



2550 Ventura Avenue
Santa Rosa, CA 95403

p: (707) 565-1900
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Scott Orr
Director

Michelle Arellano
Administration

Nathan Quarles
Engineering and Construction

Cecily Condon
Planning

Steve Mosiurchak
Fire Marshal

May 11, 2026

To: Interested Agencies

The following application has been filed with the Sonoma County Permit and Resource Management Department.

File Number:	CPH26-0009
Applicant Name:	Pringl Miller
Owner Name:	same
Site Address:	435 McChristian Ave., Bodega Bay
APN:	100-230-006
Zoning:	RR CC B7, G

Project Description: Coastal Permit with Hearing to expand the original 930 sq. ft. house to a 1,752 sq. ft. primary residence with a new 144 sq. ft. shed and 36 sq. ft. carport on a 1.0-acre parcel. The proposed building height will remain unchanged and additional massing is minimal. The carport will match the house design and be located within the existing parking area.

We are submitting the above application for your review and recommendation. Additional information is on file in this office.

Responses to referrals should include a combination of any or all of the following details:

- (1) Statement of any environmental concerns or uncertainties your agency may have with the project.
- (2) Comments you wish to make regarding the merits of the project.
- (3) Identification of any missing information or application submittals that will preclude you from providing conditions and mitigations for this project in the future.
- (4) Your proposed conditions of approval and/or mitigations for this project.

After reviewing this application, please respond to the planner with your *marked* response below:

- ☐ Conditions will be provided and no further information is necessary.
- ☐ Conditions will be provided and additional information is necessary.
- ☐ Comments and/or concerns.
- ☐ No comments or conditions.

Responsible agencies under CEQA are requested to indicate whether permits will be required for this project.

Your comments will be appreciated by May 26, 2026, and should be sent to the attention of:

CPH26-0009, Jacob Sedgley (Jacob.Sedgley@sonomacounty.gov). The Project Planner can also be reached at (707) 565-1931. **If no response is received by May 26, 2026, it will be assumed that no comments or conditions will be provided.**

Please send a copy of your comments to the applicant(s) or their representatives as indicated on the attached Planning Application.

- | | |
|--|--|
| ☒ Building Inspection | ☒ Local Fire District – Sonoma County FPD |
| ☒ Fire Prevention | ☒ State Coastal Commission – Appealable? Yes |
| ☒ Management Group | ☒ Regional Water QCB: North Coast |
| ☒ Natural Resources | ☒ Sonoma Coast MAC |
| ☒ Well & Septic | ☒ Tribal Notification |
| ☒ Dist. 5 Director and Commissioners | ☒ Bodega Bay Alliance for Sustainable Comm. |
| ☒ Coastwalk | ☒ Bodega Bay Concerned Citizens |
| ☒ NW Information Center, S.S.U. | ☒ Western So.Co. Rural Alliance |

Planning Application

PJR-001

Application Type(s):

- ☐ Admin Cert. Compliance
☐ Ag. or Timber Preserve/Contract
☐ Conditional Cert. of Compliance
☐ Cert. of Modification
☒ Coastal Permit
☐ Zoning Permit for: _____
- ☐ Design Review Admin.
☐ Design Review Full
☐ General Plan Amendment
☐ Lot Line Adjustment
☐ Major Subdivision

File # _____

- ☐ Minor Subdivision
☐ Voluntary Merger
☐ Ordinance Interpretation
☐ Second Unit Permit
☐ Specific/Area Plan Amendment
- ☐ Use Permit
☐ Variance
☐ Zone Change
☐ Other: _____

By placing my contact information (name, address, phone number, email address, etc.) on this application form and submitting it to Sonoma County PRMD, I understand and authorize PRMD to post this application to the internet for public information purposes, including my contact information.

PRINT CLEARLY					
APPLICANT			OWNER (IF OTHER THAN APPLICANT)		
Name Pringl Miller			Name		
Mailing Address PO Box 672			Mailing Address		
City Bodega Bay	State CA	Zip 94923	City	State	Zip
Day Ph (415) 264-4890	Email pringlmillermd@gmail.com		Day Ph ()	Email	
Signature 		Date 4/20/26	Signature		Date
Billing Responsible Party (At-Cost Only) ☒ Applicant ☐ Owner ☐ Other: _____					
OTHER PERSONS TO RECEIVE CORRESPONDENCE					
Name/Title David Battenfield, Architect			Name/Title Steven Sharpe, Sharpe Associates		
Mailing Address 3575 Mission St.			Mailing Address 2860 Creekside Rd		
City San Francisco	State CA	Zip 94110	City Santa Rosa	State CA	Zip 95405
Day Ph (415) 845-7641	Email dbattenfield@gmail.com		Day Ph (707) 484-2963	Email sharpeplanner@comcast.net	
PROJECT INFORMATION					
Address(es) 435 McChristian Ave			City Bodega Bay		
Assessor's Parcel Number(s) 100-230-006					
Project Description Coastal Permit for expansion of an existing single-family dwelling from 930 sf to 1752 sf and a detached 360 sf carport all within the previously approved development area of permit CPH90-239.					
Acreage 1 ac			Number of new lots proposed NA		
Site Served by Public Water? ☒ Yes ☐ No			Site Served by Public Sewer? ☐ Yes ☒ No		
TO BE COMPLETED BY PRMD STAFF					
Planning Area	Supervisory District	☐ Critical Habitat	☐ Urban Service	Groundwater	☐ 1 / 2
Current Zoning		☐ NPDES	☐ Williamson Act	Availability	☐ 3 / 4
		Specific/Area Plan		Subject to	☐ EX
General Plan Land Use		Parcel Specific Policy		CEQA	☐ YES
Application resolve planning violation? ☐ Yes ☐ No		Violation? ☐ Yes ☐ No		File No.	
Previous Files		Penalty application? ☐ Yes ☐ No			
Application accepted by		Date			
Approved by		Date			

Sonoma County Permit and Resource Management Department
 2550 Ventura Avenue, Santa Rosa, CA, 95403-2829, (707) 565-1900

09/13/2018

STEVEN SHARPE & ASSOCIATES

2860 CREEKSIDE RD
SANTA ROSA, CALIFORNIA 95405
(707) 484-2963
SHARPEPLANNER@COMCAST.NET

Project Description Pringl Miller House Expansion and Carport Coastal Permit

<u>Proposal:</u>	Coastal Permit for expansion to an existing single-family dwelling and detached carport.
<u>Applicant/Owner:</u>	Pringl Miller
<u>Planning Consultant:</u>	Steven Sharpe, Sharpe Associates
<u>Architect</u>	David Battenfield, Architect
<u>Location:</u>	435 McChristian Ave., Bodega Bay
<u>APN:</u>	100-230-006
<u>Coastal Zoning:</u>	Rural Residential, Coastal Zone, Frozen Lot Size (RR-CC-B7)
<u>General Plan:</u>	Rural Residential, 2-acre density (RR2)

Project Description

This Coastal Permit request involves renovating and horizontally expanding a single-family home and carport at 435 McChristian Avenue, Bodega Bay (APN 100-230-006). The project expands the original 930 sq ft house to a 1,752 sq ft single-story plan by incorporating a 144 sq ft shed. The coastal modern style and building height remain unchanged; additional massing is minimal. The 360 sq ft carport will match the house design and be in the existing parking area. Natural earth-tone exterior colors will help the structure blend with the surroundings, and outdoor lighting will be downcast and shielded. No trees will be removed, though some vegetation will be cleared for the addition. All work remains within the previously approved development area according to permit CPH90-239.

The property lies within a scenic corridor, has no HOA, uses an existing septic system for waste disposal, and receives water from Salmon Creek Mutual Water Company. Geotechnical and biological assessments are included.

Setting

The one-acre, rectangular parcel sits west of McChristian Ave., about 300 feet south of Miwok Rd., adjacent to Salmon Creek State Beach lands. Existing improvements, all consistent with approved permit CPH90-239, include the house, patios, shed, and gravel parking. The parcel slopes up from the road to the dwelling on a knoll, then slopes down to the west. Decorative

landscaping, non-native grasses and iceplant surround the home, with native coastal vegetation elsewhere. There are no waterways, wetlands, or wildlife habitats on or near the site.

Biological Assessment

WRA Environmental Consultants determined the 0.06-acre development footprint consists solely of non-sensitive cover types. Only 348 sq ft of work extends into the sward/iceplant area, which is not noted as sensitive habitat. San Francisco spineflower populations are present outside the work zone; a 50-ft. avoidance buffer and staging on hardscape are recommended. No nesting bird habitat exists, but if construction occurs during nesting season, a qualified biologist must survey within 7 days prior to work, establishing buffers if active nests are found. Both the expanded house and carport will locate outside the 50-ft buffer.

Attachments

- Planning Application PJR-001
- Indemnification Agreement
- Supplemental Information Application PJR-035
- At Cost Reimbursement Form PJR-095
- Project Drawings
 - Project Information-Location and USGS Maps
 - Site Plans – Existing and Proposed
 - Floor Plans – Existing and Proposed
 - Exterior Elevations
 - Exterior View
 - Lighting Plan
- Biological Resources Report
- Geotech Report
- Septic System Report
- County Email Regarding Permit History
Permit History

Coastal Permit Application Supplemental Information

PURPOSE:

This form is to be completed by applicants in order to provide additional information regarding a Coastal Permit application. The more details that are provided, the easier it will be to promptly process the Coastal Permit application. Please answer all questions. Indicate "Not Applicable" or "N/A" for those questions which do not pertain to the proposed project. It is important that applicants provide complete answers to all questions.

1. Are there existing structures or improvements on the property? ☒ Yes ☐ No
If yes, describe below and identify the use and size of each structure or improvement.

The site improvements include a 930 sf house. The house was constructed in 1992 with approved Coastal Permit (CPH 90-239). Other improvements include a storage shed, septic system, concrete patios, driveway, parking area and walkways.

2. Describe the project and include structure sizes(s) (in square feet), improvements such as wells, septic systems, grading, vegetation removal, roads, driveways, propane tanks, oil tanks, water storage tanks, solar panels, etc.

This permit requests expanding and existing house and adding a carport. The project expands the existing 930 sf house to 1,752 sf by incorporating the existing 144 sf storage shed. the coastal modern style and building height will remain unchanged. the 360 sf carport will match the house style and be located in the existing parking area. Natural earth tone colors will allow the new structures to blend with surrounding, and outdoor light will be downcast and shielded. All work will be in the previously approved development area in accordance with permit CPH90-239.

3. Is any grading or road/driveway construction planned? ☒ Yes ☐ No

Estimate the amount of grading in cubic yards: <50 cubic yards

If greater than 50 cubic yards or if greater than 2 feet of cut or 1 foot of fill will result, a grading plan and permit will be required.

Estimate the length of the proposed road/driveway: Existing to remain feet.

