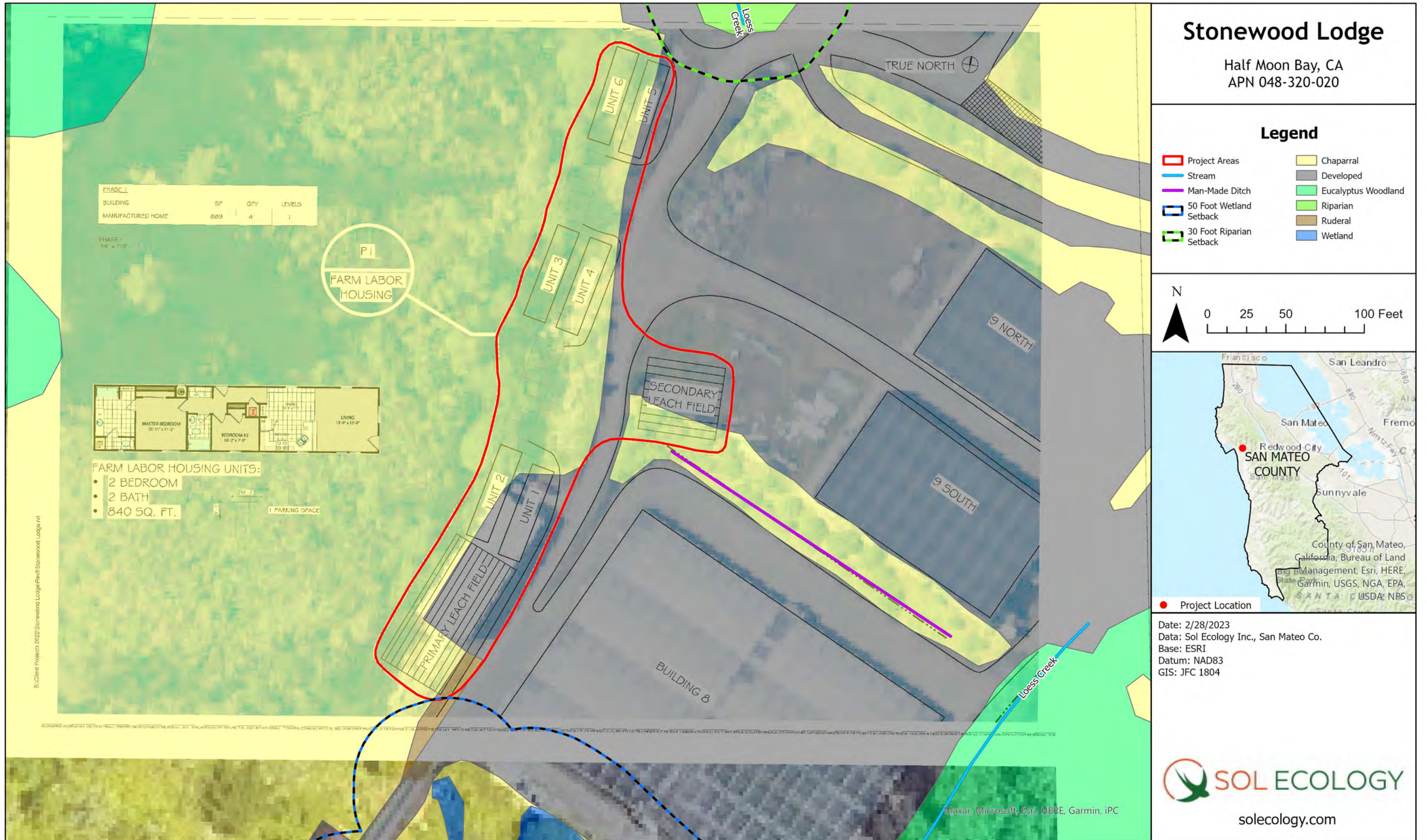


Figure 5: Project Vegetation Communities - Ridgetop Lodge
 Stonewood Lodge Project, 37 Frenchmans Creek Road, Half Moon Bay, CA 94019

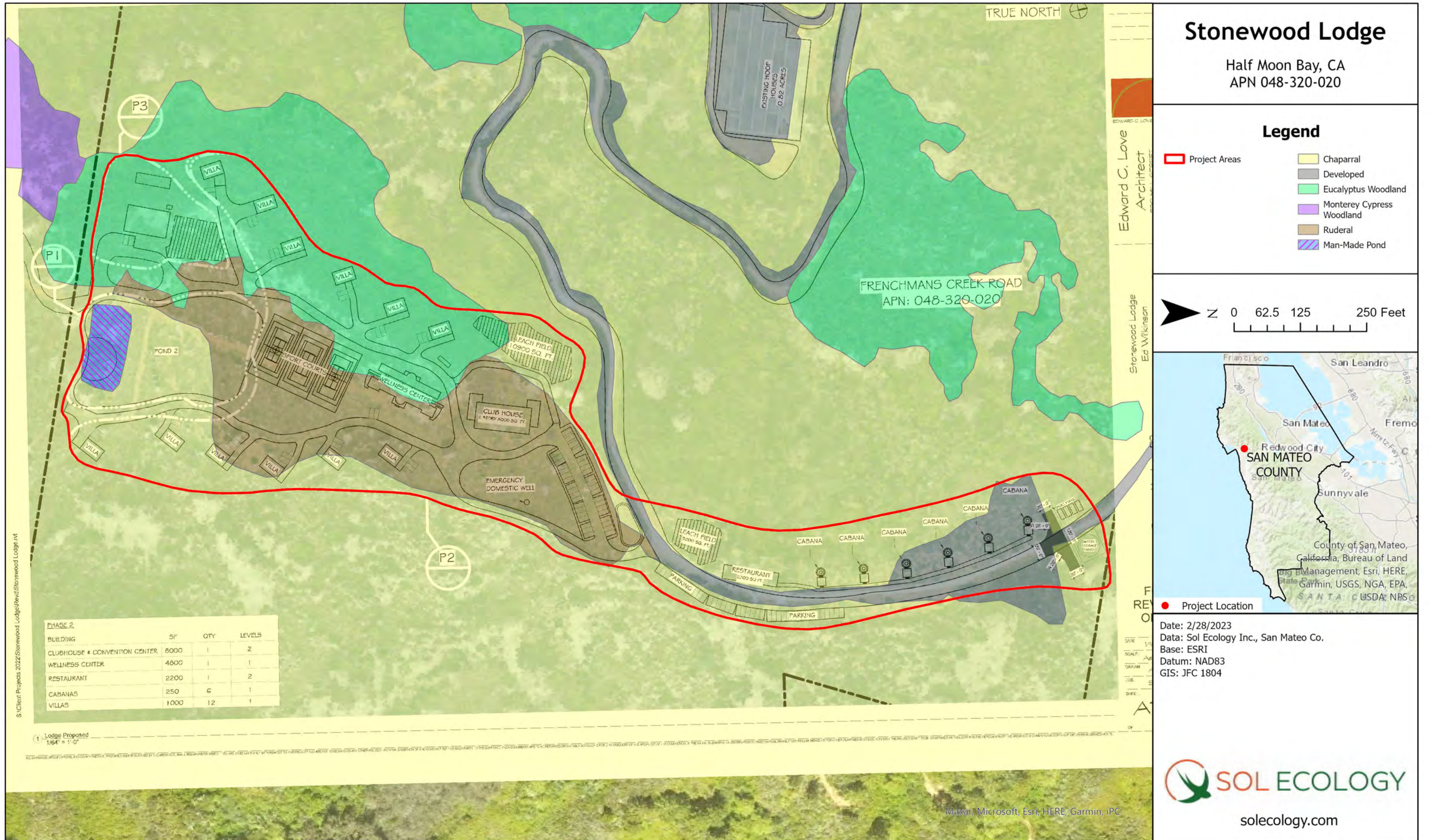
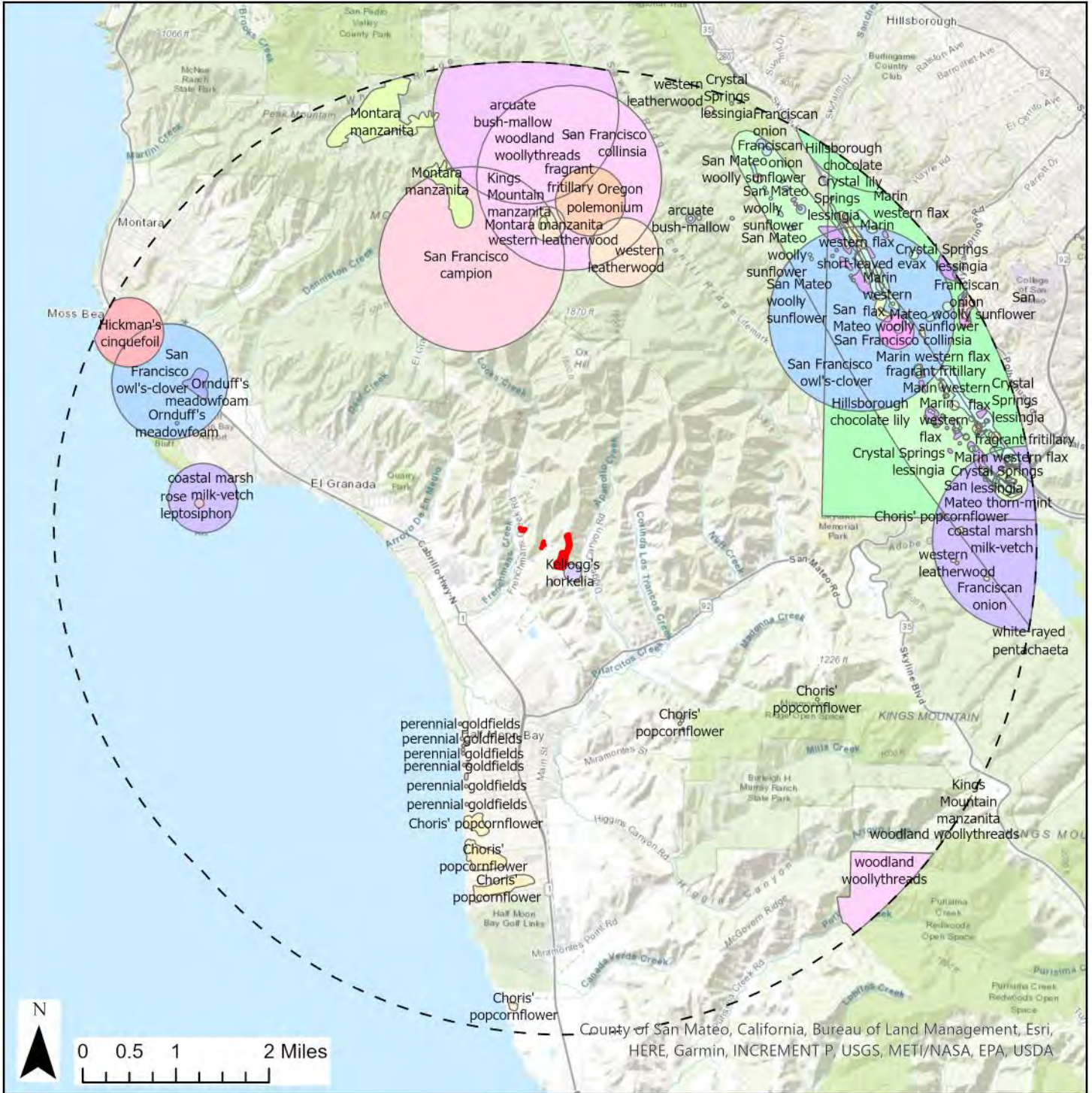


Figure 6: Special Status Plant Species within 5 Miles of the Project Site
 Stonewood Lodge, 37 Frenchmans Creek Road, Half Moon Bay, CA 94019



- | | | | | |
|-----------------------------|--------------------------|----------------------------|--------------------------|-------------------------|
| Project Study Area | Kellogg's horkelia | San Francisco collinsia | bent-flowered fiddleneck | short-leaved evax |
| 5 Miles | Kings Mountain manzanita | San Francisco owl's-clover | coastal marsh milk-vetch | western leatherwood |
| Choris' popcornflower | Marin western flax | San Mateo thorn-mint | fountain thistle | white-rayed pentachaeta |
| Crystal Springs lessingia | Montara manzanita | San Mateo woolly sunflower | fragrant fritillary | woodland woollythreads |
| Franciscan onion | Oregon polemonium | arcuate bush-mallow | perennial goldfields | |
| Hickman's cinquefoil | Ornduff's meadowfoam | | rose leptosiphon | |
| Hillsborough chocolate lily | San Francisco campion | | | |

APPENDIX B

SITE PHOTOGRAPHS



Photo 1. Aerial photograph 1992 – Shows entire ridgetop project site under agricultural production



Photo 2. Ridgetop area. From center facing south.