4. Will vegetation be removed on areas other than the building sites and roads?
☒ Yes ☐ No

If yes, explain: Approximately 305 sf of work extends into existing grasses and iceplant which are not sensitive habitat.

5. Are there any water courses, anadromous fish streams, sand dunes, rookeries, marine mammal haul-out areas, wetlands, riparian areas, rare or endangered plants, animals or habitat which support rare and endangered species located on the project site or within 100 feet of the project site? If yes explain:
See Biological Resource Assessment (BRA) prepared by WRA for sand dunes. All new structures will be located outside the 50' ESHA buffer as determined by the BRA.

6. How many trees will be removed to implement the project: None. Indicate on the site plan all trees to be removed which are greater than 9 inches in diameter (measured four feet from the ground). If applicable, please indicate on the site plan the size, location and species of all on-site trees that provide screening from public view areas.

7. Will the proposed development be visible from:
☒ A. State Highway 1? ☒ Yes ☐ No
☐ B. Other Scenic Corridor? (see list below) ☐ Yes ☒ No
☐ C. Park, beach, or recreation area? ☐ Yes ☒ No

If you answered yes, explain

The upper portion of the existing house is visible from Highway 1. The expanded house style, materials and height remain unchanged. Additional massing is minimal and consistent with other neighboring structures in the Salmon Creek subdivision. The proposed carport is not visible from Highway 1.

Scenic Corridors: Stewarts Point-Skaggs Springs Road, Fort Ross Road, Myers Grade/Seaview Road, Highway 116, Willow Creek (paved portion), Coleman Valley Road, Bay Hill Road, Bodega Highway and Petaluma-Valley Ford Road.

8. Height of structure(s) in feet (measured from average grade to the highest point of the structure). Identify height of building(s) on architectural elevations:

15' 6"

9. Describe all exterior materials and colors of all proposed structures

Siding material	<u>Composite cement panels</u>	Color	<u>Gray/Brown</u>
Trim material	<u>Wood Trim</u>	Color	<u>Earth Tone</u>
Chimney material	<u>N/A</u>	Color	
Roofing material	<u>Shingles</u>	Color	<u>Gray</u>
Window frame material	<u>Same</u>	Color	<u>Same</u>
Door material	<u>Same</u>	Color	<u>Same</u>

Fencing material N/A Color _____

Retaining wall material N/A Color _____

Other exterior materials N/A Color _____

10. Will there be any new exterior lighting? ☒ Yes ☐ No
If yes, provide lighting details and specifications for all exterior lighting fixtures. All lighting fixtures must be downcast and shielded to prevent light and glare beyond the parcel boundaries. Identify the location of all exterior lighting on the site plan or building plan.

New lighting will be located at house entrances and in the carport. All lighting fixtures will be downcast and shielded to prevent light and glare.

11. If the project is commercial, industrial, or institutional, complete the following: N/A

Total square footage of all structures: _____

Estimated employees per shift: _____

Estimated shifts per day: _____

Type of loading facilities proposed: _____

Will the proposed project be phased? ☐ Yes ☐ No

If Yes, explain your plans for phasing: _____

Parking will be provided as follows: N/A

Number of Spaces:

Existing: _____ Proposed: _____ Total: _____

Number of standard spaces: _____ Size: _____

Number of handicapped spaces: _____ Size: _____

12. What will be the method of sewage disposal?

☐ Community sewage system, specify _____

☒ Septic Tank (indicate primary and replacement leachfields on plot plan) Existing

☐ Other, specify _____

13. What will be the domestic water source?

☒ Community water system, specify supplier: Salmon Creek Water Company - Existing service connection.

☐ Well ☐ On-site ☐ Off-site

☐ Spring ☐ On-site ☐ Off-site

☐ Other, specify _____

14. Utilities will be supplied to the site as follows:

Electricity:

☒ Utility Company (service exists to the parcel)

☐ Utility Company requires extension of services to site: _____ feet _____ miles

☐ On Site generation, Specify: _____

☐ None

Gas:

☐ Utility Company/Tank

☒ None

PROJECT DIRECTORY

CLIENT:
PRINGS MILLER
435 McChristian Ave.
Bodega Bay CA 94023
EMAIL: PRINGSMILLERMD@GMAIL.COM

ARCHITECT:
DAVID BATTENFIELD
3575 MISSION STREET
SAN FRANCISCO, CA 94110
EMAIL: dbattenfield@gmail.com
T. (415) 845-7841

CONTRACTOR:
DEAN ALJORE
RED3 PRO
SEBASTOPOL CA 94742
EMAIL: dean@red3pro.com
T. (707) 900-4688

SCOPE OF WORK

RENOVATION OF EXISTING 930 SQUARE FOOT HOUSE + HORIZONTAL EXPANSION
INCORPORATING THE EXISTING 14 SQUARE FOOT SHED TO CREATE
AN OVERALL 1732 SQUARE FOOT PROPOSED SINGLE FLOOR PLAN.

FINAL TOTAL SF = 1,732

Existing septic system in good working order to remain.
New wood deck is slated to replace old siding.
New roof.

NEW FOUNDATION, WALLS AND ROOF AT NEW CONNECTED ADDITION.

STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING TO BE SUBMITTED UNDER SEPARATE PERMITS

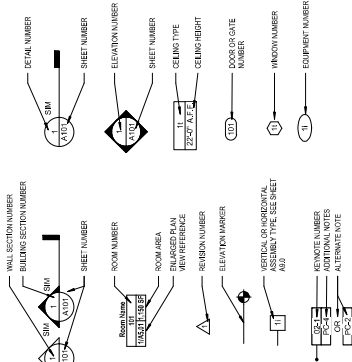
CODE INFORMATION

- APRIL 2018 BUILDING CODES:
- The 2018 California Building Code.
 - The 2018 California Electrical Code.
 - The 2018 California Energy Code.
 - The 2018 California Mechanical Code.
 - The 2018 California Plumbing Code.

WALL TYPES LEGEND

- PROPOSED PARTIAL-HEIGHT WALL
- PROPOSED FULL-HEIGHT WALL
- PROPOSED 4" HOUR-RATED WALL
- ALL PROPOSED INTERIOR WALLS TO BE INSULATED W/ BATT INSULATION
- EXISTING BUILDING WALL TO REMAIN
- ELEMENTS SHOWN DAMAGED TO BE REMOVED

GRAPHIC LEGEND



PROJECT DATA

PROJECT NAME: Salmon Creek Residence
PROJECT ADDRESS: 435 McChristian Ave. Bodega Bay, CA
BUILDING OWNER: Prings Miller
BLOCK / LOT #: -
PARCEL #: APN: 100-090-006
ZONING: R-2
DISTRICT: -
LOT AREA: 43,660 SF GROSS
OF EXITS: 2
BUILDING HEIGHT: 1 Story
PARKING: 2 SPACES OFF-STREET
SCOPE: HORIZONTAL EXPANSION
BUILDING TYPE: VAN
FIRE PROTECTION: -
OCCUP. PROPOSED: R3
OF STORIES: 1
OF BASEMENTS: 0
(E) GROUND LEVEL AREA: 930 SF PROPOSED TOTAL COMBINED = 1,732 SF

DRAWING LIST

Sheet Number	Sheet Name	Sheet Issue Date	Current Revision	Current Revision Date	Current Revision Description
A0 PROJECT INFORMATION					
A0.01	Project Information	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
A0.10	USCS & AREA MAP	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
A0.11	SITE EXHIBIT	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
A1 SITE PLAN					
A1.00	Site Plan - Existing	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
A1.01	Site Plan - Proposed	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
A1.05	AREA PLANS	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
A1 EXISTING PLANS					
A1.10	Existing Floor Plan	04/22/26			
A2 PLANS					
A2.01	Proposed Plan	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
A3 EXTERIOR ELEVATIONS					
A3.00	Exterior Elevations - Existing	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
A3.01	Exterior Elevations - Existing	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
A3.02	Exterior Elevations - Existing	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
A3.03	Exterior Elevations - Proposed	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
Exterior Views					
A10.01	MATERIALS AND LIGHTING	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT

Salmon Creek Residence
435 McChristian Ave, Bodega Bay, CA

FOR PRINTING TWO AGENCY USE

Issue #	Revised Revisions	Date
1	PLANNING & COASTAL PERMIT	04/22/26
Description		
Project Name		
Drawn By		
Checked By		
Scale		
Notes		

Project Information

A0.01

PROJECT DATA

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PROJECT ADDRESS: 435 McChristian Ave. Bodega Bay, CA
BUILDING OWNER: Prings Miller
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BUILDING TYPE: VAN
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OCCUP. PROPOSED: R3
OF STORIES: 1
OF BASEMENTS: 0
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A1 SITE PLAN					
A1.00	Site Plan - Existing	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
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A1.05	AREA PLANS	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
A1 EXISTING PLANS					
A1.10	Existing Floor Plan	04/22/26			
A2 PLANS					
A2.01	Proposed Plan	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
A3 EXTERIOR ELEVATIONS					
A3.00	Exterior Elevations - Existing	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
A3.01	Exterior Elevations - Existing	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
A3.02	Exterior Elevations - Existing	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
A3.03	Exterior Elevations - Proposed	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT
Exterior Views					
A10.01	MATERIALS AND LIGHTING	04/22/26	1	04/22/26	PLANNING & COASTAL PERMIT

Salmon Creek Residence
435 McChristian Ave, Bodega Bay, CA

FOR PRINTING TWO AGENCY USE

Issue #	Revised Revisions	Date
1	PLANNING & COASTAL PERMIT	04/22/26
Description		
Project Name		
Drawn By		
Checked By		
Scale		
Notes		

Project Information

A0.01

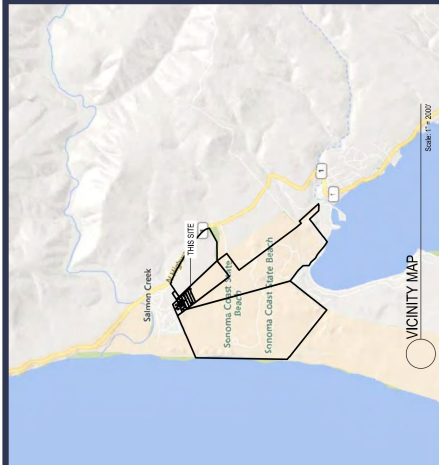
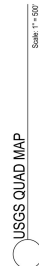


PROJECT SITE

1/2" = 1'-0"



LANDS OF MILLER TRUST
MILLER RESIDENCE ADDITION
435 MCCHRISTIAN AVE, BODEGA BAY
APN: 100-230-006

[illegible]

For Review
04/02/2026 12:39:48 PM

PUBLISHED 4/2/2026

SHEET TITLE:

USGS & VICINITY MAP



TRUNORTH

MILLER
RESIDENCE
ADDITION

OWNER INFORMATION:

PRINGL MILLER
TRUST

SITE INFORMATION:

435 MCCHRISTIAN AVE
BODEGA BAY, CA
APN: 100-230-006

For Review
04/02/2026 12:40:01 PM

PUBLISHED 4/2/2026

SHEET TITLE:

SITE EXHIBIT

SHEET NUMBER:

A0.11



Salmon Creek Residence

435 McChristian Ave, Bodega Bay, CA

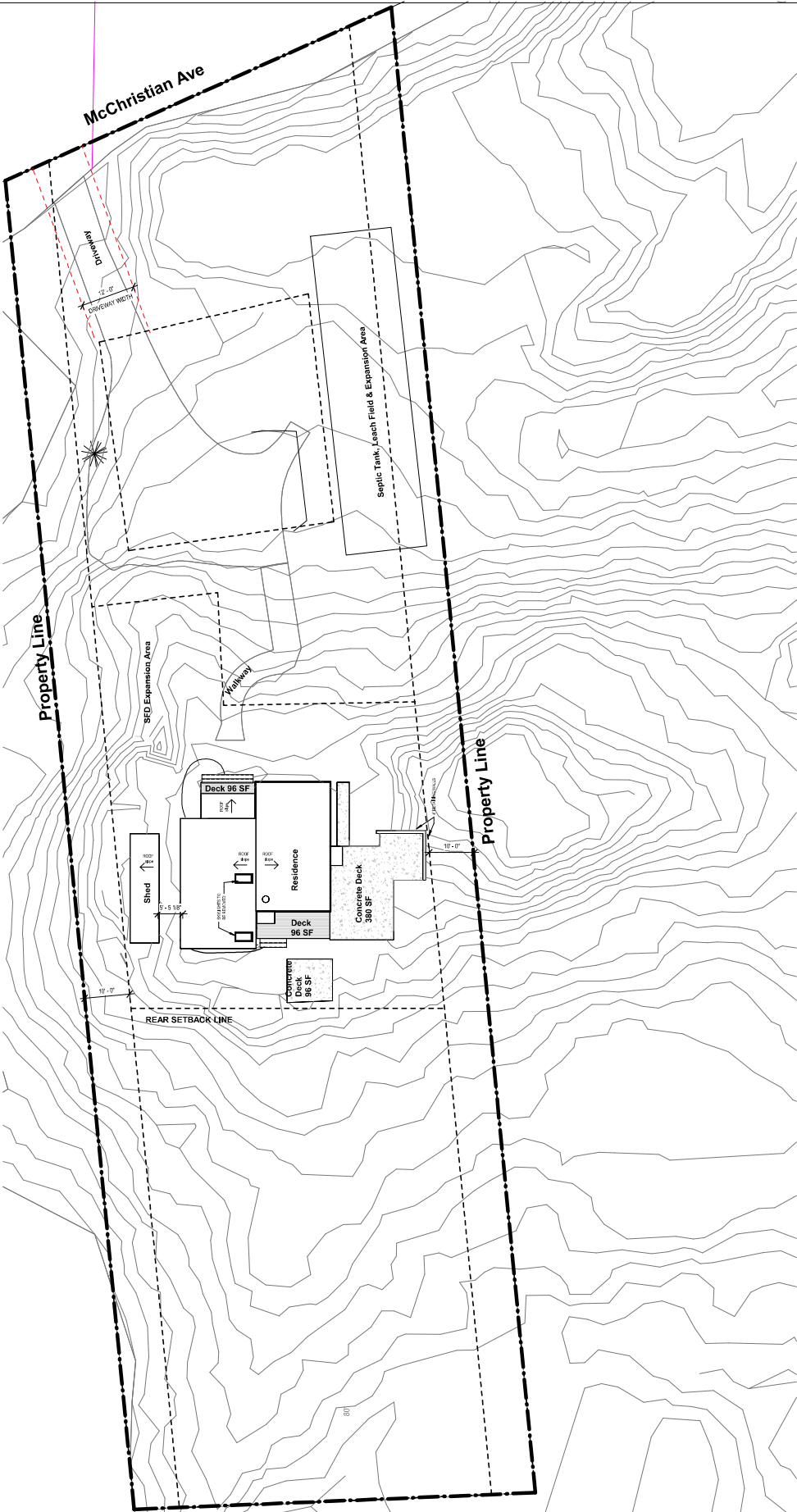
FOR PRINTING AGENCY USE

Revised	Revisions	Date
1	PLANNING & DESIGN	04/22/20

Project Date:	4/22/2020 3:40:24 PM
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Checked By:	DB
Scale:	1/8" = 1'-0"

Site Plan -
Existing

A1.00



Salmon Creek Residence
435 McChristian Ave, Bodega Bay, CA

FOR PERMITTING AGENCY USE

Issue #	Description	Date
1	PLANNING & COASTAL PERMIT	04/22/26

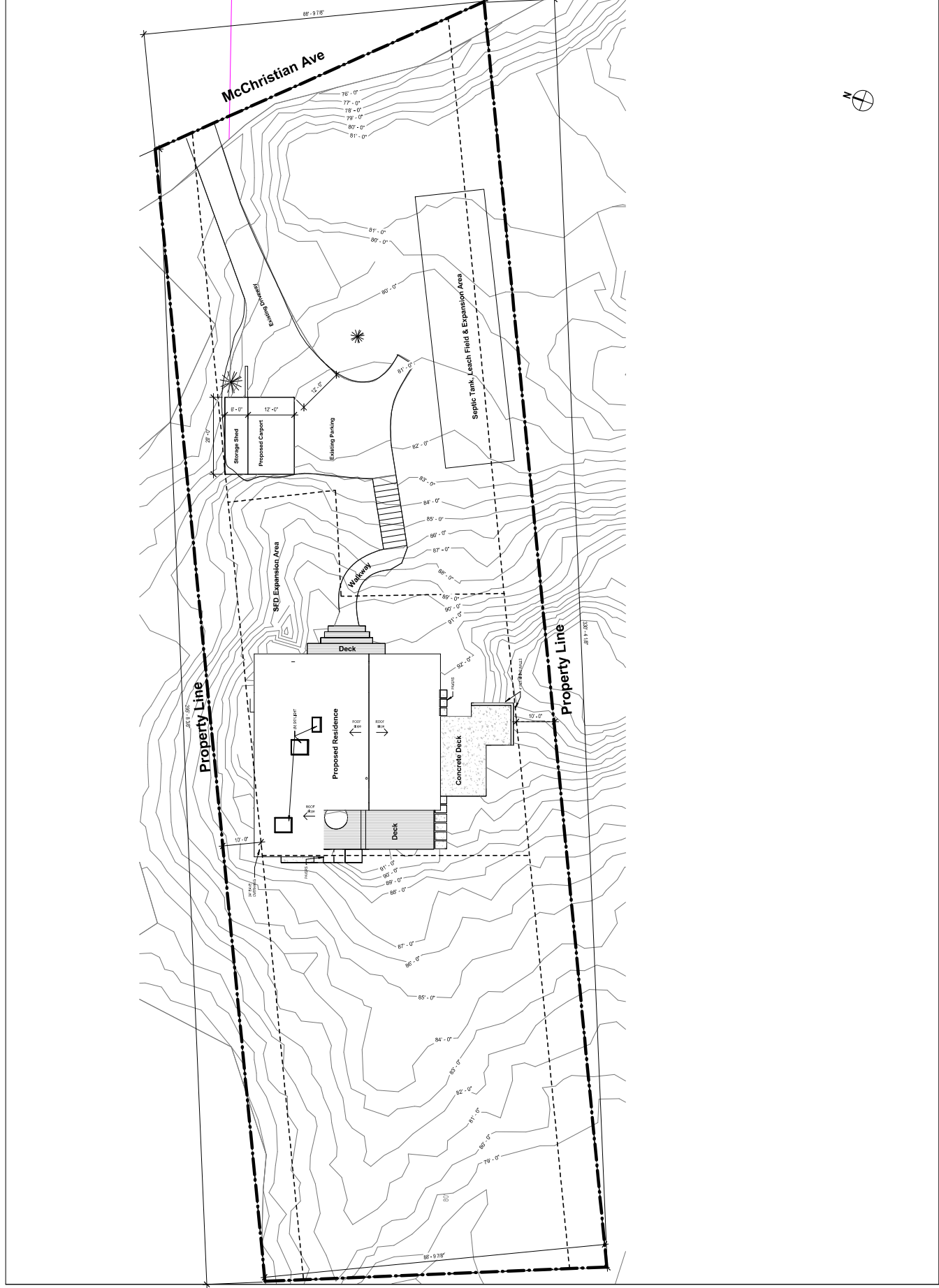
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Scale:	3/32" = 1'-0"

All drawings and written material appearing herein constitute original and unpublished work of the Architect and may not be duplicated, used or disclosed without written consent of the Architect.