Photo 3. Ridgetop area. From center facing west.



Photo 4. Ridgetop area. From southern portion facing west.



Photo 5. Overview of campground area. Ephemeral drainage included (bottom).



Photo 6. Ephemeral drainage near campground, showing heavy erosion.

APPENDIX C

OBSERVED SPECIES TABLE

Appendix C: Observed Avian Species During the March 17, 2021 Survey

Common Name	Scientific Name	Activity On-Site
Western scrub jay	<i>Aphelocoma californica</i>	Foraging
Red-tailed hawk	<i>Buteo jamaicensis</i>	Observed one individual perched at the top of telephone poll outside of the Study Area.
Anna's hummingbird	<i>Calypte anna</i>	Both male and female observed foraging.
American goldfinch	<i>Carduelis tristis</i>	
House Finch	<i>Carpodacus mexicanus</i>	One pair heard singing and observed outside of the Study Area.
Wrenit	<i>Chamaea fasciata</i>	Heard singing
American crow	<i>Corvus brachyrhynchos</i>	Heard calling
Dark-eyed junco	<i>Junco hyemalis</i>	Heard singing
Song sparrow	<i>Melospiza melodia</i>	Foraging
Allen's hummingbird	<i>Selasphorus sasin</i>	Several individuals observed loafing in eucalyptus trees in the Study Area.
White-breasted nuthatch	<i>Sitta carolinensis</i>	Several individuals observed in pine trees throughout the site.
California thrasher	<i>Toxostoma redivivum</i>	Observed a pair flushing from a nearby pine tree; presumed nesting (or nest building).
American robin	<i>Turdus migratorius</i>	Foraging
Hutton's vireo	<i>Vireo huttoni</i>	Foraging
Yellow-crowned sparrow	<i>Zonotrichia atricapilla</i>	Foraging

39 degree F Partly Cloudy

Wind speed 0 to 5 miles per hour

Start time: 8:00 AM

End time: 11:00 AM

Appendix C: Observed Plant Species During Protocol-level Plant Surveys Performed on March 24, 2021 and March 18, 2022

Vascular Plant Species List

*=non-native

Adoxaceae

Sambucus racemosa Red elderberry

Anacardiaceae

Toxicodendron diversilobum Poison oak

Apiaceae

**Conium maculatum* Poison hemlock

**Foeniculum vulgare* Fennel

Heracleum maximum Common cow parsnip

Sanicula crassicaulis Pacific sanicle

Asteraceae

Achillea millefolium Yarrow

Anaphalis margaritacea Pearly everlasting

Artemisia californica Coastal sage brush

Baccharis pilularis Coyote brush

**Carduus tenuiflorus* Slender flowered thistle

Cirsium brevistylum Short-styled thistle

**Cirsium vulgare* Bull thistle

**Delairea odorata* Cape ivy

**Erigeron bonariensis* Flax-leaved horseweed

Eriophyllum staechadifolium Lizard tail

**Glebionis segetum* Corn marigold

**Helminthotheca echioides* Bristly ox-tongue

**Hypochaeris radicata* Hairy cats ear

**Pseudognaphalium luteoalbum* Jersey cudweed

**Senecio vulgaris* Common groundsel

**Silybum marianum* Milk thistle

**Sonchus oleraceus* Sow thistle

Symphotrichum chilense Pacific aster

**Taraxacum officinale* Dandelion

Boraginaceae

Phacelia malvifolia Stinging phacelia

Brassicaceae

Barbarea orthoceras Winter cress

**Brassica rapa* Mustard

**Cardamine hirsuta* Hairy bitter cress

**Hirschfeldia incana* Mustard

**Lepidium didymium* Lesser swine cress

**Raphanus sativus* Jointed charlock

Cactaceae

**Opuntia ficus-indica* Tuna

Caprifoliaceae

Lonicera involucrata var. *ledebourii* Coast twinberry

Symphoricarpos albus Common snowberry

Caryophyllaceae

**Spergula arvensis* Corn spurry

**Stellaria media* Chickweed

Cornaceae

Cornus sericea American dogwood

Crassulaceae

**Crassula ovata* Jade

Cucurbitaceae

Marah fabacean California man-root

Dryopteridaceae

Polystichum munitum Western sword fern

Euphorbiaceae

**Euphorbia lathyris* Gopher plant

**Euphorbia peplus* Petty spurge

Fabaceae

Lathyrus vestitus Common pacific pea

**Lotus corniculatus* Bird's foot trefoil

Lupinus arboreus Coastal bush lupine

Lupinus nanus Annual lupine

**Medicago polymorpha* Burclover

**Melilotus indicus* Annual yellow sweetclover

**Trifolium campestre* Hop clover

Vicia gigantea Giant vetch

**Vicia hirsuta* Hairy vetch

**Vicia sativa* Spring vetch

**Vicia tetrasperma* Four seeded vetch

Geraniaceae

**Geranium dissectum* Wild geranium

**Geranium molle* Crane's bill geranium

Grossulariaceae

Ribes menziesii Gooseberry

Ribes sanguineum var. *glutinosum* Blood currant

Iridaceae

Iris douglasiana
Sisyrinchium bellum

Douglas iris
Blue-eyed grass

Juncaceae

Juncus bufonius

Common toad rush

Malvaceae

Malva parviflora

Cheeseweed

Montiaceae

Claytonia perfoliata
Calandrinia menziesii

Miner's lettuce
Redmaids

Myricaceae

Morella californica

California wax myrtle

Myrsinaceae

**Lysimachia arvensis*

Scarlet pimpernel

Myrtaceae

**Eucalyptus sideroxylon*

Red iron bark

Onagraceae

Oenothera elata

Evening primrose

Orobanchaceae

Castilleja affinis

Coast paintbrush

Oxalidaceae

**Oxalis incarnata*
**Oxalis pes-caprae*
Oxalis pilosa

Crimson woodsorrel
Bermuda buttercup
Hairy wood sorrel

Papaveraceae

Eschscholzia californica
**Fumaria capreolata*

California poppy
White ramping fumitory

Phrymaceae

Diplacus aurantiacus

Orange bush monkeyflower

Phytolaccaceae

**Phytolacca americana*

Pokeweed

Pinaceae

Pinus radiata
Pseudotsuga menziesii

Monterey pine
Douglas fir

Plantaginaceae

Plantago erecta
**Plantago lanceolata*

California plantain
Ribwort

Poaceae

* <i>Avena fatua</i>	Wildoats
* <i>Bromus diandrus</i>	Ripgut brome
* <i>Cortaderia jubata</i>	Pampas grass
* <i>Cynodon dactylon</i>	Bermuda grass
* <i>Dactylis glomerata</i>	Orchard grass
* <i>Hordeum murinum</i>	Seaside barley

Polygonaceae

* <i>Rumex acetosella</i>	Sheep sorrel
* <i>Rumex crispus</i>	Curly dock

Polypodiaceae

<i>Polypodium</i> sp.	Polypody fern
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Ranunculaceae

<i>Thalictrum fendleri</i>	Fendler's meadow rue
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Rhamnaceae

<i>Ceanothus thyrsiflorus</i>	Blueblossom
<i>Frangula californica</i>	Coffeeberry

Rosaceae

* <i>Cydonia oblonga</i>	Quince
<i>Fragaria vesca</i>	Wild strawberry
<i>Holodiscus discolor</i>	Ocean spray
<i>Rubus parviflorus</i>	Thimbleberry
<i>Rubus ursinus</i>	California blackberry

Rubiaceae

<i>Galium aparine</i>	Cleavers
* <i>Sherardia arvensis</i>	Field madder

Ruscaceae

<i>Maianthemum stellatum</i>	Star-flowered lily-of-the-valley
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Salicaceae

<i>Salix lasiolepis</i>	Arroyo willow
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Saxifragaceae

<i>Heuchera micrantha</i>	Crevice alumroot
<i>Tellima grandiflora</i>	Fringe cups

Scrophulariaceae

<i>Scrophularia californica</i>	California bee plant
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Urticaceae

<i>Urtica dioica</i>	Stinging nettle
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APPENDIX D

DATABASE SEARCH RESULTS



Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Half Moon Bay (3712244) OR Montara Mountain (3712254) OR San Mateo (3712253) OR Woodside (3712243) OR La Honda (3712233) OR San Gregorio (3712234))
 AND Taxonomic Group IS (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Acanthomintha duttonii</i> San Mateo thorn-mint	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	170 600	5 S:5	0	1	0	1	2	1	4	1	3	1	1
<i>Agrostis blasdalei</i> Blasdale's bent grass	G2G3 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCSC-UC Santa Cruz	50 50	62 S:1	0	0	0	1	0	0	0	1	1	0	0
<i>Allium peninsulare var. franciscanum</i> Franciscan onion	G5T2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	20 1,025	25 S:15	2	6	1	0	0	6	4	11	15	0	0
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley SB_UCSC-UC Santa Cruz	220 475	93 S:4	0	2	1	0	0	1	1	3	4	0	0
<i>Arctostaphylos andersonii</i> Anderson's manzanita	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	950 1,622	64 S:3	0	0	0	2	0	1	1	2	3	0	0
<i>Arctostaphylos montaraensis</i> Montara manzanita	G1 S1	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	1,000 1,500	4 S:3	2	0	1	0	0	0	2	1	3	0	0
<i>Arctostaphylos regismontana</i> Kings Mountain manzanita	G2 S2	None None	Rare Plant Rank - 1B.2 SB_UCSC-UC Santa Cruz	586 2,100	17 S:15	1	3	3	3	0	5	7	8	15	0	0



Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database



Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i> coastal marsh milk-vetch	G2T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	10 500	24 S:9	0	5	1	0	0	3	4	5	9	0	0
<i>Centromadia parryi</i> ssp. <i>parryi</i> pappose tarplant	G3T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	10 23	39 S:2	0	0	0	1	0	1	1	1	2	0	0
<i>Chloropyron maritimum</i> ssp. <i>palustre</i> Point Reyes salty bird's-beak	G4?T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	5 5	80 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Chorizanthe cuspidata</i> var. <i>cuspidata</i> San Francisco Bay spineflower	G2T1 S1	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden		17 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Cirsium andrewsii</i> Franciscan thistle	G3 S3	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	200 450	31 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Cirsium fontinale</i> var. <i>fontinale</i> fountain thistle	G2T1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	400 600	5 S:3	0	1	1	0	1	0	2	1	2	1	0
<i>Collinsia multicolor</i> San Francisco collinsia	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	100 700	36 S:11	0	5	0	0	0	6	3	8	11	0	0



Summary Table Report
California Department of Fish and Wildlife
California Natural Diversity Database



Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Dirca occidentalis</i> western leatherwood	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	255 1,320	90 S:30	8	7	2	0	0	13	4	26	30	0	0
<i>Eriophyllum latilobum</i> San Mateo woolly sunflower	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	100 900	8 S:7	1	2	1	0	1	2	1	6	6	1	0
<i>Fissidens pauperculus</i> minute pocket moss	G3? S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	250 250	22 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Fritillaria biflora var. ineziana</i> Hillsborough chocolate lily	G3G4T1 S1	None None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley SB_USDA-US Dept of Agriculture	550 550	2 S:2	0	1	0	0	0	1	1	1	2	0	0
<i>Fritillaria liliacea</i> fragrant fritillary	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	295 800	82 S:7	0	5	0	0	0	2	3	4	7	0	0
<i>Grindelia hirsutula var. maritima</i> San Francisco gumplant	G5T1Q S1	None None	Rare Plant Rank - 3.2 SB_UCSC-UC Santa Cruz	200 200	15 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Hesperevax sparsiflora var. brevifolia</i> short-leaved evax	G4T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	400 400	72 S:1	0	0	0	0	0	1	1	0	1	0	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Hesperolinon congestum</i> Marin western flax	G1 S1	Threatened Threatened	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	200 700	27 S:9	0	5	2	0	2	0	3	6	7	2	0
<i>Horkelia cuneata var. sericea</i> Kellogg's horkelia	G4T1? S1?	None None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz USFS_S-Sensitive	600 600	58 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Horkelia marinensis</i> Point Reyes horkelia	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	300 300	36 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Hypogymnia schizidiata</i> island tube lichen	G2G3 S2	None None	Rare Plant Rank - 1B.3	1,290 1,780	10 S:3	2	0	0	0	0	1	0	3	3	0	0
<i>Lasthenia californica ssp. macrantha</i> perennial goldfields	G3T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	40 350	59 S:4	0	1	1	1	0	1	0	4	4	0	0
<i>Leptosiphon croceus</i> coast yellow leptosiphon	G1 S1	None Endangered	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	50 50	1 S:1	0	0	0	1	0	0	0	1	1	0	0
<i>Leptosiphon rosaceus</i> rose leptosiphon	G1 S1	None None	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	70 70	31 S:4	0	1	0	0	2	1	2	2	2	2	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Lessingia arachnoidea</i> Crystal Springs lessingia	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	300 550	11 S:8	2	2	1	0	0	3	2	6	8	0	0
<i>Limnanthes douglasii ssp. ornduffii</i> Ornduff's meadowfoam	G4T1 S1	None None	Rare Plant Rank - 1B.1 SB_UCSC-UC Santa Cruz	30 50	2 S:2	0	0	0	0	1	1	0	2	1	1	0
<i>Malacothamnus arcuatus</i> arcuate bush-mallow	G2Q S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	10 851	34 S:13	0	1	1	1	1	9	5	8	12	0	1
<i>Microseris paludosa</i> marsh microseris	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden SB_UCSC-UC Santa Cruz	40 40	38 S:1	0	0	0	0	1	0	1	0	0	0	1
<i>Monolopia gracilens</i> woodland woollythreads	G3 S3	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	640 675	68 S:6	0	1	0	0	0	5	3	3	6	0	0
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	500 520	14 S:3	1	0	0	0	1	1	2	1	2	0	1
<i>Plagiobothrys chorisianus var. chorisianus</i> Choris' popcornflower	G3T1Q S1	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCSC-UC Santa Cruz	35 1,250	42 S:18	1	9	4	0	0	4	3	15	18	0	0
<i>Polemonium carneum</i> Oregon polemonium	G3G4 S2	None None	Rare Plant Rank - 2B.2		16 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Potentilla hickmanii</i> Hickman's cinquefoil	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_UCBG-UC Botanical Garden at Berkeley	25 240	4 S:2	0	1	0	0	1	0	1	1	1	0	1



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Senecio aphanactis</i> chaparral ragwort	G3 S2	None None	Rare Plant Rank - 2B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	640 640	98 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Silene scouleri ssp. scouleri</i> Scouler's catchfly	G5T4T5 S2S3	None None	Rare Plant Rank - 2B.2	800 1,025	23 S:4	0	0	0	0	0	4	1	3	4	0	0
<i>Silene verecunda ssp. verecunda</i> San Francisco campion	G5T1 S1	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	375 1,500	20 S:3	0	1	0	0	1	1	2	1	2	1	0
<i>Trifolium hydrophilum</i> saline clover	G2 S2	None None	Rare Plant Rank - 1B.2		56 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Triphysaria floribunda</i> San Francisco owl's-clover	G2? S2?	None None	Rare Plant Rank - 1B.2	5 450	50 S:5	0	0	0	0	1	4	5	0	4	0	1
<i>Triquetrella californica</i> coastal triquetrella	G2 S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	1,180 1,180	13 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Usnea longissima</i> Methuselah's beard lichen	G4 S4	None None	Rare Plant Rank - 4.2 BLM_S-Sensitive	590 590	206 S:1	0	0	0	0	1	0	1	0	0	1	0



Summary Table Report

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California Natural Diversity Database



Query Criteria: Quad (Half Moon Bay (3712244) OR Montara Mountain (3712254) OR San Mateo (3712253) OR Woodside (3712243) OR La Honda (3712233) OR San Gregorio (3712234)) AND Taxonomic Group (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects)

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Acipenser medirostris</i> pop. 1 green sturgeon - southern DPS	G2T1 S1	Threatened None	AFS_VU-Vulnerable IUCN_EN-Endangered	0 0	14 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Ambystoma californiense</i> pop. 1 California tiger salamander - central California DPS	G2G3T3 S3	Threatened Threatened	CDFW_WL-Watch List IUCN_VU-Vulnerable	400 400	1271 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Aneides niger</i> Santa Cruz black salamander	G3 S3	None None	CDFW_SSC-Species of Special Concern	534 1,487	78 S:3	0	0	0	0	0	3	2	1	3	0	0
<i>Antrozous pallidus</i> pallid bat	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	40 420	420 S:4	0	0	0	0	0	4	4	0	4	0	0
<i>Ardea herodias</i> great blue heron	G5 S4	None None	CDF_S-Sensitive IUCN_LC-Least Concern	5 5	156 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Athene cunicularia</i> burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	5 842	2011 S:3	0	1	0	0	0	2	0	3	3	0	0
<i>Bombus caliginosus</i> obscure bumble bee	G2G3 S1S2	None None	IUCN_VU-Vulnerable	40 500	181 S:6	0	0	0	0	0	6	6	0	6	0	0
<i>Bombus occidentalis</i> western bumble bee	G3 S1	None Candidate Endangered	IUCN_VU-Vulnerable USFS_S-Sensitive	40 100	306 S:5	0	0	0	0	0	5	5	0	5	0	0
<i>Brachyramphus marmoratus</i> marbled murrelet	G3 S2	Threatened Endangered	CDF_S-Sensitive IUCN_EN-Endangered NABCI_RWL-Red Watch List	200 800	110 S:6	0	0	0	0	0	6	3	3	6	0	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Calicina minor</i> Edgewood blind harvestman	G1 S1	None None		400 560	2 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Callophrys mossii bayensis</i> San Bruno elfin butterfly	G4T1 S2	Endangered None		600 1,882	6 S:4	2	0	0	0	0	2	0	4	4	0	0
<i>Charadrius nivosus nivosus</i> western snowy plover	G3T3 S3	Threatened None	CDFW_SSC-Species of Special Concern NABCI_RWL-Red Watch List	10 17	138 S:3	1	0	0	0	0	2	2	1	3	0	0
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	190 2,170	635 S:7	0	0	0	1	0	6	2	5	7	0	0
<i>Danaus plexippus plexippus pop. 1</i> monarch - California overwintering population	G4T1T2 S2	Candidate None	IUCN_EN-Endangered USFS_S-Sensitive	40 150	388 S:5	0	1	1	0	2	1	5	0	3	2	0
<i>Dicamptodon ensatus</i> California giant salamander	G2G3 S2S3	None None	CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	300 1,400	234 S:11	1	2	0	0	0	8	8	3	11	0	0
<i>Dipodomys venustus venustus</i> Santa Cruz kangaroo rat	G4T1 S1	None None		42 42	29 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Emys marmorata</i> western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	21 949	1421 S:12	1	10	1	0	0	0	0	12	12	0	0
<i>Eucyclogobius newberryi</i> tidewater goby	G3 S3	Endangered None	AFS_EN-Endangered IUCN_NT-Near Threatened	15 20	127 S:2	0	1	0	0	0	1	2	0	2	0	0
<i>Eumetopias jubatus</i> Steller sea lion	G3 S2	Delisted None	IUCN_NT-Near Threatened MMC_SSC-Species of Special Concern	15 15	38 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Euphydryas editha bayensis</i> Bay checkerspot butterfly	G5T1 S1	Threatened None		300 640	30 S:4	0	1	0	0	3	0	3	1	1	2	1
<i>Falco columbarius</i> merlin	G5 S3S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	65 65	37 S:1	0	1	0	0	0	0	0	1	1	0	0



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Falco peregrinus anatum</i> American peregrine falcon	G4T4 S3S4	Delisted Delisted	CDF_S-Sensitive CDFW_FP-Fully Protected	5 5	73 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Geothlypis trichas sinuosa</i> saltmarsh common yellowthroat	G5T3 S3	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	10 480	112 S:12	1	2	2	0	0	7	12	0	12	0	0
<i>Hydrochara rickseckeri</i> Ricksecker's water scavenger beetle	G2? S2?	None None		35 280	13 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Icaricia icarioides missionensis</i> Mission blue butterfly	G5T1 S2	Endangered None		500 700	14 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Ischnura gemina</i> San Francisco forktail damselfly	G2 S2	None None	IUCN_EN-Endangered	26 75	7 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Lasiurus cinereus</i> hoary bat	G3G4 S4	None None	IUCN_LC-Least Concern		238 S:6	0	0	0	0	0	6	6	0	6	0	0
<i>Laterallus jamaicensis coturniculus</i> California black rail	G3T1 S1	None Threatened	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_EN-Endangered NABCI_RWL-Red Watch List	5 5	303 S:1	0	0	0	1	0	0	1	0	1	0	0
<i>Lichnanthe ursina</i> bumblebee scarab beetle	G2 S2	None None		15 15	8 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Melospiza melodia pusillula</i> Alameda song sparrow	G5T2T3 S2S3	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	10 42	38 S:3	0	0	0	0	0	3	3	0	3	0	0
<i>Microcina edgewoodensis</i> Edgewood Park micro-blind harvestman	G1 S1	None None		600 600	1 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Myotis thysanodes</i> fringed myotis	G4 S3	None None	BLM_S-Sensitive IUCN_LC-Least Concern USFS_S-Sensitive	500 500	86 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Nannopterum auritum</i> double-crested cormorant	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	30 30	39 S:1	0	0	0	0	0	1	1	0	1	0	0



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<i>Neotoma fuscipes annectens</i> San Francisco dusky-footed woodrat	G5T2T3 S2S3	None None	CDFW_SSC-Species of Special Concern	270 522	42 S:7	0	2	0	0	0	5	1	6	7	0	0
<i>Nyctinomops macrotis</i> big free-tailed bat	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	150 150	32 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Oncorhynchus mykiss irideus pop. 8</i> steelhead - central California coast DPS	G5T2T3Q S3	Threatened None	AFS_TH-Threatened	100 550	44 S:6	0	2	0	0	0	4	6	0	6	0	0
<i>Pomatiopsis californica</i> Pacific walker	G1 S1	None None	IUCN_DD-Data Deficient	20 20	4 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	G3T1 S1	Endangered Endangered	CDFW_FP-Fully Protected NABCI_RWL-Red Watch List	0 15	99 S:4	0	1	1	0	1	1	2	2	3	1	0
<i>Rana boylei pop. 4</i> foothill yellow-legged frog - central coast DPS	G3T2 S2	Proposed Threatened Endangered	BLM_S-Sensitive USFS_S-Sensitive	192 878	178 S:8	0	1	0	0	2	5	8	0	6	0	2
<i>Rana draytonii</i> California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	6 4,005	1683 S:112	16	36	20	13	1	26	16	96	111	1	0
<i>Reithrodontomys raviventris</i> salt-marsh harvest mouse	G1G2 S1S2	Endangered Endangered	CDFW_FP-Fully Protected IUCN_EN-Endangered	2 2	144 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Riparia riparia</i> bank swallow	G5 S2	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern		299 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Speyeria zerene myrtleae</i> Myrtle's silverspot butterfly	G5T1 S1	Endangered None		20 60	17 S:3	0	0	0	0	3	0	3	0	0	0	3
<i>Spirinchus thaleichthys</i> longfin smelt	G5 S1	Candidate Threatened	IUCN_LC-Least Concern	0 20	46 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Taxidea taxus</i> American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	187 1,599	594 S:9	0	0	0	0	0	9	1	8	9	0	0
<i>Thamnophis sirtalis tetrataenia</i> San Francisco gartersnake	G5T2Q S2	Endangered Endangered	CDFW_FP-Fully Protected	5 1,355	66 S:37	5	11	4	0	1	16	21	16	36	0	1