Site Plan - Proposed

A1.01



Salmon Creek Residence

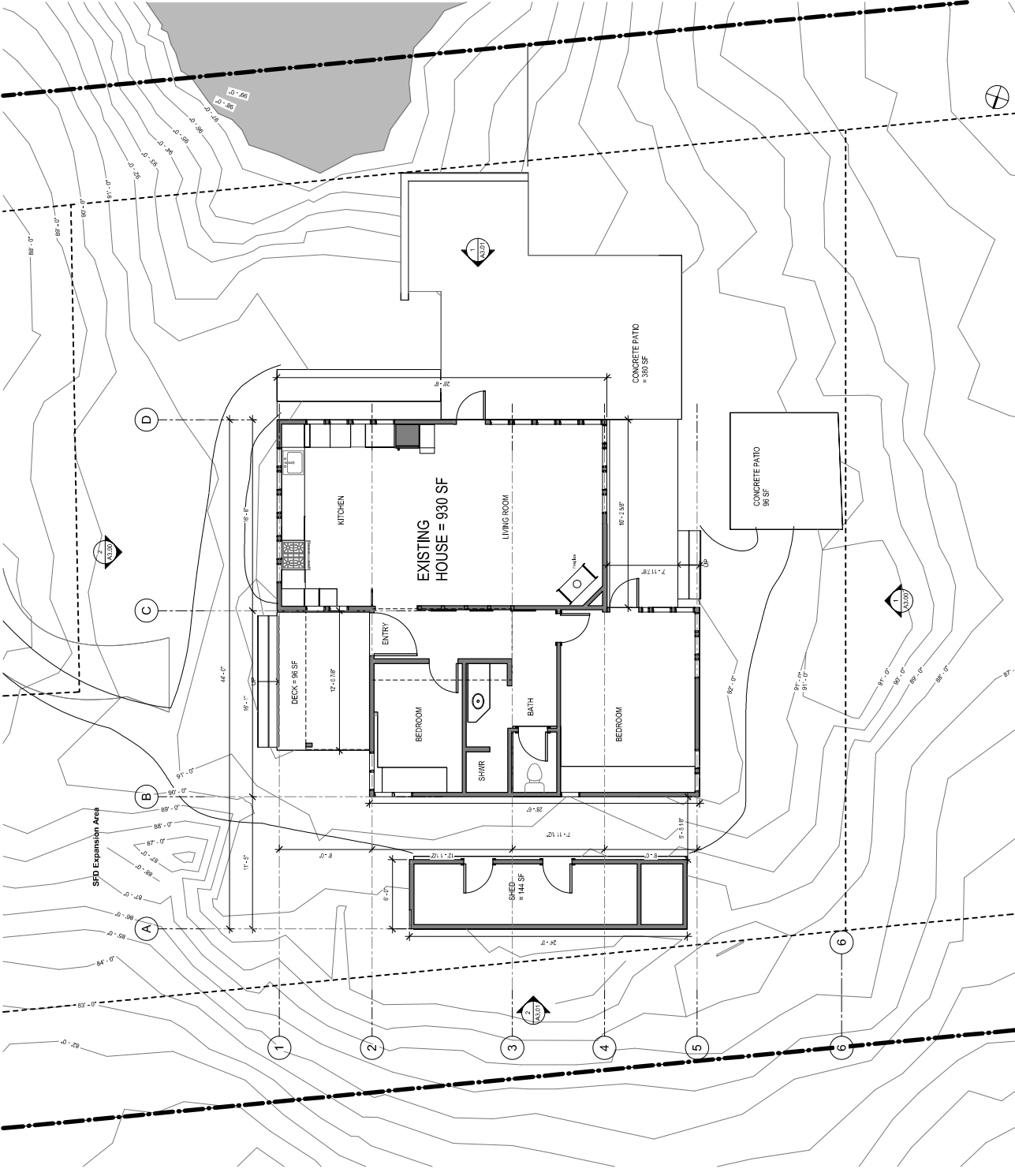
435 McChristian Ave, Bodega Bay, CA

FOR PERMITTING AGENCY USE

Issue #	Revised	Revisions	Description	Date
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Existing
Floor Plan

A1.10



1. Floor Plan - Existing
1/4" = 1'-0"

Salmon Creek Residence

435 McChristian Ave, Bodega Bay, CA

FOR PERMITTING AGENCY USE

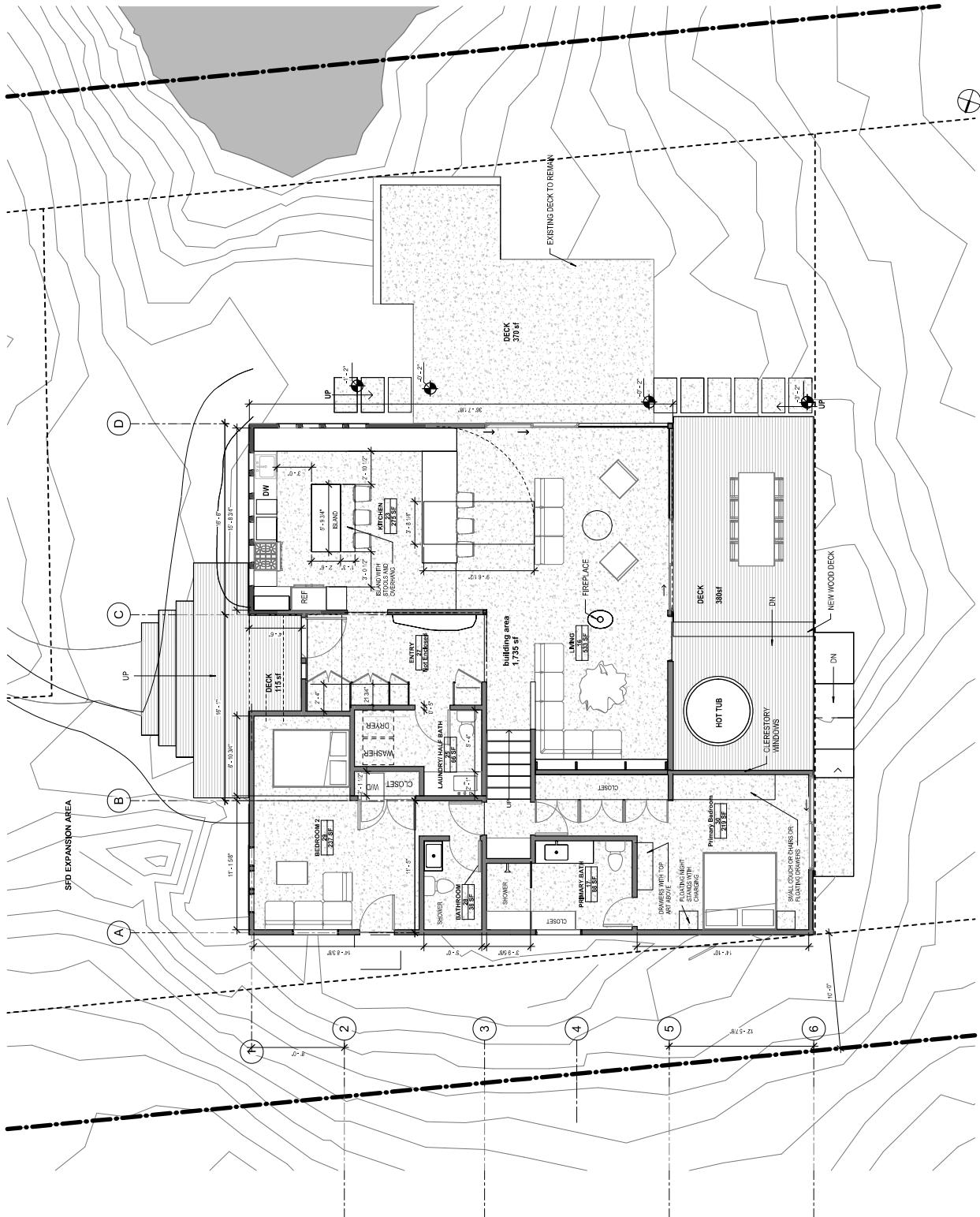
Issue #	Description	Date
1	PLANNING & CONCEPT	04/22/20

Issue #	Description	Date
1	PLANNING & CONCEPT	04/22/20

Project Date:	04/22/2020 3:46:49 PM
Drawn By:	DB
Checked By:	DB
Scale:	1/4" = 1'-0"
Notes:	2.044 - existing and water related drawings 1.44" = 1'-0"

Proposed
Plan

A2.01



PROPOSED FLOOR PLAN
1/4" = 1'-0"

Salmon Creek Residence

435 McChristian Ave, Bodega Bay, CA

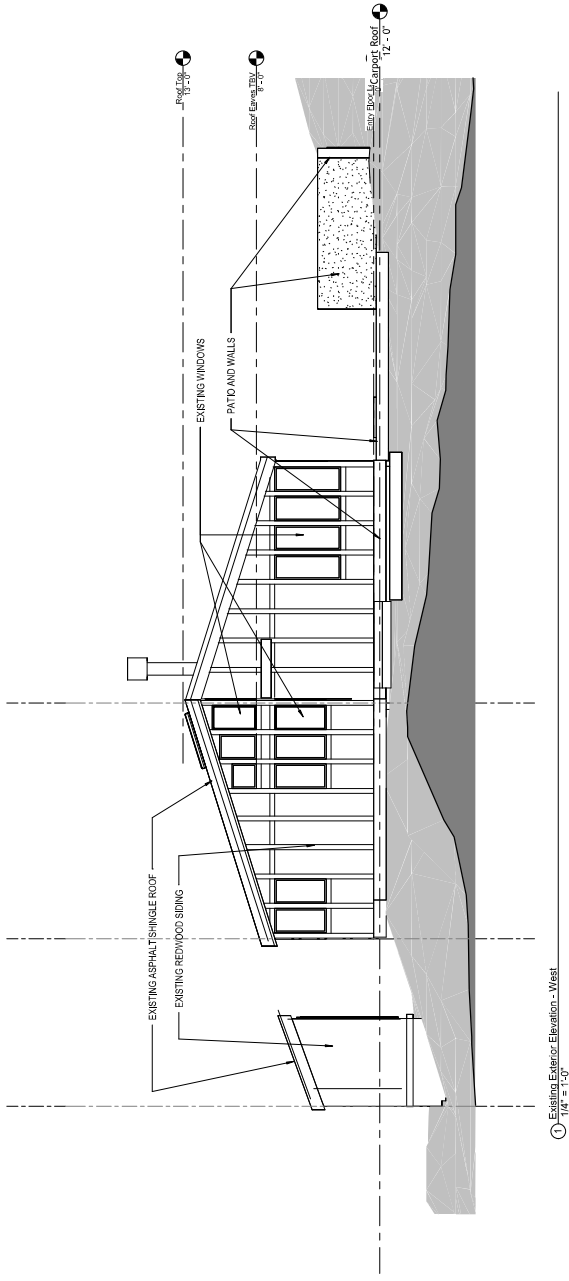
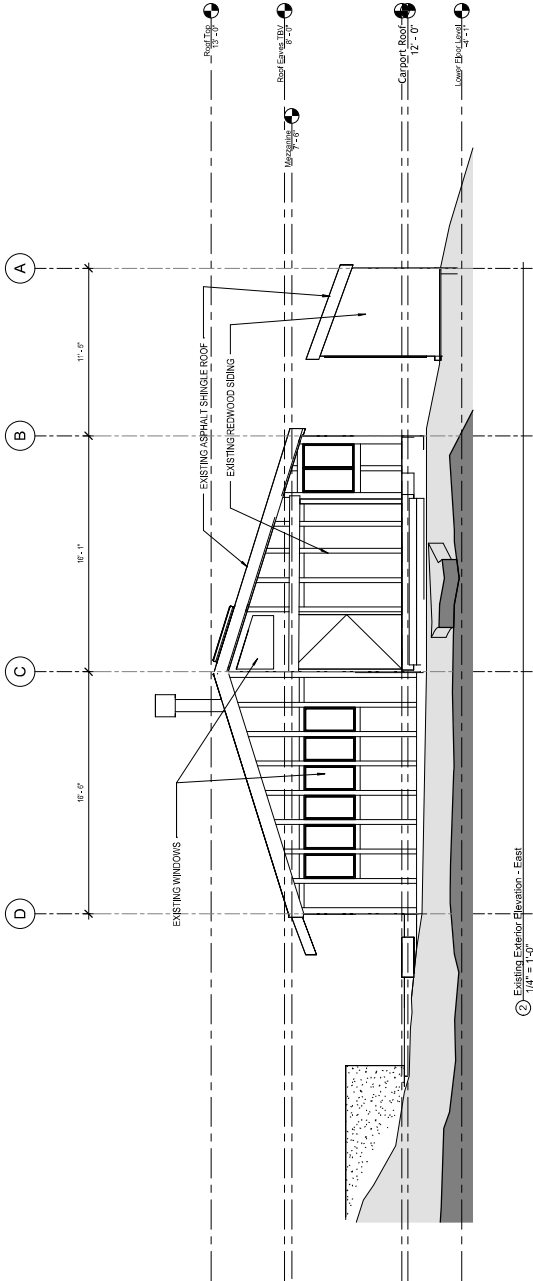
FOR PRINTING AGENCY USE