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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Tryonia imitator</i> mimic tryonia (=California brackishwater snail)	G2 S2	None None	IUCN_DD-Data Deficient	3 40	39 S:2	0	1	0	0	0	1	1	1	2	0	0

CNPS Rare Plant Inventory



Search Results

67 matches found. Click on scientific name for details

Search Criteria: Quad is one of [3712244:3712254:3712253:3712243:3712233:3712234]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK
<i>Acanthomintha duttonii</i>	San Mateo thorn-mint	Lamiaceae	annual herb	Apr-Jun	FE	CE	G1	S1	1B.1
<i>Agrostis blasdalei</i>	Blasdale's bent grass	Poaceae	perennial rhizomatous herb	May-Jul	None	None	G2G3	S2	1B.2
<i>Allium peninsulare</i> var. <i>franciscanum</i>	Franciscan onion	Alliaceae	perennial bulbiferous herb	(Apr)May-Jun	None	None	G5T2	S2	1B.2
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	None	None	G3	S3	1B.2
<i>Arabis blepharophylla</i>	coast rockcress	Brassicaceae	perennial herb	Feb-May	None	None	G4	S4	4.3
<i>Arctostaphylos andersonii</i>	Anderson's manzanita	Ericaceae	perennial evergreen shrub	Nov-May	None	None	G2	S2	1B.2
<i>Arctostaphylos montaraensis</i>	Montara manzanita	Ericaceae	perennial evergreen shrub	Jan-Mar	None	None	G1	S1	1B.2
<i>Arctostaphylos regismontana</i>	Kings Mountain manzanita	Ericaceae	perennial evergreen shrub	Dec-Apr	None	None	G2	S2	1B.2
<i>Astragalus nuttallii</i> var. <i>nuttallii</i>	ocean bluff milk-vetch	Fabaceae	perennial herb	Jan-Nov	None	None	G4T4	S4	4.2
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	coastal marsh milk-vetch	Fabaceae	perennial herb	(Apr)Jun-Oct	None	None	G2T2	S2	1B.2
<i>Calandrinia breweri</i>	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun	None	None	G4	S4	4.2
<i>Calochortus umbellatus</i>	Oakland star-tulip	Liliaceae	perennial bulbiferous herb	Mar-May	None	None	G3?	S3?	4.2
<i>Calochortus uniflorus</i>	pink star-tulip	Liliaceae	perennial bulbiferous herb	Apr-Jun	None	None	G4	S4	4.2
<i>Castilleja ambigua</i> var. <i>ambigua</i>	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	None	None	G4T4	S3S4	4.2
<i>Centromadia parryi</i> ssp. <i>parryi</i>	pappose tarplant	Asteraceae	annual herb	May-Nov	None	None	G3T2	S2	1B.2
<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	Point Reyes salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	None	None	G4?T2	S2	1B.2
<i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	San Francisco Bay spineflower	Polygonaceae	annual herb	Apr-Jul(Aug)	None	None	G2T1	S1	1B.2
<i>Cirsium andrewsii</i>	Franciscan thistle	Asteraceae	perennial herb	Mar-Jul	None	None	G3	S3	1B.2

<u><i>Cirsium fontinale</i> var. <i>fontinale</i></u>	fountain thistle	Asteraceae	perennial herb	(Apr)May-Oct	FE	CE	G2T1	S1	1B.1
<u><i>Collinsia multicolor</i></u>	San Francisco collinsia	Plantaginaceae	annual herb	(Feb)Mar-May	None	None	G2	S2	1B.2
<u><i>Cypripedium fasciculatum</i></u>	clustered lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	None	None	G4	S4	4.2
<u><i>Cypripedium montanum</i></u>	mountain lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	None	None	G4G5	S4	4.2
<u><i>Dirca occidentalis</i></u>	western leatherwood	Thymelaeaceae	perennial deciduous shrub	Jan-Mar(Apr)	None	None	G2	S2	1B.2
<u><i>Elymus californicus</i></u>	California bottle-brush grass	Poaceae	perennial herb	May-Aug(Nov)	None	None	G4	S4	4.3
<u><i>Eriophyllum latilobum</i></u>	San Mateo woolly sunflower	Asteraceae	perennial herb	May-Jun	FE	CE	G1	S1	1B.1
<u><i>Eryngium jepsonii</i></u>	Jepson's coyote-thistle	Apiaceae	perennial herb	Apr-Aug	None	None	G2	S2	1B.2
<u><i>Erysimum franciscanum</i></u>	San Francisco wallflower	Brassicaceae	perennial herb	Mar-Jun	None	None	G3	S3	4.2
<u><i>Fissidens pauperculus</i></u>	minute pocket moss	Fissidentaceae	moss		None	None	G3?	S2	1B.2
<u><i>Fritillaria biflora</i> var. <i>ineziana</i></u>	Hillsborough chocolate lily	Liliaceae	perennial bulbiferous herb	Mar-Apr	None	None	G3G4T1	S1	1B.1
<u><i>Fritillaria lanceolata</i> var. <i>tristulis</i></u>	Marin checker lily	Liliaceae	perennial bulbiferous herb	Feb-May	None	None	G5T2	S2	1B.1
<u><i>Fritillaria liliacea</i></u>	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	G2	S2	1B.2
<u><i>Grindelia hirsutula</i> var. <i>maritima</i></u>	San Francisco gumplant	Asteraceae	perennial herb	Jun-Sep	None	None	G5T1Q	S1	3.2
<u><i>Hesperevax sparsiflora</i> var. <i>brevifolia</i></u>	short-leaved evax	Asteraceae	annual herb	Mar-Jun	None	None	G4T3	S3	1B.2
<u><i>Hesperolinon congestum</i></u>	Marin western flax	Linaceae	annual herb	Apr-Jul	FT	CT	G1	S1	1B.1
<u><i>Horkelia cuneata</i> var. <i>sericea</i></u>	Kellogg's horkelia	Rosaceae	perennial herb	Apr-Sep	None	None	G4T1?	S1?	1B.1
<u><i>Horkelia marinensis</i></u>	Point Reyes horkelia	Rosaceae	perennial herb	May-Sep	None	None	G2	S2	1B.2
<u><i>Hosackia gracilis</i></u>	harlequin lotus	Fabaceae	perennial rhizomatous herb	Mar-Jul	None	None	G3G4	S3	4.2
<u><i>Hypogymnia schizidiata</i></u>	island tube lichen	Parmeliaceae	foliose lichen		None	None	G2G3	S2	1B.3
<u><i>Iris longipetala</i></u>	coast iris	Iridaceae	perennial rhizomatous herb	Mar-May(Jun)	None	None	G3	S3	4.2
<u><i>Lasthenia californica</i> ssp. <i>macrantha</i></u>	perennial goldfields	Asteraceae	perennial herb	Jan-Nov	None	None	G3T2	S2	1B.2
<u><i>Leptosiphon ambiguus</i></u>	serpentine leptosiphon	Polemoniaceae	annual herb	Mar-Jun	None	None	G4	S4	4.2
<u><i>Leptosiphon aureus</i></u>	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2

<u>Leptosiphon croceus</u>	coast yellow leptosiphon	Polemoniaceae	annual herb	Apr-Jun	None	CE	G1	S1	1B.1
<u>Leptosiphon grandiflorus</u>	large-flowered leptosiphon	Polemoniaceae	annual herb	Apr-Aug	None	None	G3G4	S3S4	4.2
<u>Leptosiphon latisectus</u>	broad-lobed leptosiphon	Polemoniaceae	annual herb	Apr-Jun	None	None	G4	S4	4.3
<u>Leptosiphon rosaceus</u>	rose leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G1	S1	1B.1
<u>Lessingia arachnoidea</u>	Crystal Springs lessingia	Asteraceae	annual herb	Jul-Oct	None	None	G2	S2	1B.2
<u>Lessingia hololeuca</u>	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	None	None	G2G3	S2S3	3
<u>Limnanthes douglasii ssp. ornduffii</u>	Ornduff's meadowfoam	Limnanthaceae	annual herb	Nov-May	None	None	G4T1	S1	1B.1
<u>Lupinus arboreus var. eximius</u>	San Mateo tree lupine	Fabaceae	perennial evergreen shrub	Apr-Jul	None	None	G2Q	S2	3.2
<u>Malacothamnus arcuatus</u>	arcuate bush-mallow	Malvaceae	perennial deciduous shrub	Apr-Sep	None	None	G2Q	S2	1B.2
<u>Microseris paludosa</u>	marsh microseris	Asteraceae	perennial herb	Apr-Jun(Jul)	None	None	G2	S2	1B.2
<u>Monolopia gracilens</u>	woodland woollythreads	Asteraceae	annual herb	(Feb)Mar-Jul	None	None	G3	S3	1B.2
<u>Pentachaeta bellidiflora</u>	white-rayed pentachaeta	Asteraceae	annual herb	Mar-May	FE	CE	G1	S1	1B.1
<u>Perideridia gairdneri ssp. gairdneri</u>	Gairdner's yampah	Apiaceae	perennial herb	Jun-Oct	None	None	G5T3T4	S3S4	4.2
<u>Plagiobothrys chorisianus var. chorisianus</u>	Choris' popcornflower	Boraginaceae	annual herb	Mar-Jun	None	None	G3T1Q	S1	1B.2
<u>Plagiobothrys chorisianus var. hickmanii</u>	Hickman's popcornflower	Boraginaceae	annual herb	Apr-Jun	None	None	G3T3Q	S3	4.2
<u>Polemonium carneum</u>	Oregon polemonium	Polemoniaceae	perennial herb	Apr-Sep	None	None	G3G4	S2	2B.2
<u>Potentilla hickmanii</u>	Hickman's cinquefoil	Rosaceae	perennial herb	Apr-Aug	FE	CE	G1	S1	1B.1
<u>Ranunculus lobbii</u>	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	None	None	G4	S3	4.2
<u>Senecio aphanactis</u>	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	None	None	G3	S2	2B.2
<u>Silene scouleri ssp. scouleri</u>	Scouler's catchfly	Caryophyllaceae	perennial herb	(Mar-May)Jun-Aug(Sep)	None	None	G5T4T5	S2S3	2B.2
<u>Silene verecunda ssp. verecunda</u>	San Francisco champion	Caryophyllaceae	perennial herb	(Feb)Mar-Jul(Aug)	None	None	G5T1	S1	1B.2
<u>Trifolium hydrophilum</u>	saline clover	Fabaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.2
<u>Triphysaria floribunda</u>	San Francisco owl's-clover	Orobanchaceae	annual herb	Apr-Jun	None	None	G2?	S2?	1B.2
<u>Triquetrella californica</u>	coastal triquetrella	Pottiaceae	moss		None	None	G2	S2	1B.2

<u>Usnea longissima</u>	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)	None	None	G4	S4	4.2
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Showing 1 to 67 of 67 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website <https://www.rareplants.cnps.org> [accessed 28 February 2023].

IPaC resource list

We recently ran updates to ensure IPaC is referencing the most current species data. We recommend you update ongoing/open projects; no action is needed on previously submitted/completed projects.

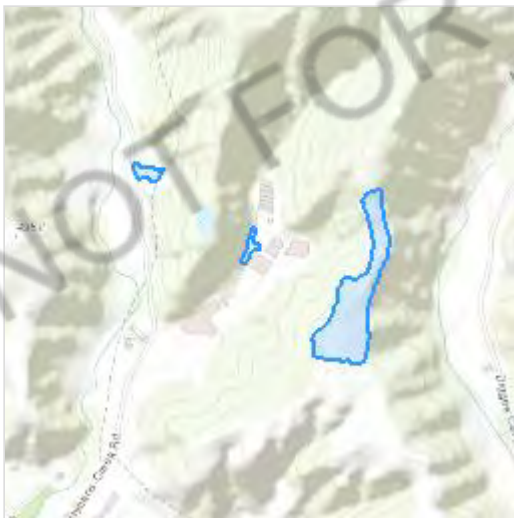
This information is for informational purposes only. It does not constitute an offer of insurance or any other financial product. For more information, please contact your insurance broker.

below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

San Mateo County, California



Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713

Federal Building

2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
<p>California Least Tern <i>Sterna antillarum browni</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104</p>	Endangered
<p>Marbled Murrelet <i>Brachyramphus marmoratus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4467</p>	Threatened
<p>Western Snowy Plover <i>Charadrius nivosus nivosus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8035</p>	Threatened

Reptiles

NAME	STATUS
<p>Green Sea Turtle <i>Chelonia mydas</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6199</p>	Threatened
<p>San Francisco Garter Snake <i>Thamnophis sirtalis tetrataenia</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5956</p>	Endangered

Amphibians

NAME	STATUS
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California Red-legged Frog *Rana draytonii*

Threatened

Wherever found

There is **final** critical habitat for this species. Your location overlaps the critical habitat.

<https://ecos.fws.gov/ecp/species/2891>

Foothill Yellow-legged Frog *Rana boylei*

Proposed Threatened

No critical habitat has been designated for this species.

Fishes

NAME

STATUS

Tidewater Goby *Eucyclogobius newberryi*

Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/57>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus*

Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME

TYPE

California Red-legged Frog *Rana draytonii*

Final

<https://ecos.fws.gov/ecp/species/2891#crithab>

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<p>Allen's Hummingbird <i>Selasphorus sasin</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9637</p>	Breeds Feb 1 to Jul 15

<p>Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p>	Breeds Jan 1 to Aug 31
<p>Belding's Savannah Sparrow <i>Passerculus sandwichensis beldingi</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8</p>	Breeds Apr 1 to Aug 15
<p>Black Oystercatcher <i>Haematopus bachmani</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591</p>	Breeds Apr 15 to Oct 31
<p>Black Skimmer <i>Rynchops niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234</p>	Breeds May 20 to Sep 15
<p>Black Swift <i>Cypseloides niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878</p>	Breeds Jun 15 to Sep 10
<p>Black Turnstone <i>Arenaria melanocephala</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds elsewhere
<p>Black-chinned Sparrow <i>Spizella atrogularis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9447</p>	Breeds Apr 15 to Jul 31
<p>Bullock's Oriole <i>Icterus bullockii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds Mar 21 to Jul 25

California Gull <i>Larus californicus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
California Thrasher <i>Toxostoma redivivum</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
Common Yellowthroat <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lawrence's Goldfinch <i>Carduelis lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Nuttall's Woodpecker <i>Picoides nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20

<p>Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656</p>	Breeds Mar 15 to Jul 15
<p>Olive-sided Flycatcher <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914</p>	Breeds May 20 to Aug 31
<p>Scripps's Murrelet <i>Synthliboramphus scrippsi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Feb 20 to Jul 31
<p>Short-billed Dowitcher <i>Limnodromus griseus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480</p>	Breeds elsewhere
<p>Tricolored Blackbird <i>Agelaius tricolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910</p>	Breeds Mar 15 to Aug 10
<p>Western Grebe <i>aechmophorus occidentalis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743</p>	Breeds Jun 1 to Aug 31
<p>Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds elsewhere
<p>Wrentit <i>Chamaea fasciata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Mar 15 to Aug 10

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and

understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

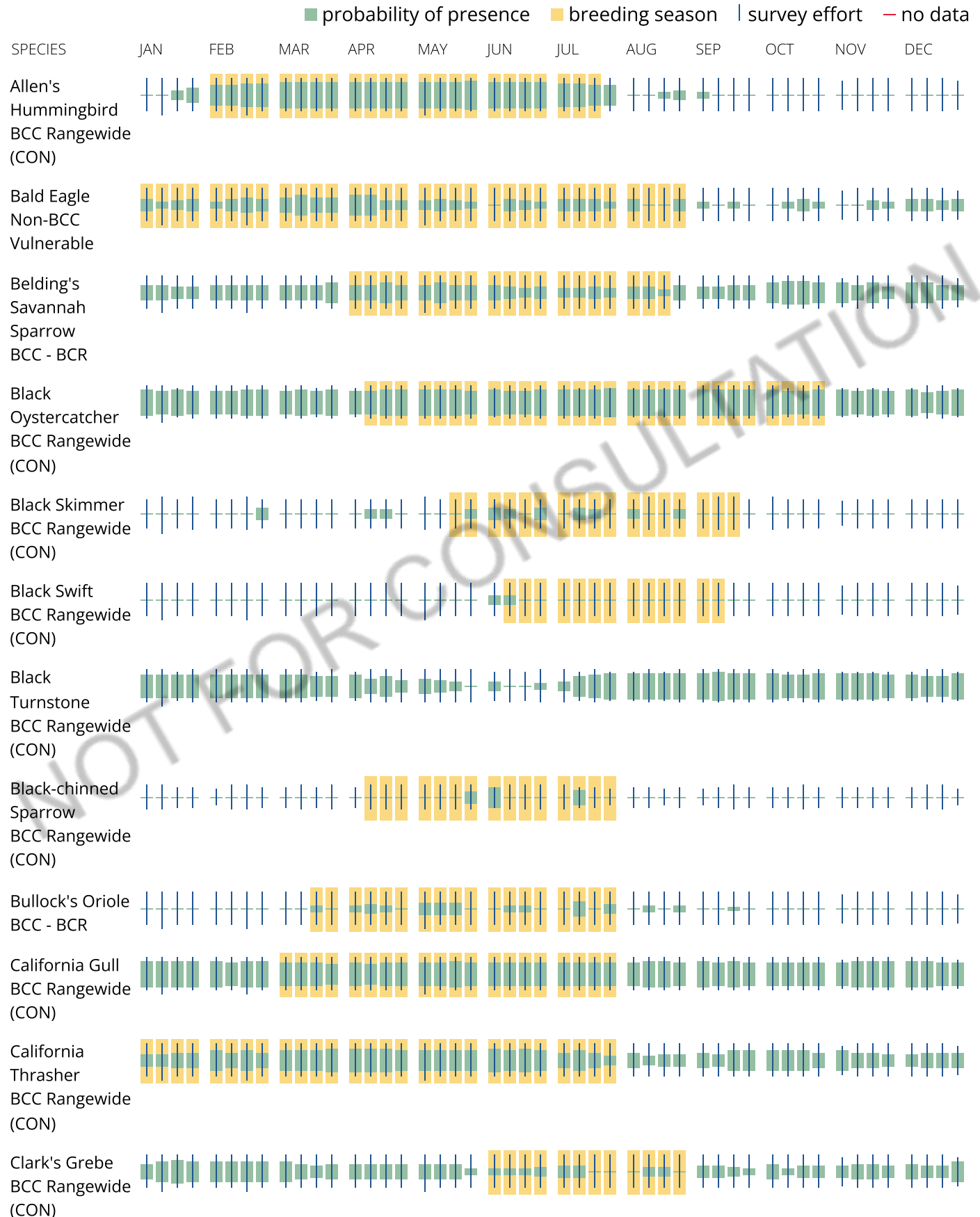
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

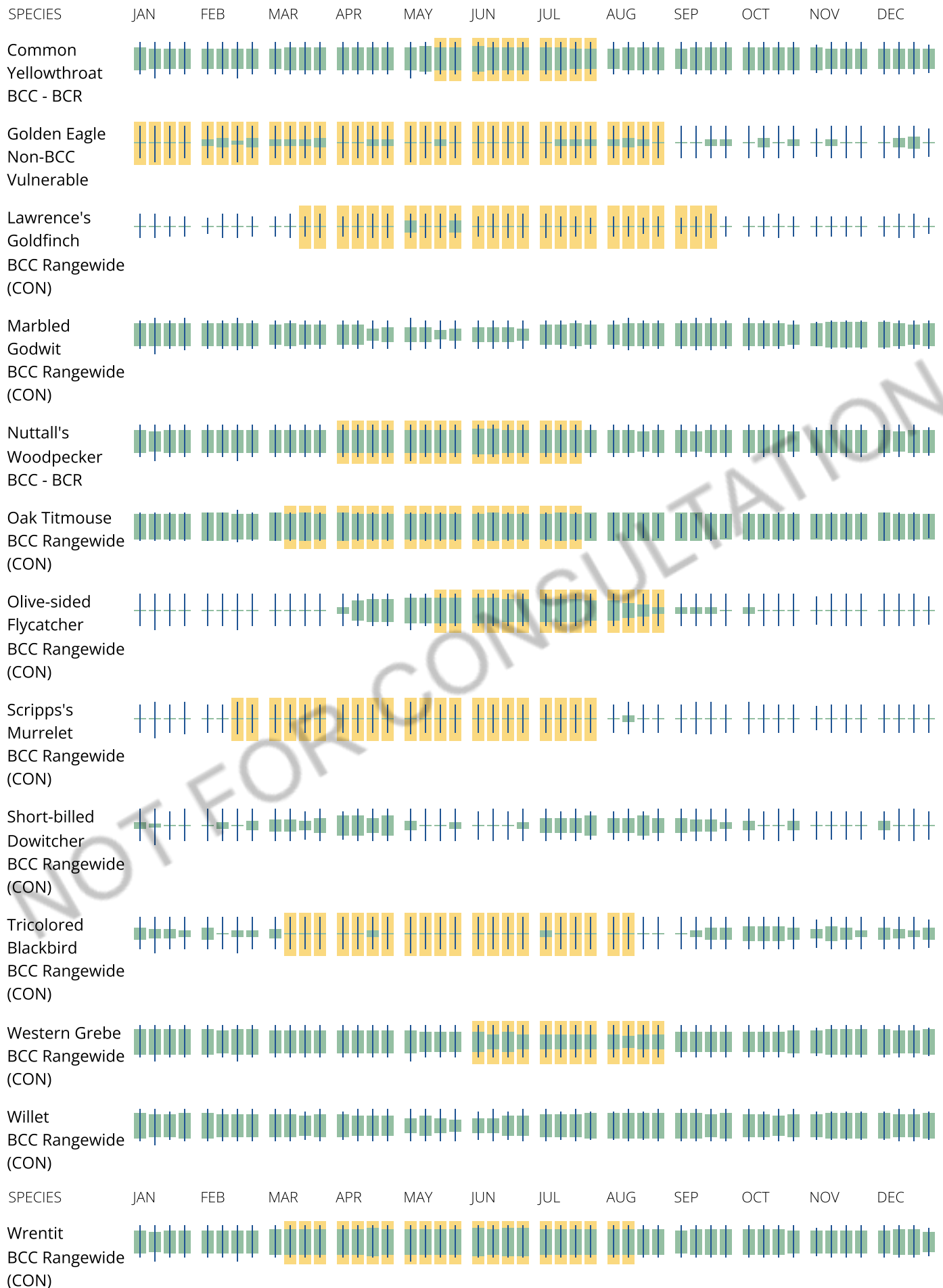
No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn

more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



APPENDIX 12

C.3 AND C.6 DEVELOPMENT REVIEW CHECKLIST

C.3 and C.6 Development Review Checklist

Municipal Regional Stormwater Permit (MRP 3.0)
 Stormwater Controls for Development Projects

Project Information (Enter information only into blue-highlighted cells - other cells are locked.)