Issue #	Revised	Date
1	PLANNING	04/22/20

Issue #	Revised	Date
1	PLANNING	04/22/20

Exterior Elevations - Existing

A3.00



Salmon Creek Residence

435 McChristian Ave, Bodega Bay, CA

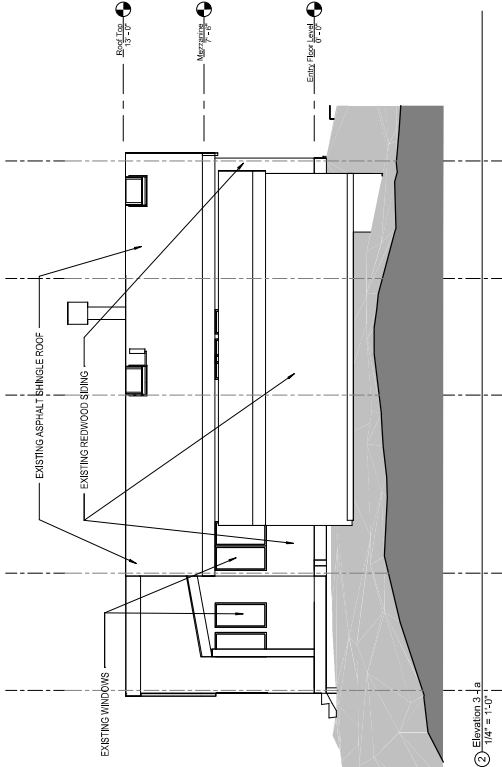
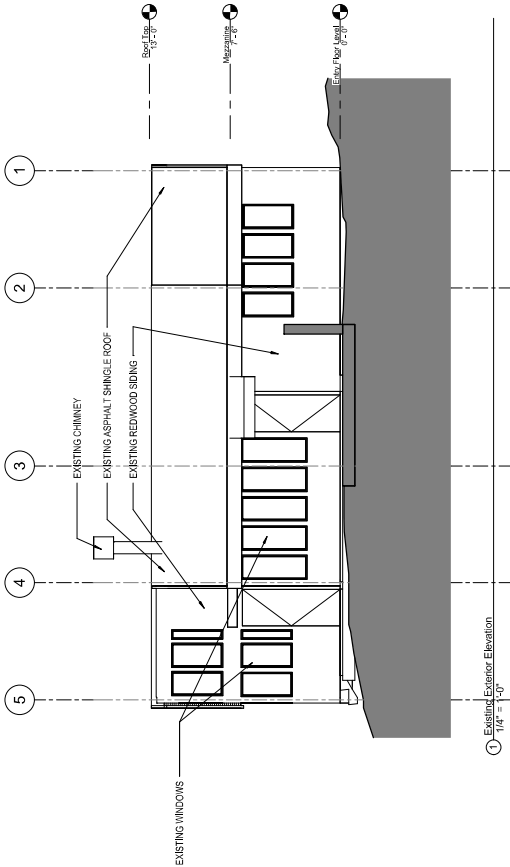
FOR PRINTING AGENCY USE

Issue #	Revised	Description	Date
1	PLANNING	PLANNING & DESIGN	04/22/20

Print Date:	4/22/2020 3:40:28 PM
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Scale:	1/4" = 1'-0"
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Exterior Elevations -
Existing

A3.01



Salmon Creek Residence

435 McChristian Ave, Bodega Bay, CA

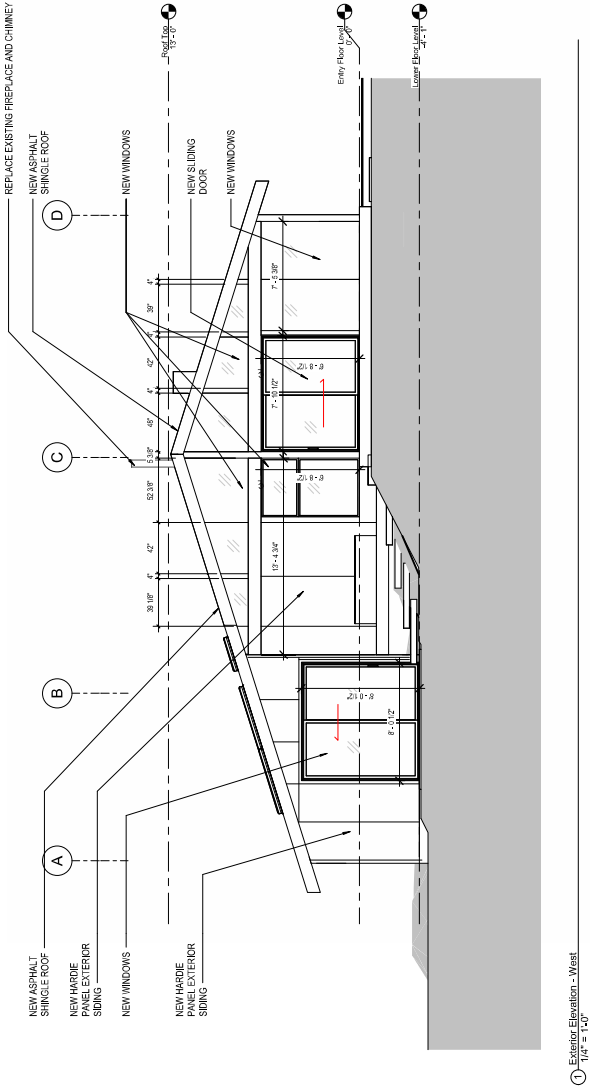
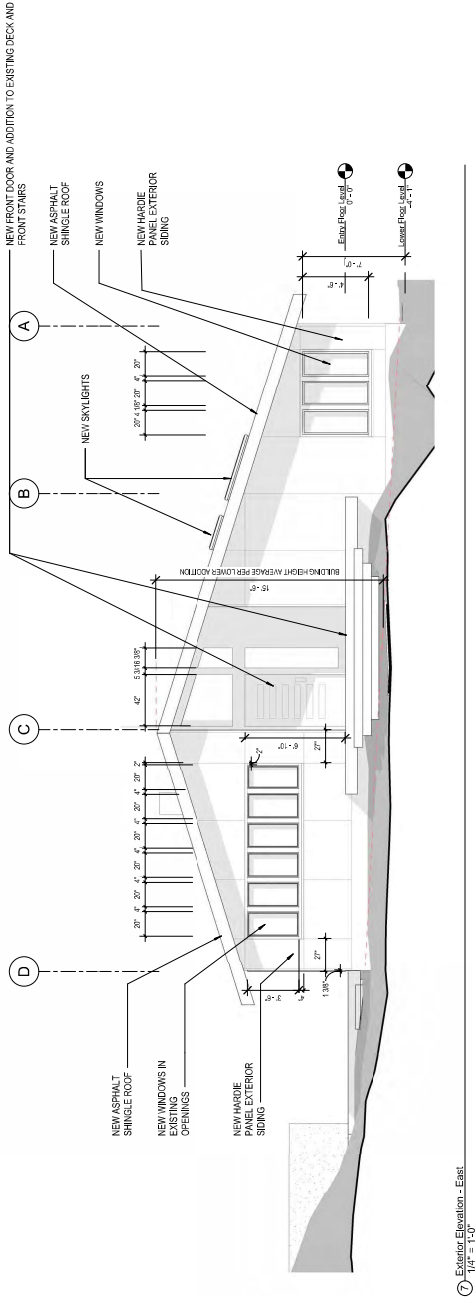
FOR PERMITTING AGENCY USE

Issue #	Revised	Description	Date
1		PLANNING STUDY	04/22/20

Project Date:	4/22/2020 3:40:30 PM
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Exterior
Elevations -
Proposed