I.A Enter Project Data (For "C.3 Regulated Projects," data will be reported in the municipality's stormwater Annual Report.)

Project Name:	Stonewood Resort	Case Number:	
Project Address:	37 Frenchmans Creek Rd, Half Moon Bay, CA 94019	Cross Street:	Cabrillo Hwy
Project APN:	048-320-020	Project Watershed:	Frenchmans Creek Watershed
Applicant Name:	SKRRR LLC	Project Phase No.:	
Applicant Phone:	(626) 321-2119	Applicant Email Address:	ed@halfmoongrow.com

Development Type: (check all that apply)

<input checked="" type="checkbox"/> Small Single-Family Home Project (<10,000 sq. ft. of created and/or replaced impervious surface ¹)	# of units: <input type="text"/>
<input type="checkbox"/> Large Single-Family Home Project (≥10,000 sq. ft. of created and/or replaced impervious surface ¹)	# of units: <input type="text"/>
<input type="checkbox"/> Subdivision - Residential: Two or more lot development ²	# of units: <input type="text"/>
<input type="checkbox"/> Multi-Family Residential	# of units: <input type="text"/>
<input checked="" type="checkbox"/> Commercial	# of units: <input type="text"/>
<input type="checkbox"/> Industrial, Manufacturing	# of units: <input type="text"/>
<input type="checkbox"/> Mixed-Use	# of units: <input type="text"/>
<input type="checkbox"/> New, widened or reconstructed roads related to parcel-based projects ³	# of units: <input type="text"/>
<input type="checkbox"/> Stand-alone pavement maintenance or construction work, or similar work related to parcel-based projects ³	
<input type="checkbox"/> Other redevelopment project as defined by MRP: creating, adding and/or replacing exterior existing impervious surface on a site where past development has occurred.	
<input type="checkbox"/> Institutional: schools, libraries, jails, etc.	
<input checked="" type="checkbox"/> Parks and trails, camp grounds, other recreational	
<input type="checkbox"/> Kennels, Ranches	
<input type="checkbox"/> Other, Please specify	<input type="text"/>

Project Description (Don't include past or future phases)⁴

The project proposes a clubhouse, restaurant, wellness center, 12 villas, 6 cabanas, 3 sport courts, owner operator residence, additional site parking and expansion of the reservoir on the eastern ridge of the property. The project will provide 6 farm labor housing units and reconfiguration of existing onsite agriculture in the eastern valley of the property. The project also proposes a new campground with 12 campsites in the western valley of the property.

I.A.1 Total Project Area: square feet (on and off-site)

I.A.2 Total Area on-site: square feet (on the private property)

I.A.3 Total Area off-site: square feet (frontage or area in Public Right of Way being improved)

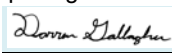
I.A.4 Total Area of land disturbed during construction: square feet
 (Include all project on-site and off-site areas of clearing, grading, excavating and stockpiling)

I.A.5 Site slope: %

I.A.6 Certification:

I certify that the information provided on this form is correct and acknowledge that, should the project exceed the amount of new and/or replaced impervious surface provided in this form, the as-built project may be subject to additional improvements.

Preliminary Calculations Attached Final Calculations Attached Stormwater Control Plan Attached

Name of person completing the form:	Darren Gallagher	Title:	Design Engineer
Signature:		Date:	7/12/2023
Phone Number:	(650) 482-6488	E-mail:	dgallagher@bkf.com

¹ Small and Large Detached Single-Family Homes that are not part of a common plan of development².
² Common Plans of Development (subdivisions or contiguous, commonly owned lots, for the construction of two or more homes developed within 1 year of each other), and/or constructed with shared utilities, are not considered single family home projects by the MRP.
³ Stand-alone roadway or pavement projects, or pavement work that is part of a project, creating or replacing 5,000 sq. ft. or more of impervious surface may be subject to C.3 requirements - both in public and private areas. See the Roads Factsheet at: www.flowstobay.org/newdevelopment
⁴ Project description examples: 5-story office building, industrial warehouse, residential with five 4-story buildings for 200 condominiums, etc. 7/1/23

I.B Is the project a “C.3 Regulated Project” per MRP Provision C.3.b? (Use table below to make determination.)

I.B.1 Enter the amount of Impervious surface Retained, Replaced or Created⁵ by the project (use DMA Table in Worksheet D):

Table I.B.1 Impervious⁶ and Pervious⁶ Surfaces (Match DMA Summary Table in Worksheet D, if applicable)

Impervious Surfaces (IS) (e.g., sidewalks, driveways, parking areas, patios, roads, rooftops, pools, pathways, etc.)	Pre-Project	Post-Project			
	I.B.1.a Existing (Pre-Project) Impervious Surface (sq.ft.)	I.B.1.b Existing Impervious Surface to be Retained ⁵ (sq.ft.)	I.B.1.c Existing Impervious Surface to be Replaced ⁵ (sq.ft.)	I.B.1.d New Impervious Surface to be Created ⁵ (sq.ft.)	I.B.1.e Post-Project Impervious Surface (sq.ft.) (=b+c+d)
On-site area (within the parcel/private site boundaries)	510,000	505,000	-	212,500	717,500
Off-site area (e.g., frontage/other area in Public Right of Way)	-	-	-	-	-
Subtotal:	510,000	505,000	-	212,500	717,500
Total Impervious Surface Replaced and Created: (sum of totals for columns I.B.1.c and I.B.1.d):		I.B.1.f	212,500 sq. ft.		
Pervious Surfaces (PS) (e.g., landscaping, pervious pavement, bioretention areas, parking strips, street trees, etc. - both on-site and off-site)	Existing (Pre-Project) Pervious Surface (sq.ft.)				Post-project Pervious Surface (sq.ft.)
All pervious off-site area (e.g., frontage/Public Right of Way) ⁶	-				-
Landscaping area on-site	6,643,860				6,436,360
Pervious Pavement area on-site	-				-
Green Roof area on-site	-				-
Subtotal:	6,643,860				6,436,360
Total Project Area (should be equal to I.A.1)	7,153,860	50% Rule Calculation			7,153,860
		I.B.1.h	0	%	

I.B.2 Please review and attach additional worksheets as required below using the Total Impervious Surface (IS) Replaced or Created in cell **I.B.1.f** from Table **I.B.1** above and other factors:

	Review Steps	Check One		Attach Worksheet
		Yes	No	
I.B.2.a	Does this project involve any earthwork and/or stockpiling of soil, aggregates etc? If YES, then Check Yes, and Complete Worksheet A. If NO, then Check No, and go to I.B.2.b	<input checked="" type="checkbox"/>	<input type="checkbox"/>	A
I.B.2.b	Is I.B.1.f greater than or equal to 2,500 sq.ft? If YES, then the Project is subject to Provision C.3.i. - complete Worksheets B, C and go to I.B.2.c. If NO, go to I.B.2.i - or ask municipal staff for Small Project Checklist.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	B, C
I.B.2.c	Does the 50% rule apply to the project? Is I.B.1.h 50% or more? If YES, site design, source control and treatment requirements apply to the entire on-site area. Continue to I.B.2.d If NO, these requirements apply only to the impervious surface created and/or replaced. Continue to I.B.2.d	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
I.B.2.d	Is this project a Roadway Project and is I.B.1.f greater than or equal to 5,000 sq.ft? If YES, project may be C.3 Regulated Project. See the Roadways Fact Sheet at: www.flowstobay.org/newdevelopment If NO, go to I.B.2.e	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
I.B.2.e	Is I.B.1.f greater than or equal to 5,000 sq.ft? (Or 10,000 sq.ft. for a Large Single-Family Home?) If YES, project is a C.3 Regulated Project - complete Worksheet D. Then continue to I.B.2.f. If NO, then skip to I.B.2.g. - or ask municipal staff for Small Project Checklist.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	D
I.B.2.f	Is I.B.1.f greater than or equal to 43,560 sq.ft. (i.e., one acre)? If YES, project may be subject to Hydromodification Management requirements - complete Worksheet E then go to I.B.2.g. If NO, then go to I.B.2.g.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	E
I.B.2.g	Is I.A.4 greater than or equal to 43,560 sq.ft. (i.e., one acre)? If YES, check box, obtain coverage under CA Construction General Permit & submit Notice of Intent to municipality- go to I.B.2.h. If NO, then go to I.B.2.h. For more information see: www.swrcb.ca.gov/water_issues/programs/stormwater/construction.shtml	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
I.B.2.h	Is this a Special Project or does it have the potential to be a Special Project? If YES, complete Worksheet F - then continue to I.B.2.i. If NO, go to I.B.2.i.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	F
I.B.2.i	Is this project a High Priority Site? (Determined by the Municipality. High Priority Sites can include those located within 100 ft. of a sensitive habitat, an Area of Special Biological Significance, a body of water, or on sites disturbing >=5,000 sq.ft. with slopes >=15% (see I.A.5) [or per municipal criteria/map.] Subject to monthly inspections from Oct 1 to April 30.) If YES, complete section G-2 on Worksheet G - then continue to I.B.2.j. and complete the Certification in Section I.A.6 If NO, then go to I.B.2.j and complete the Certification in Section I.A.6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	G
I.B.2.j	For Municipal Staff Use Only: Are you using Alternative Certification for the project review? If YES, then fill out section G-1 on Worksheet G. Fill out other sections of Worksheet G as appropriate. See cell I.B.1.g above - Is the project installing 3,000 square feet or more of pervious pavement? If YES, then fill out section G-3 on Worksheet G. Add to Municipal Inspection Lists (C.3 and C.3.h)	<input type="checkbox"/>	<input type="checkbox"/>	G

⁵ “Retained” means to leave existing impervious surfaces in place; “Replaced” means to install new impervious surface where existing impervious surface is removed anywhere on the same site; and “Created” means the amount of new impervious surface being proposed which exceeds the total amount of existing impervious surface at the site.

⁶ Per the MRP, pavement that meets the following definition of pervious pavement is NOT an impervious surface. Pervious pavement is defined as pavement that stores and infiltrates rainfall at a rate equal to immediately surrounding unpaved, landscaped areas, or that stores and infiltrates the rainfall runoff volume described in Provision C.3. Gravel pavement is not pervious unless it is constructed using pervious pavement system designs or runoff flows to adjacent landscaping. Pervious off-site areas include landscaped areas such as parking strips and street trees; off-site pervious pavement includes pervious concrete gutters and interlocking permeable concrete paver sidewalks, etc. 7/1/23

Worksheet A

C.6 – Construction Stormwater BMPs

Identify Plan sheet showing the appropriate construction Best Management Practices (BMPs) used on this project:

(Applies to all projects with earthwork)

Yes	Plan Sheet	Best Management Practice (BMP)
<input checked="" type="checkbox"/>		Control and prevent the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, rinse water from architectural copper, and non-stormwater discharges to storm drains and watercourses.
<input checked="" type="checkbox"/>		Store, handle, and dispose of construction materials/wastes properly to prevent contact with stormwater.
<input checked="" type="checkbox"/>		Do not clean, fuel, or maintain vehicles on-site, except in a designated area where wash water is contained and treated.
<input checked="" type="checkbox"/>		Train and provide instruction to all employees/subcontractors re: construction BMPs.
<input checked="" type="checkbox"/>		Protect all storm drain inlets in vicinity of site using sediment controls such as berms, fiber rolls, or filters.
<input checked="" type="checkbox"/>		Limit construction access routes and stabilize designated access points.
<input checked="" type="checkbox"/>		Attach the San Mateo Countywide Water Pollution Prevention Program's construction BMP plan sheet to project plans and require contractor to implement the applicable BMPs on the plan sheet.
<input checked="" type="checkbox"/>		Use temporary erosion controls to stabilize all denuded areas until permanent erosion controls are established.
<input checked="" type="checkbox"/>		Delineate with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
<input checked="" type="checkbox"/>		Provide notes, specifications, or attachments describing the following: <ul style="list-style-type: none"> ■ Construction, operation and maintenance of erosion and sediment controls, include inspection frequency; ■ Methods and schedule for grading, excavation, filling, clearing of vegetation, and storage and disposal of excavated or cleared material; ■ Specifications for vegetative cover & mulch, include methods and schedules for planting and fertilization; ■ Provisions for temporary and/or permanent irrigation.
<input checked="" type="checkbox"/>		Perform clearing and earth moving activities only during dry weather.
<input checked="" type="checkbox"/>		Use sediment controls or filtration to remove sediment when dewatering and obtain all necessary permits.
<input checked="" type="checkbox"/>		Trap sediment on-site, using BMPs such as sediment basins or traps, earthen dikes or berms, silt fences, check dams, soil blankets or mats, covers for soil stock piles, etc.
<input checked="" type="checkbox"/>		Divert on-site runoff around exposed areas; divert off-site runoff around the site (e.g., swales and dikes).
<input checked="" type="checkbox"/>		Protect adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

Worksheet B

C.3 – Source Controls

Select appropriate source controls and identify the detail/plan sheet where these elements are shown.

Yes	Detail/Plan Sheet No.	Features that require source control	Source Control Measures (Refer to Local Source Control List for detailed requirements)
<input checked="" type="checkbox"/>		Storm Drain	Mark on-site inlets with the words “No Dumping! Flows to Bay” or equivalent.
<input checked="" type="checkbox"/>		Floor Drains	Plumb interior floor drains to sanitary sewer [or prohibit].
<input type="checkbox"/>		Parking garage	Plumb interior parking garage floor drains to sanitary sewer. ⁸
<input checked="" type="checkbox"/>		Landscaping	<ul style="list-style-type: none"> ■ Retain existing vegetation as practicable. ■ Follow ReScope (www.rescapeca.org) principles. Select diverse species appropriate to the site. Include plants that are pest- and/or disease-resistant, drought-tolerant, and/or attract beneficial insects. ■ Minimize use of pesticides and quick-release fertilizers. ■ Use efficient irrigation system; design to minimize runoff.
<input type="checkbox"/>		Pool/Spa/Fountain	Provide connection to the sanitary sewer to facilitate draining. ⁸
<input checked="" type="checkbox"/>		Food Service Equipment (non-residential)	Provide sink or other area for equipment cleaning, which is: <ul style="list-style-type: none"> ■ Connected to a grease interceptor prior to sanitary sewer discharge.⁸ ■ Large enough for the largest mat or piece of equipment to be cleaned. ■ Indoors or in an outdoor roofed area designed to prevent stormwater run-on and run-off, and signed to require equipment washing in this area.
<input checked="" type="checkbox"/>		Refuse Areas	<ul style="list-style-type: none"> ■ Provide a roofed and enclosed area for dumpsters, recycling containers, etc., designed to prevent stormwater run-on and runoff. ■ Connect any drains in or beneath dumpsters, compactors, and tallow bin areas serving food service facilities to the sanitary sewer.⁸ ■ For more information, see the New Development Projects Litter Reduction Fact Sheet at: https://www.flowstobay.org/wp-content/uploads/2021/06/New-Dev-Litter-Reduction-Fact-Sheet-060421.pdf
<input type="checkbox"/>		Outdoor Process Activities ⁹	Perform process activities either indoors or in roofed outdoor area, designed to prevent stormwater run-on and runoff, and to drain to the sanitary sewer. ⁸
<input type="checkbox"/>		Outdoor Equipment/Materials Storage	<ul style="list-style-type: none"> ■ Cover the area or design to avoid pollutant contact with stormwater runoff. ■ Locate area only on paved and contained areas. ■ Roof storage areas that will contain non-hazardous liquids, drain to sanitary sewer⁸, and contain by berms or similar.
<input type="checkbox"/>		Vehicle/ Equipment Cleaning	<ul style="list-style-type: none"> ■ Roofed, pave and berm wash area to prevent stormwater run-on and runoff, plumb to the sanitary sewer⁸, and sign as a designated wash area. ■ Commercial car wash facilities shall discharge to the sanitary sewer.⁸
<input type="checkbox"/>		Vehicle/ Equipment Repair and Maintenance	<ul style="list-style-type: none"> ■ Designate repair/maintenance area indoors, or an outdoors area designed to prevent stormwater run-on and runoff and provide secondary containment. Do not install drains in the secondary containment areas. ■ No floor drains unless pretreated prior to discharge to the sanitary sewer.⁸ ■ Connect containers or sinks used for parts cleaning to the sanitary sewer.⁸
<input type="checkbox"/>		Fuel Dispensing Areas	<ul style="list-style-type: none"> ■ Fueling areas shall have impermeable surface that is a) minimally graded to prevent ponding and b) separated from the rest of the site by a grade break. ■ Canopy shall extend at least 10 ft. in each direction from each pump and drain away from fueling area.
<input type="checkbox"/>		Loading Docks	<ul style="list-style-type: none"> ■ Cover and/or grade to minimize run-on to and runoff from the loading area. ■ Position downspouts to direct stormwater away from the loading area. ■ Drain water from loading dock areas to the sanitary sewer.⁸ ■ Install door skirts between the trailers and the building.
<input type="checkbox"/>		Fire Sprinklers	Design for discharge of fire sprinkler test water to landscape or sanitary sewer. ⁸
<input type="checkbox"/>		Miscellaneous Drain or Wash Water	<ul style="list-style-type: none"> ■ Drain condensate of air conditioning units to landscaping. Large air conditioning units may connect to the sanitary sewer.⁸ ■ Roof drains from equipment drain to landscaped area where practicable. ■ Drain boiler drain lines, roof top equipment, all wash water to sanitary sewer.⁸
<input type="checkbox"/>		Architectural Copper Rinse Water	<ul style="list-style-type: none"> ■ Drain rinse water to landscaping, discharge to sanitary sewer⁸, or collect and dispose properly offsite. See flyer “Requirements for Architectural Copper.”¹⁰

⁸ Any connection to the sanitary sewer system is subject to sanitary district approval.

⁹ Businesses that may have outdoor process activities/equipment include machine shops, auto repair, industries with pretreatment facilities.

¹⁰ See the Flowstobay website: <https://flowstobay.org/wp-content/uploads/2020/04/ArchitecturalcopperBMPs.pdf>

Worksheet C

Low Impact Development – Site Design Measures

Select Appropriate Site Design Measures (Required for C.3 Regulated Projects; all other projects are encouraged to implement site design measures, which may be required at municipality discretion.) Projects that create and/or replace between 2,500 and 5,000 sq.ft. of impervious surface, and detached single family homes that create/replace between 2,500 and 10,000 sq.ft. of impervious surface, must include **one of Site Design Measures a through f** (Provision C.3.i requirements).¹⁰ Larger (>=5,000 sq.ft) projects must also include applicable Site Design Measures g through i. Consult with municipal staff about requirements for your project.

Select appropriate site design measures and identify the Plan Sheet where these elements are shown.

Yes	Plan Sheet No.	Site Design Measures
<input checked="" type="checkbox"/>		a. Direct roof runoff into cisterns or rain barrels and use rainwater for irrigation or other non-potable use.
<input checked="" type="checkbox"/>		b. Direct roof runoff onto vegetated areas.
<input checked="" type="checkbox"/>		c. Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas.
<input checked="" type="checkbox"/>		d. Direct runoff from driveways and/or uncovered parking lots onto vegetated areas.
<input type="checkbox"/>		e. Construct sidewalks, walkways, and/or patios with pervious or permeable surfaces. Use the specifications in the C.3 Regulated Projects Guide downloadable at www.flowstobay.org/newdevelopment
<input type="checkbox"/>		f. Construct bike lanes, driveways, and/or uncovered parking lots with pervious surfaces. Use the specifications in the C.3 Regulated Projects Guide downloadable at www.flowstobay.org/newdevelopment
<input checked="" type="checkbox"/>		g. Limit disturbance of natural water bodies and drainage systems; minimize compaction of highly permeable soils; protect slopes and channels; and minimize impacts from stormwater and urban runoff on the biological integrity of natural drainage systems and water bodies;
<input checked="" type="checkbox"/>		h. Conserve natural areas, including existing trees, other vegetation and soils.
<input checked="" type="checkbox"/>		i. Minimize impervious surfaces.

Regulated Projects can also consider the following site design measures to reduce treatment system sizing:

Yes	Plan Sheet No.	Site Design Measures
<input checked="" type="checkbox"/>		j. Self-treating area (see Section 4.2 of the C.3 Regulated Projects Guide)
<input checked="" type="checkbox"/>		k. Self-retaining area (see Section 4.3 of the C.3 Regulated Projects Guide)

¹⁰ See MRP Provision C.3.a.i.(6) for non-C.3 Regulated Projects, C.3.c.i.(2)(a) for Regulated Projects, C.3.i for projects that create/replace between 2,500 and 5,000 sq.ft. of impervious surface and detached single family homes that create/replace between 2,500 and 10,000 sq.ft. of impervious surface.

Worksheet D

C.3 Regulated Projects and Non-Regulated GI Projects

Stormwater Treatment Measures and Site Design Measures by Drainage Management Area (DMA)

Check all applicable boxes, answer questions and fill in cells related to the site design and treatment measure(s) included in the project.

Drainage Management Area Summary Table

Complete the information below at the Entitlement, Building Permit and Certificate of Occupancy stages for Regulated C.3 Projects and Non-Regulated Green Infrastructure Projects. (The first four cells are automatically filled in from the Project Info sheet.)

Project Name:	Stonewood Resort					
Project Address:	37 Frenchmans Creek Rd, Half Moon Bay, CA 94019					
Cross Streets:	Cabrillo Hwy					
APN:	048-320-020					
Special Project¹¹?	No	of C.3.d amount of runoff treated by Non-LID Systems on the Special Project site.				
C.3 Regulated?	Yes					
Public or Private Project?	Private	Public projects are those on public property or ROW; private projects are on privately-owned property but can include improvements in the public ROW required as part of the project.				
DMA Identification Number	Impervious Area ¹² (ft ²)	Pervious Area ¹³ (ft ²)	Type of Site Design Measure or Treatment Measure ¹⁴	Sizing Criteria Used ¹⁵	Size Required ¹⁶	Size Provided
Example DMA 1	5,000	2,000	Bioretention unlined with underdrain	2c: Flow	208 ft2	220 ft2
Example DMA 2	1,000	1,000	Self-retaining area	Other	< 2:1 ratio	1:1 ratio
Example DMA 3	1,000	-	Infiltration trench	1b: Volume	1,000 ft3	1,100 ft3
1 - Ex. to Remain	505,000	5,972,860	N/A	N/A	N/A	N/A
2 - Farm Labor Housing	12,500	14,500	Bioretention lined with underdrain	2c: Flow	500	500
3 - Campground	5,000	59,000	Self-retaining area	Other	< 2:1 ratio	12:1 ratio
4 - East Ridge	195,000	390,000	Bioretention lined with underdrain	2c: Flow	7,800	7,800
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
add rows, if needed						
TOTALS	717,500	6,436,360	N/A	N/A	N/A	N/A
Totals from Project Info Sheet Cells	717,500	6,436,360				

Is the project harvesting and using rainwater? Yes <input checked="" type="checkbox"/>	<u>Rainwater Harvesting/Use Measures:</u> <input type="checkbox"/> Rainwater Harvesting for indoor non-potable water use <input checked="" type="checkbox"/> Rainwater Harvesting for landscape irrigation use
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A long term Operations and Maintenance (O&M) Agreement and Plan for this project will be required. Please contact the municipality for an agreement template and/or consult the C.3 Regulated Projects Guide and table of contents at www.flowstobay.org/newdevelopment for maintenance plan templates for specific facility types.