A3.02



Salmon Creek Residence

435 McChristian Ave, Bodega Bay, CA

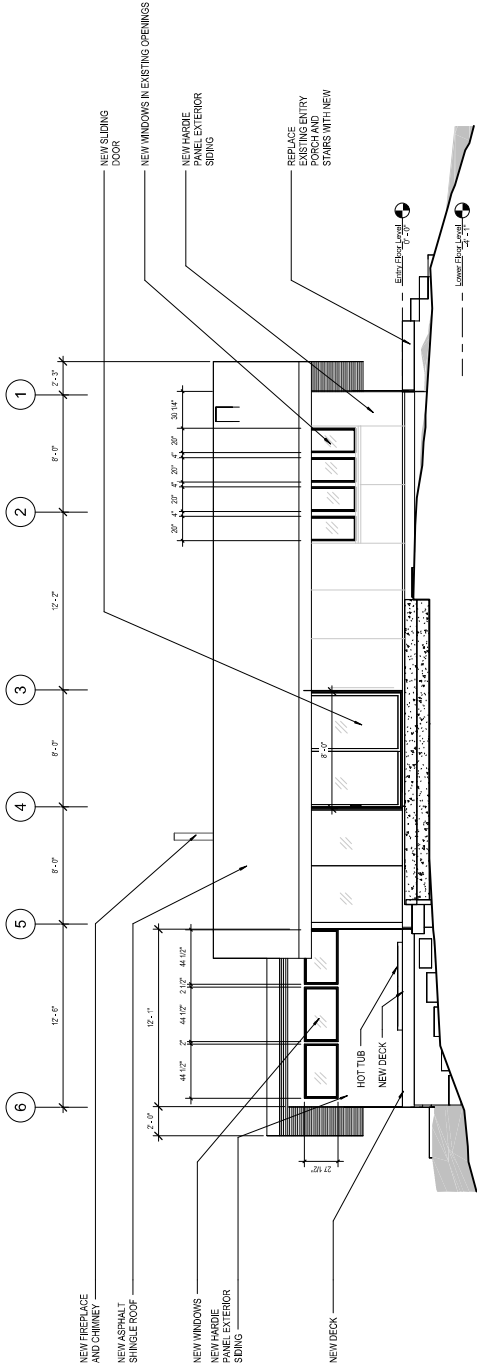
FOR PRINTING AGENCY USE

Issue #	Revised	Revisions	Date
1		PLANNING & DESIGN	04/22/20

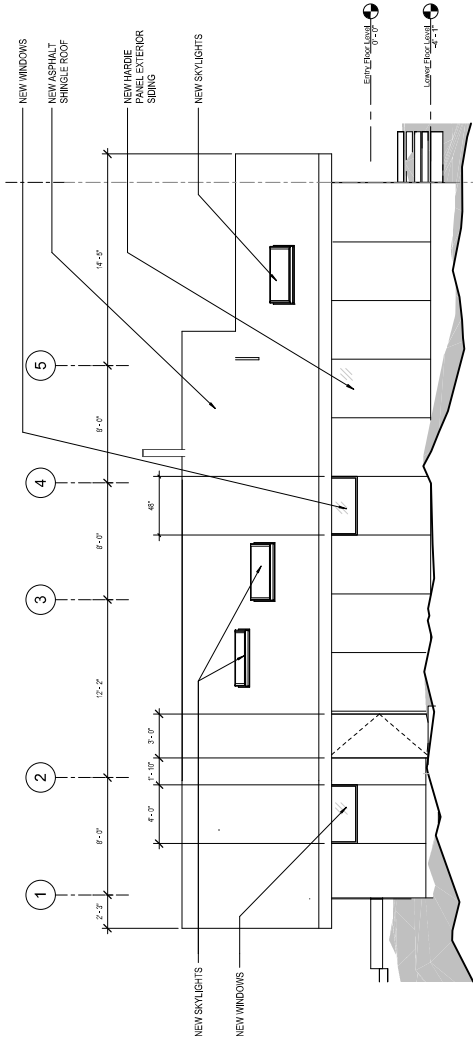
Project Date	4/22/2020 3:40:30 PM
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Scale	1/4" = 1'-0"
3044 Using and water related drawings. 1/4" = 1'-0"	
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Exterior Elevations - Proposed

A3.03

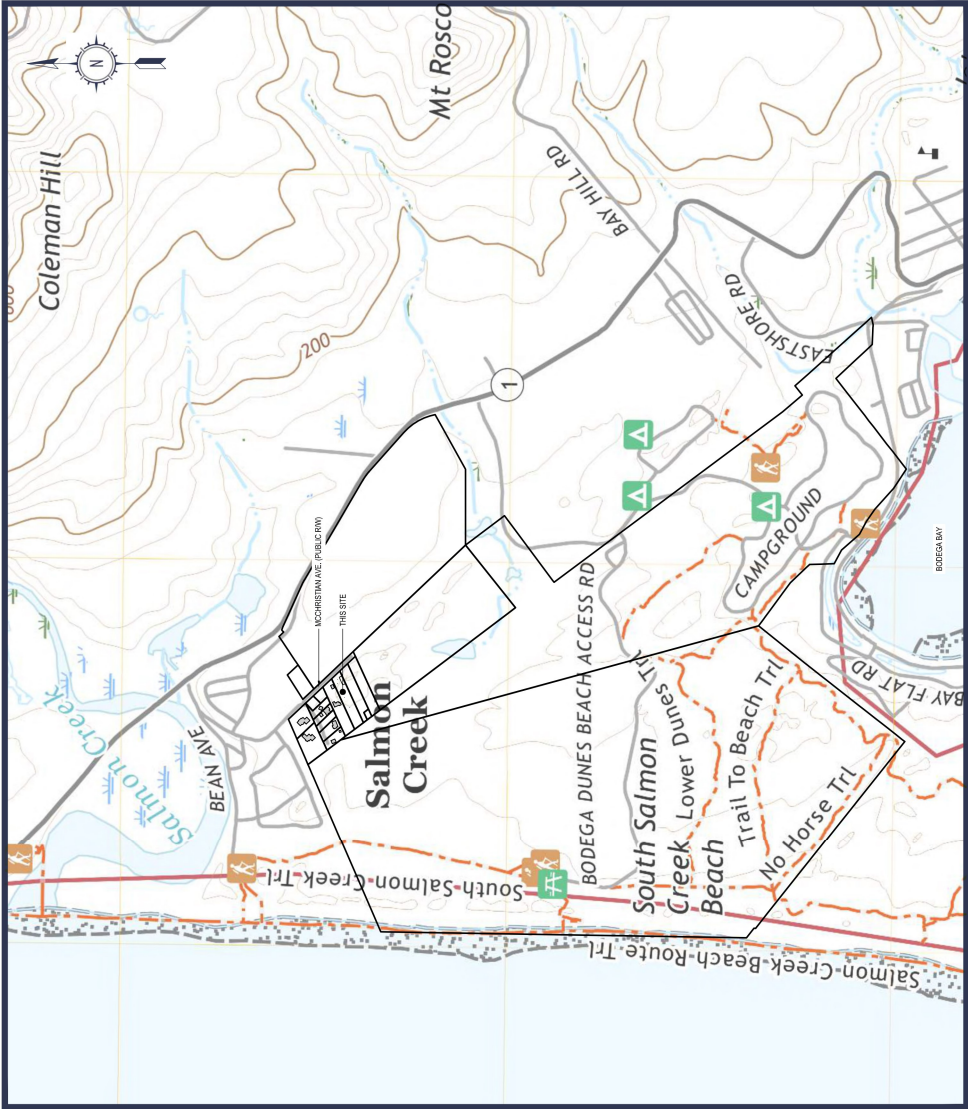


① Exterior Elevation - South
1/4" = 1'-0"

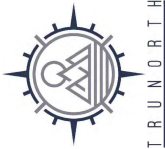


② North Elevation
1/4" = 1'-0"

LANDS OF MILLER TRUST
MILLER RESIDENCE ADDITION
435 MCCHRISTIAN AVE, BODEGA BAY
APN: 100-230-006



USGS QUAD MAP
Scale: 1" = 500'



**MILLER
RESIDENCE
ADDITION**

OWNER INFORMATION:

PRINGL MILLER
TRUST

SITE INFORMATION:

435 MCCHRISTIAN AVE
BODEGA BAY, CA
APN: 100-230-006



PUBLISHED

4/2/2028

SHEET TITLE:

**USGS &
VICINITY MAP**

SHEET NUMBER:

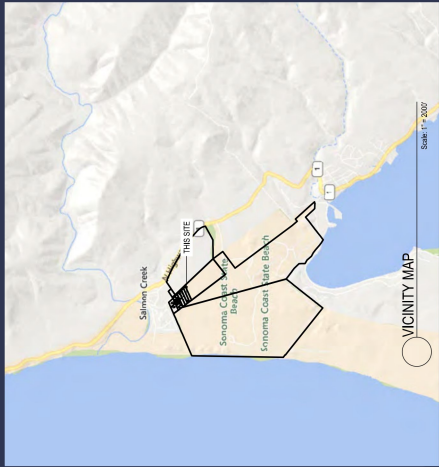


EXHIBIT NOTES:

HORIZONTAL COORDINATE SYSTEM:

VERTICAL DATUM:

UNITS:

US SURVEY FEET

CALIFORNIA STATE AVE II - NAD83

SONOMA VEG MAP 2011 LDMR - NAVD83

THE SONOMA COUNTY VEGETATION MAPPING AND LEAD PROGRAM (HTPS://SONOMAVEG.MAP.ORG) AND THE UNIVERSITY OF CALIFORNIA, BERKELEY'S LAND AND PHOTOGRAPHIC DATA COLLECTION FOR ALL OF SONOMA COUNTY (PLATE 2014). PROJECT PLANNERS INCLUDE: MASA, THE

SONOMA COUNTY INFORMATION SYSTEMS DEPARTMENT, THE SONOMA COUNTY TRANSPORTATION AND PUBLIC WORKS

DEPARTMENT, THE CALIFORNIA DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS, THE CALIFORNIA DEPARTMENT OF

WATER RESOURCES, THE CALIFORNIA DEPARTMENT OF REVENUE AND TAX SERVICES, THE CALIFORNIA DEPARTMENT OF

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TRUNORTH

MILLER
RESIDENCE
ADDITION

OWNER INFORMATION:

PRINGL MILLER
TRUST

SITE INFORMATION:

435 MCCHRISTIAN AVE
BODEGA BAY, CA
APN: 100-230-006

For Review
04/02/2026 12:40:01 PM

PUBLISHED 4/2/2026

SHEET TITLE:

SITE EXHIBIT

SHEET NUMBER:





March 20, 2026

Pringl Miller
P.O. Box 672
Bodega Bay, CA 94923

RE: 435 McChristian Avenue, Sonoma County, California (APN: 100-230-006) (WRA Project #350213)

Ms. Miller,

This letter is intended to summarize the methods, results, and recommendations of a biological resources assessment (BRA) at your property located at 435 McChristian Avenue, Sonoma County (Study Area). It is our understanding that you are proposing to remodel an existing single-family residence and build a new carport, and that Sonoma County has requested a review of biological resources. The following addresses all potential and present sensitive biological resources in the Study Area that could be affected by the proposed project and provides recommendations for preventing impacts to such in conformance with Sonoma County Codes, including the Local Coastal Program (LCP), California Environmental Quality Act (CEQA), and California Coastal Act (CCA).

BACKGROUND AND METHODS

The Study Area is a single parcel (APN: 100-230-006) located on the edge of the Bodega Dunes in the Salmon Creek neighborhood. The property was developed between 1983 and 1993 and currently contains a single-family residence, outbuilding, concrete patio, decks, walkways, parking area, driveway, and associated infrastructure. As noted, the proposed project is a remodel of the residence with a slight alteration of the footprint. To ensure that sensitive biological resources are not impacted by the development, WRA conducted the following assessments/surveys in the Study Area.

On July 10, 2025, WRA biologists visited the Study Area to map land cover types, document plant and wildlife species present, and evaluate on-site habitat for the potential to support special-status species. Prior to the site visit, the WRA biologists reviewed literature resources and performed database searches to assess the potential for sensitive biological communities (e.g., wetlands) and special-status species (e.g., endangered plants), including:

- *Soil Survey of Sonoma County, California* (USDA 1972)
- Bodega Head 7.5-minute quadrangle (USGS 2012)
- Contemporary aerial photographs (Google Earth 2025)
- Historical aerial photographs (Historical Aerials 2025)
- National Wetlands Inventory (NWI; USFWS 2025a)
- California Aquatic Resources Inventory (CARI; SFEI 2025)
- California Natural Diversity Database (CNDDB; CDFW 2025)
- California Native Plant Society Electronic Inventory (CNPS 2025a)
- Consortium of California Herbaria (CCH 2025)
- USFWS Information for Planning and Consultation (USFWS 2025b)
- eBird Online Database (eBird 2025)
- CDFW Publication, *California Bird Species of Special Concern in California* (Shuford and Gardali 2008)
- CDFW and University of California Press publication *California Amphibian and Reptile Species of Special Concern* (Thomson et al. 2016)
- *Breeding Birds of Sonoma County, California* (Burridge 1995)
- *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003)
- *A Manual of California Vegetation, 2nd Edition* (Sawyer et al. 2009)
- *A Manual of California Vegetation Online* (CNPS 2025b)
- *Sonoma Vegetation Map* (Sonoma County 2015)
- *Preliminary Descriptions of the Terrestrial Natural Communities* (Holland 1986)
- *California Natural Community List* (CDFW 2018a)

Land Cover

Following the desktop assessment, the WRA biologists completed a field review to document: (1) land cover types (e.g., terrestrial communities, aquatic resources), (2) existing conditions and to determine if such provided suitable habitat for any special-status plant or wildlife species, (3) if and what type of aquatic natural communities (e.g., wetlands) were present, and (4) if special-status species were present.