11 Special Projects are smart growth, high density, transit-oriented or affordable housing developments with the criteria defined in Provision C.3.e.ii.(2), (3) or (4) (see Worksheet F).
 12 The sq.ft. of impervious area within the Drainage Management Area
 13 The sq.ft. of pervious area within the Drainage Management Area
 14 "Lined" refers to an impermeable liner placed on the bottom of a bioretention area, such that no infiltration into native soil occurs.
 15 Select from the menu which of the following Provision C.3.d.i hydraulic sizing methods was used, if any. Volume based approaches: 1(a) Urban Runoff Quality Management approach, or 1(b) 80% capture approach (recommended volume-based approach). Flow-based approaches: 2(a) 10% of 50-year peak flow approach, 2(b) 2 times the 85th percentile rainfall intensity approach, 2(c) 0.2-Inch-per-hour intensity approach (recommended flow-based approach - also known as the 4% rule for bioretention), or 3 Combination flow and volume-based approach. "Other" is used for Site Design Measures such as Self-Retaining or Self-Treating Areas.
 16 Each DMA should drain to one treatment area (unless it is self-treating or self-retaining). If multiple DMAs are draining to one treatment area, they should be combined into one DMA. If one DMA drains to multiple treatment areas, that DMA should be split up so there is one DMA per treatment area (which allows the treatment area to be properly sized). 7/1/23

Worksheet E
Hydromodification Management

E-1 Is the project a Hydromodification¹⁷ Management (HM) Project?

E-1.1 Is the total impervious area increased over the pre-project condition?

- Yes. Continue to E-1.2
 No. Go to Item E-1.3 and check "No."

E-1.2 Is the site located in an HM Control Area per the HM Control Areas map (Appendix H of the C.3 Regulated Projects Guide)?

- Yes. Go to E-1.3 and Check "Yes".
 No. Attach map, indicating project location. Go to Item E-1.3 and check "No."

E-1.3 Is the project a Hydromodification Management Project?

- Yes. The project is subject to HM requirements in Provision C.3.g of the Municipal Regional Stormwater Permit.
 No. The project is EXEMPT from HM requirements.

► If the project is subject to the HM requirements, incorporate in the project flow duration control measures designed such that post-project discharge rates and durations match pre-project discharge rates and durations.

► The Bay Area Hydrology Model (BAHM) has been developed to help size flow duration controls. See www.clearcreeksolutions.info/downloads. Guidance is provided in Chapter 7 of the C.3 Regulated Projects Guide.

E-2 Incorporate HM Controls (if required)

Are the applicable items provided with the Plans?

Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site plans with pre- and post-project impervious surface areas, surface flow directions of entire site, locations of flow duration controls and site design measures per HM site design requirement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Soils report or other site-specific document showing soil type(s) on site
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If project uses the Bay Area Hydrology Model (BAHM), a list of model inputs and outputs.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If project uses custom modeling, a summary of the modeling calculations with corresponding graph showing curve matching (existing, post-project, and post-project with HM controls curves), goodness of fit, and (allowable) low flow rate.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If project uses the Impracticability Provision, a listing of all applicable costs and a brief description of the alternative HM project (name, location, date of start up, entity responsible for maintenance).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the project uses alternatives to the default BAHM approach or settings, a written description and rationale.

¹⁷ Hydromodification is the change in a site's runoff hydrograph, including increases in flows and durations that results when land is developed (made more impervious). The effects of hydromodification include, but are not limited to, increased bed and bank erosion of receiving streams, loss of habitat, increased sediment transport and/or deposition, and increased flooding. Hydromodification control measures are designed to reduce these effects.

Worksheet F Special Projects

Complete this worksheet for projects that appear to meet the definition of "Special Project", per Provision C.3.e.ii of the Municipal Regional Stormwater Permit (MRP). The form assists in determining whether a project meets Special Project criteria, and the percentage of low impact development (LID) treatment reduction credit. Special Projects that implement less than 100% LID treatment must provide a narrative discussion of the feasibility or infeasibility of 100% LID treatment. See Appendix J of the C.3 Regulated Projects Guide (download at www.flowstobay.org/newdevelopment) for more information.

F-1

"Special Project" Determination (Check the boxes to determine if the project meets any of the following categories.)

Special Project Category "A"

Does the project have ALL of the following characteristics?

- Located in a municipality's designated central business district, downtown core area or downtown core zoning district, neighborhood business district or comparable pedestrian-oriented commercial district, or historic preservation site and/or district;
 - Creates and/or replaces 0.5 acres or less of impervious surface - enter answer in F-2 table;
 - Includes no surface parking, except for incidental parking for emergency vehicle access, ADA access, and passenger or freight loading zones;
 - Has at least 85% coverage of the entire site by permanent structures. The remaining 15% portion of the site may be used for safety access, parking structure entrances, trash and recycling service, utility access, pedestrian connections, public uses, landscaping and stormwater treatment - enter answer in F-2 Table
- No (continue)
 Yes – Complete Section F-2 below

Special Project Category "B"

Does the project have ALL of the following characteristics?

- Located in a municipality's designated central business district, downtown core area or downtown core zoning district, neighborhood business district or comparable pedestrian-oriented commercial district, or historic preservation site and/or district¹⁵;
 - Creates and/or replaces more than 0.5 acres of impervious area and less than 2.0 acres - enter answer in F-2 Table;
 - Includes no surface parking, except for incidental parking for emergency access, ADA access, and passenger or freight loading zones;
 - Has at least 85% coverage of the entire site by permanent structures. The remaining 15% portion of the site may be used for safety access, parking structure entrances, trash and recycling service, utility access, pedestrian connections, public uses, landscaping and stormwater treatment - enter answer in F-2 Table;
 - Minimum gross density of either 50 dwelling units per acre (for residential projects) or a Floor Area Ratio (FAR) of 2:1 (for commercial projects) - mixed use projects may use either criterion¹⁶ - enter answer in F-2 Table;
- No (continue)
 Yes – Complete Section F-2 below

Special Project Category "C"

Complete the Special Project Category C - Affordable Housing Credit Calculator (AHCC) Worksheet.

Does the project meet ALL of the required characteristics for Category C?

- No
 Yes – Complete Section F-2 below

¹⁵ And built as part of a municipality's stated objective to preserve/enhance a pedestrian-oriented type of urban design.

¹⁶ The MRP establishes definitions for "Gross Density"(GD) & FAR. GD is defined as, "the total number of residential units divided by the acreage of the entire site area, including land occupied by public right-of-ways, recreational, civic, commercial and other non-residential uses." FAR is defined as, "the Ratio of the total floor area on all floors of all buildings at a project site (except structures, floors, or floor areas dedicated to parking) to the total project site area."

F-2 LID Treatment Reduction Credit Calculation

If more than one category applies, choose only one of the applicable categories and fill out the table for that category. Fill in all cells with blue highlighting that pertain to the chosen Special Project Category.

Category	Impervious Area Created/Replaced (sq. ft.)	Site Coverage (%)	Project Density ¹⁶ or FAR ¹⁶	Density/Criteria	Allowable Credit (%)	Applied Credit (%)
A			N.A.	See above in F-1	100%	
B				Res ≥ 50 DU/ac or FAR ≥ 2:1	50%	
				Res ≥ 75 DU/ac or FAR ≥ 3:1	75%	
				Res ≥ 100 DU/ac or FAR ≥ 4:1	100%	
C	Affordable Housing Credit - from AHCC Worksheet):					
TOTAL CREDIT =					0%	

F-3 Narrative Discussion of the Feasibility/Infeasibility of 100% LID Treatment:

If project will implement less than 100% LID, prepare a discussion of the feasibility or infeasibility of 100% LID treatment, as described in Appendix J of the C.3 Regulated Projects Guide.

F-4 Select Certified Non-LID Treatment Measures:

If the project will include non-LID treatment measures, select a treatment measure certified for “Basic” General Use Level Designation (GULD) by the Washington State Department of Ecology’s Technical Assessment Protocol – Ecology (TAPE¹⁷). See guidance in Appendix J of the C.3 Regulated Projects Guide (www.flowstobay.org/newdevelopment).

¹⁷ TAPE certification is used in order to satisfy Special Project’s reporting requirements in the MRP.

Worksheet G
(For municipal staff use only)

G-1 Alternative Certification: Were the treatment and/or HM control sizing and design reviewed by a qualified third-party professional that is not a member of the project team or agency staff?

Yes No Name of Reviewer: _____

G-2 High Priority Site: High Priority Sites can include those located in or within 100 feet of a sensitive habitat, an Area of Special Biological Significance (ASBS), a body of water, or on "hillside projects" disturbing $\geq 5,000$ sq.ft. of land and with steep slopes (of $\geq 15\%$ - see cell **I.A.5** - or as identified by municipal criteria or map). These sites are subject to monthly inspections from Oct 1 to April 30. See MRP Provision C.6.e.ii.(2)(b) and C.6.e.ii.(2)(c).

Yes No If yes, then add site to Staff's Monthly Rainy Season Construction Site Inspection List

G-3 Inspections of Sites with Pervious Pavement: Regulated projects that are installing 3,000 sq.ft. or more of pervious pavement (see cell **I.B.1.g**) (excluding private-use patios in single family homes, townhomes, or condominiums) must have the pavement system inspected by the jurisdiction upon completion of the installation and the site must be added to the jurisdiction's list of sites needing inspections at least once every five years – see provision C.3.h. Pervious pavement systems include pervious concrete, pervious asphalt, pervious pavers and grid pavers etc. and are described in the C3 Regulated Projects Guide downloadable at: www.flowstobay.org/newdevelopment.

Yes No If yes, then add site to Staff's Lists for Construction and O&M inspections (C.3 and C.3.h)

Operations and Maintenance (O&M) Submittals

G-4 Stormwater Treatment Measure and/HM Control Owner or Operator's Information:

Name: _____

Address: _____

Phone: _____ Email: _____

▶ Applicant must call for inspection and receive inspection at completion of installation of treatment measures and/or hydromodification management controls including any pervious pavement areas of 3,000 sq.ft. or more.

The following questions apply to C.3 Regulated Projects and Hydromodification Management Projects.

		Yes	No	N/A
G-4.1	Was maintenance plan submitted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G-4.2	Was maintenance plan approved?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G-4.3	Was maintenance agreement submitted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Date executed: _____)

▶ Attach the executed maintenance agreement as an appendix to this checklist.

G-5 Annual Operations and Maintenance (O&M) Submittals (for municipal staff use only):

For C.3 Regulated Projects and Hydromodification Management Projects, indicate the dates on which the Applicant submitted annual reports for project O&M:

G-6 Comments (for municipal staff use only):

G-7 NOTES (for municipal staff use only):

Project Info Notes: _____
 Worksheet A Notes: _____
 Worksheet B Notes: _____
 Worksheet C Notes: _____
 Worksheet D Notes: _____
 Worksheet E Notes: _____
 Worksheet F Notes: _____

G-8 Project Close-Out (for municipal staff use only):

		Yes	No	N/A
8.1	Were final Conditions of Approval met?	<input type="checkbox"/>	<input type="checkbox"/>	
8.2	Was initial inspection of the completed treatment/HM measure(s) conducted? (Date of inspection: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.3	Was maintenance plan submitted? (Date executed: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.4	Was project information provided to staff responsible for O&M verification inspections? (Date provided to inspection staff: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

G-9 Project Close-Out (Continued -- for municipal staff use only):

Name of staff confirming project is closed out: _____

Signature: _____

Date: _____

Name of O&M staff receiving information: _____

Signature: _____

Date: _____