Terrestrial land cover types were mapped and evaluated across the entire Study Area. In most instances, communities are delineated based on distinct shifts in plant assemblage (vegetation) and follow the *California Natural Community List* (CDFW 2018a), *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), *A Manual of California Vegetation, Online Edition* (CNPS 2025b), and *Sonoma Vegetation Map* (SVP; Sonoma County 2015). Any sensitive natural communities as described in the Sonoma County LCP (Sonoma County 2025) or General Plan (Sonoma County 2008) were considered.

Aquatic resources include Waters of the U.S., Waters of the State, and Streams, Lakes, and Riparian Habitat as defined in the CWA, Porter-Cologne Act, and CFGC, respectively. Sonoma County mandates setbacks from these aquatic resources and therefore requires mapping of the outward extent of such features. This site assessment does not constitute a formal wetland delineation; however, the surveys looked for superficial indicators of wetlands such as hydrophytic vegetation (i.e., plant communities dominated by wetland species), evidence of inundation or flowing water, saturated soils and seepage, and topographic depressions/swales. If streams potentially jurisdictional under the CWA and/or the CFGC are noted on a site, they are delineated using a mix of surveyed topography data, high resolution aerial photographs, and a sub-meter

GPS unit. The top-of-bank would be used to determine the extent of CFGC Section 1602 and 401 and for setting Sonoma County mandated setbacks.

Special-status Species

Potential occurrence of special-status species in the Study Area was evaluated by first determining which special-status species occur in the greater vicinity through a literature and database review. Database searches (i.e., CNDDB, CNPS) included the Arched Rock, Duncans Mills, Bodega Head, and Valley Ford USGS 7.5-minute quadrangle for special-status plants. The special-status wildlife evaluation was based on database searches for the entirety of Sonoma County. Suitable habitat conditions are based on physical and biological conditions of the site, as well as the professional expertise of the investigating biologists. The potential for each special-status species to occur in the Study Area was then determined according to the following criteria:

- No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- High Potential. All habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- Present. Species has been observed on the site or has been recorded (i.e. CNDDB, other reports) on the site in the recent past.

RESULTS

Land Cover Types

Land cover types observed by WRA within the Study Area include developed, iceplant mat, and European beachgrass sward (Attachment A).

Developed Area (no vegetation alliance). CDFW Rank: None. This land cover type constitutes 0.14 acres of the Study Area, of which 0.057 acre is situated in the Project Area (Attachment A). Developed areas are composed of a mix of hardscape (e.g., buildings, gravel road) and landscape (e.g., gardens). The vegetation and soils are highly altered providing virtually no habitat for native plants and very limited habitat for wildlife. Plants include a mix of landscape species and disturbance adapted herbs including rough cat's-ear (*Hypochaeris radicata*), hawkbit (*Leontodon saxatilis*), and English plantain (*Plantago lanceolata*). This land cover type is synonymous with the Developed biotic community in the SVM (Sonoma County 2015). This land cover type is not considered an Environmentally Sensitive Habitat Area (ESHA) under the CCA or LCP, nor is it considered sensitive by Sonoma County, CDFW, or any other regulatory entity.

Iceplant Mat (*Mesembryanthemum* spp.-*Carpobrotus* spp. Herbaceous Semi-Natural Alliance). CDFW Rank: None. Iceplant mats are known from the outer Coast Ranges, Central Valley, Peninsular Ranges, and Bay Area situated on sandy to loamy soils on disturbed areas, bluffs, and coastal dunes (Sawyer et al. 2009, CNPS 2025b). Within the Study Area, iceplant mats total approximately 0.31 acre, of which 0.003 acre is situated in the Project Area. These mats are dominated by the Cal-IPC Rank High invasive species iceplant (*Carpobrotus edulis*), with notable cover of other non-native plants including European beachgrass (*Ammophila arenaria*), Italian thistle (*Carduus pycnocephalus*), rip-gut brome (*Bromus diandrus*), and sheep sorrel (*Rumex acetosella*). This land cover type is synonymous with the *Mesembryanthemum* spp.-*Carpobrotus* spp. Provisional Alliance biotic community in the SVM (Sonoma County 2015). This land cover type is not considered an ESHA under the CCA or LCP, nor is it considered sensitive by Sonoma County, CDFW, or any other regulatory entity.

European Beachgrass Sward (*Ammophila arenaria* Herbaceous Semi-Natural Alliance). CDFW Rank: None. European beachgrass swards are known from the outer Coast Ranges and Peninsular Ranges situated on sands of coastal bars, foredunes, river mouths, and coastal spits (Sawyer et al. 2009, CNPS 2025b). Within the Study Area, European beachgrass swards total approximately 0.56 acre, of which 0.005 acre is situated in the Project Area. These swards are dominated by the Cal-IPC Rank High invasive species European beachgrass (*Ammophila arenaria*), with notable cover of other non-native plants including iceplant (*Carpobrotus edulis*), rip-gut brome (*Bromus diandrus*), big rattlesnake grass (*Briza maxima*), yellow bush lupine (*Lupinus arboreus*), and sheep sorrel (*Rumex acetosella*). This land cover type is synonymous with the *Ammophila arenaria* Provisional Alliance biotic community in the SVM (Sonoma County 2015). This land cover type is not considered an ESHA under the CCA or LCP, nor is it considered sensitive by Sonoma County, CDFW, or any other regulatory entity.

Special-status Species

Special-status Plants

Based upon a review of the resource databases (CNPS and CNNDDB), a total of 68 special-status plant species have been documented within the four 7.5-minute quadrangles listed above. Of these 68 special-status plants 19 have the potential to occur in the Study Area. The remaining 49 special-status plants are unlikely or have no potential to occur in the Study Area for one or more of the following reasons:

- Hydrologic conditions (e.g., tidal, riverine) necessary to support the special-status plant species are not present in the Study Area.
- Edaphic (soil) conditions (e.g., clays, serpentine) necessary to support the special-status plant species are not present in the Study Area.
- Topographic conditions (e.g., north-facing slope, montane) necessary to support the special-status plant species are not present in the Study Area.
- Unique pH conditions (e.g., alkali scalds, acidic bogs) necessary to support the special-status plant species are not present in the Study Area.
- Associated natural communities (e.g., interior chaparral, tidal marsh) necessary to support the special-status plant species are not present in the Study Area.

- The Study Area is geographically isolated (e.g., below elevation, coastal environs) from the documented range of the special-status plant species.
- Land use history and contemporary management (e.g., absence of mowing or grazing) has degraded the localized habitat necessary to support the special-status plant species.
- Recent evaluation of historical records has determined that these species are extirpated from the Study Area region.

A single floristic survey was conducted during the site visit which was conducted during a period sufficient to identify all 19 special-status plants with the potential to occur in the Study Area through floral and/or vegetative characters. One special-status plant was observed in the Study Area, while the remaining 18 were not observed and are considered absent. The following summarize each of plants.

San Francisco spineflower (*Chorizanthe cuspidata* var. *cuspidata*), CRPR 1B. Moderate Potential. San Francisco spineflower is an annual forb in the buckwheat family (Polygonaceae) that blooms from April to August. It typically occurs on sandy substrate of terraces and slopes in coastal bluff scrub, coastal dune, coastal prairie, and coastal scrub habitat at elevations ranging from 10 to 700 feet (CDFW 2025a, CNPS 2025a). Eight subpopulations totaling 270 individuals over 310 square feet are present in the Study Area entirely located in openings in European beachgrass swards and iceplant mats (Attachment A).

The following 18 special-status plants were not observed in the Study Area:

- Pink sand-verbena (*Abronia umbellata* var. *breviflora*); CRPR 1B
- Blasdale's bentgrass (*Agrostis blasdalei*); CRPR 1B
- Coastal bluff morning-glory (*Calystegia purpurata* ssp. *saxicola*); CRPR 1B
- Monterey paintbrush (*Castilleja latifolia*); CRPR 4
- Point Reyes ceanothus (*Ceanothus gloriosus* ssp. *gloriosus*); CRPR 4
- Woolly-headed spineflower (*Chorizanthe cuspidata* var. *villosa*); CRPR 1B
- Sonoma spineflower (*Chorizanthe valida*); FE, SE, CRPR 1B
- Mendocino dodder (*Cuscuta pacifica* var. *papillate*); CRPR 1B
- Bluff wallflower (*Erysimum concinnum*); CRPR 1B
- San Francisco wallflower (*Erysimum franciscanum*); CRPR 4
- Blue coast gilia (*Gilia capitata* ssp. *chamissonis*); CRPR 1B
- Pacific gilia (*Gilia capitata* ssp. *pacifica*); CRPR 1B
- Dark-eyed gilia (*Gilia millefoliata*); CRPR 1B
- Short-leaved evax (*Hesperevax sparsiflora* var. *brevifolia*); CRPR 1B
- Point Reyes horkelia (*Horkelia marinensis*); CRPR 1B
- Perennial goldfields (*Lasthenia californica* ssp. *macrantha*); CRPR 1B
- Large-flowered leptosiphon (*Leptosiphon grandifloras*); CRPR 4
- Tidestrom's lupine (*Lupinus tidestromii*); FE, SE, CRPR 1B

Special-status Wildlife

A total of 64 special-status wildlife species have been documented in Sonoma County (CDFW 2025a). The Study Area has the potential to support four (4) of these special-status wildlife. The remaining 60 species are unlikely or have no potential to occur due to one or more of the following reasons:

- Aquatic habitats (e.g., estuaries, ponds) necessary to support the special-status wildlife species are not present in the Study Area.
- Vegetation habitats (e.g., coast redwood forest, coastal prairie, chaparral) that provide nesting and/or foraging resources necessary support the special-status wildlife species are not present in the Study Area.
- Physical structures (e.g., mines/caves) necessary to provide nesting, cover, and/or foraging habitat to support the special-status wildlife species are not present in the Study Area.
- Host plants (e.g., dog violet, harlequin lotus) necessary to provide larval and nectar resources for the special-status wildlife species are not present in the Study Area
- The Study Area is outside (e.g., north of, west of) of the special-status wildlife species documented nesting range.

Those species with the potential to occur are listed as follows:

- Short-eared owl (*Asio flammeus*); SSC
- Northern harrier (*Circus hudsonius*); SSC
- White-tailed kite (*Elanus leucurus*); SFP
- Loggerhead shrike (*Lanius ludovicianus*); SSC

RECOMMENDATIONS

Section 30240 of the CCA and Section 8 under the Open Space and Resource Conservation (OSRC) Element of the Sonoma County LCP outline the governance of ESHA. ESHA is defined as:

“... any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.”

The LCP sites five specific ESHA that should be evaluated in context of project activities and their presence in a specific site:

- Any habitat area that is rare or especially valuable from a local, regional, or statewide perspective.
- Areas that contribute to the viability of plant or animal species designated as rare, threatened, or endangered under State or Federal law.
- Areas that contribute to the viability of species designated as Fully Protected or Species of Special Concern under State law or regulations.
- Areas that contribute to the viability of plant and animal life for which there is compelling evidence of rarity, or a species or habitat that is considered to have a special nature or role in the ecosystem.
- Old growth [at least 150 years old] Redwood and Douglas fir trees and associated forest habitat. Because of their rarity and biological importance, isolated old growth Redwood and Douglas fir trees shall be protected as well as intact old growth forest habitat.

Additionally, the LCP list fourteen (14) criteria to be considered when determining whether additional areas should be considered ESHA¹:

- Features included maps presented in the LCP
- Federally- and State-listed Candidate/Rare/Threatened/Endangered Plants and Wildlife, as well as habitats that support such
- California Native Plant Society (CNPS) Ranked 1 and 2 Plants
- California Department of Fish and Wildlife (CDFW) Global and State 1-3 Ranked Vegetation Communities/Plants/Wildlife
- California Species of Special Concern (SSC) and Fully Protected Species (SFP)
- Tree stands that support nesting raptors, roosting monarchs, and egret/heron rookeries
- Genetically special populations
- Habitat corridors, ecological linkages, and areas provisioning/supporting critical ecosystem services

Likewise, the LCP discusses Streams and Riparian Corridors, Marine Habitats, and Terrestrial Habitats and provides allowable uses. The LCP calls for setback requirements for ESHA and other biological resources; some setbacks may be reduced under certain circumstances, but in no case shall an ESHA buffer be less than 50 feet.

- Riparian Corridor: 100 feet from vegetation edge
- Stream: 100 feet from the top-of-bank
- Russian River 200 feet
- Wetlands: 100 feet (may be reduced to 30 feet or 50 feet depending on circumstance)
- Nesting Special-status Birds: 500 feet (may be reduced to no less than 100 feet)
- Nesting Passerines: 300 feet (may be reduced)
- Heron/Egret Rookeries: 600 feet (may be reduced)
- Nesting Raptors: 500 feet (may be reduced)

As noted, the proposed project is the remodeling of the existing residence to slightly altered footprint. The following recommendations are forwarded to avoid impacts on sensitive biological resources.

Land Covers

Land covers within the Study Area overlain with the proposed Project Area is included in Attachment A. The Project Area is situated entirely within non-sensitive land cover types of developed areas, European beachgrass swards, and iceplant mats. The latter two land cover types are dominated by plants ranked as High on Cal-IPC list of invasive species. Both species effectively stabilize coastal dunes altering the native flora and dune morphology. Dunes are discussed in the OSRC Element with the implication that they are ESHA.

Although the Study Area is underlain by dune sands and is mapped as dune in Figure C-OSRC-2i of the LCP it has become largely stabilized due to invasion of these plants. Furthermore, the eastern portion of the Study Area around the residence and driveway has experienced several

¹ All fourteen are included here, with several collated into a single bullet point

iterations of disturbance and degradation including the necessary importation of fill material to build the residence and other developed elements.

The proposed project has been intentionally and necessarily sited within the developed area to the greatest extent possible. A total of 348 square feet will be sited in iceplant mat and European beachgrass sward land cover types, which are adjacent to the existing development. As noted these areas are severely degraded and support 100 percent absolute cover of non-native invasive species. Therefore, these areas are not sensitive biological resources, should not be considered ESHA, and should require no additional consideration. No further actions are recommended for land cover types.

Special-status Species

Special-status Plants

The Study Area contains eight subpopulations of San Francisco spineflower. They are universally situated in openings underlain by loose sands. Because this species has a CNPS Rank of 1B, it is explicitly considered an ESHA according to the LCP. This species is a diminutive annual that requires a certain degree of disturbance (i.e., shifting, loose sands). The proposed project is not located near these subpopulations and a 50-foot buffer with the following restrictions will be sufficient to provide protection.

Recommendation 1: Use the existing parking area and other existing developed areas for laydown of materials and equipment. Inform construction personnel of the presence of these subpopulations and require that they work within the developed areas to the greatest extent feasible.

Special-status Wildlife

The Study Area has the potential to support four special-status wildlife species, all of which are birds (short-eared owl, northern harrier, white-tailed kite, loggerhead shrike). Additionally, the Study Area has the potential to support non-status birds that are afforded protections under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGF). The following recommendations are forwarded to ensure that nesting special-status and non-status birds are not impacted by the proposed project.

Recommendation 2: Vegetation removal and initial construction should occur from August 16 to January 31, outside of the general bird nesting season. If relatively high decibel-level² construction activities begin prior to the nesting season and continue to occur consistently into the nesting season, then general nesting bird surveys would not be recommended. If at any time during the nesting season (February 1 through August 15) that construction activities are suspended for seven or more days, then a general nesting bird survey should be conducted.

The survey should cover the Project Area and surrounding areas within 600 feet. Survey methods would involve the biologist(s) traversing the site in the early morning to observe and document bird activity. The survey should include all potential bird nesting substrates,

² Steady noise at levels of 70 or greater decibels; this threshold is approximately the sound level of a multi-party conversation at 3 feet distance.

with a particular focus on dense herbaceous vegetation; cavities, platforms, and fissures in trees; large trees and shrubs; etc. Avian territorial behavior (e.g., singing, chasing intruders), breeding behavior (e.g., copulation, carrying nesting material, carrying food to nest), and the presence of active nest structures and/or pre-fledged juvenile birds, are sufficient evidence to determine that birds are nesting and require protection. If active bird nests are found during the survey, an appropriate species-specific no-disturbance buffer should be established by the qualified biologist. Once it is determined that young have fledged (left the nest) or the nest has otherwise become inactive (e.g., due to predation), the buffer may be lifted, and work may be initiated within the former buffer area.

Please contact me if you have questions or require additional information. Sincerely,



Aaron Arthur
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ENCLOSURES:

Attachment A: Figures
Attachment B: List of Observed Species
Attachment C: Potential Special-status Species in the Study Area
Attachment D: Representative Photographs
Attachment E: Statement of Qualifications

ATTACMENT A – FIGURES



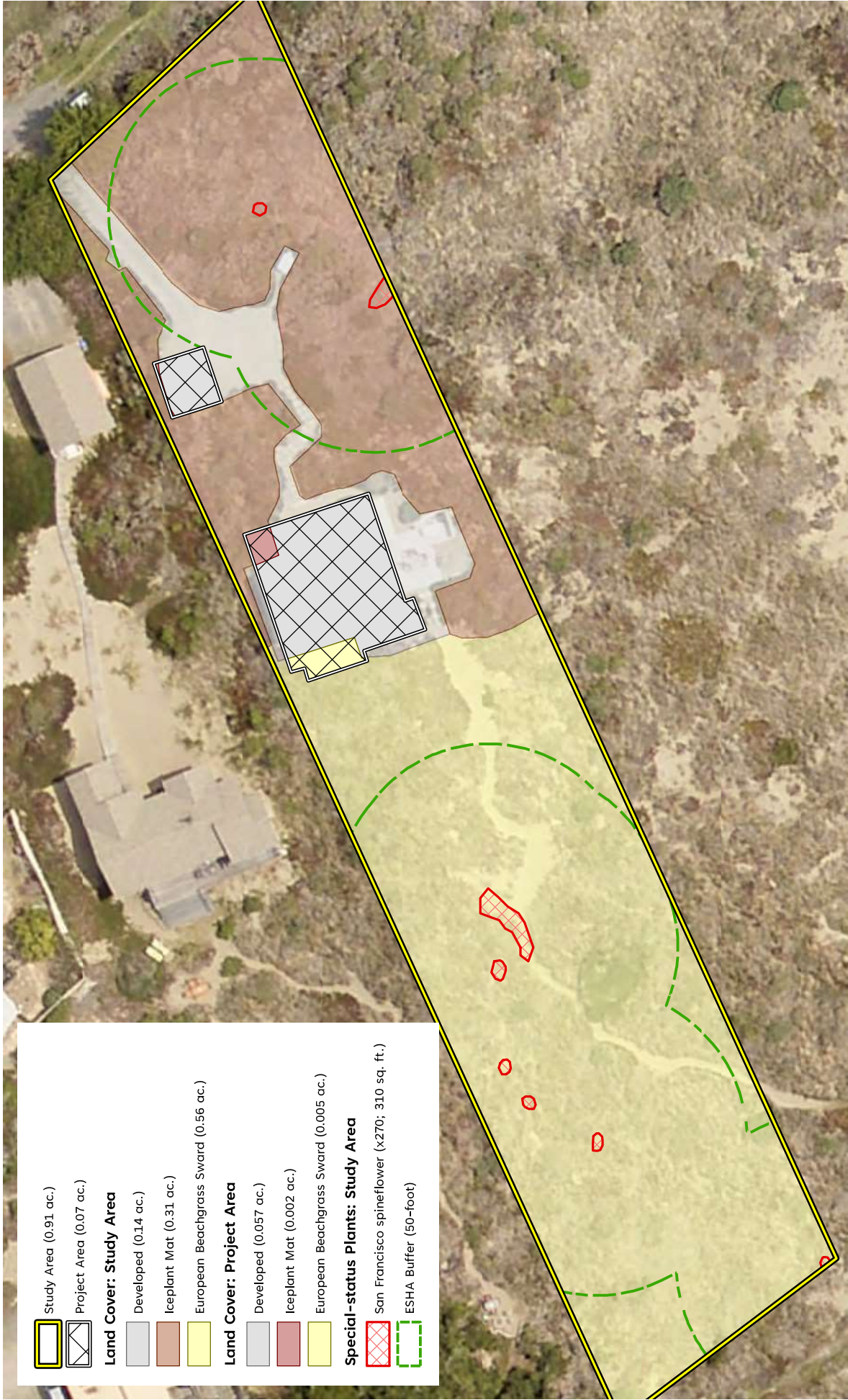
Sources: National Geographic, WRA | Prepared By: Arthur, 6/14/2025

Figure A-1. Study Area Location

435 McChristian Ave.
Sonoma County, CA

0 0.75 1.5
Miles

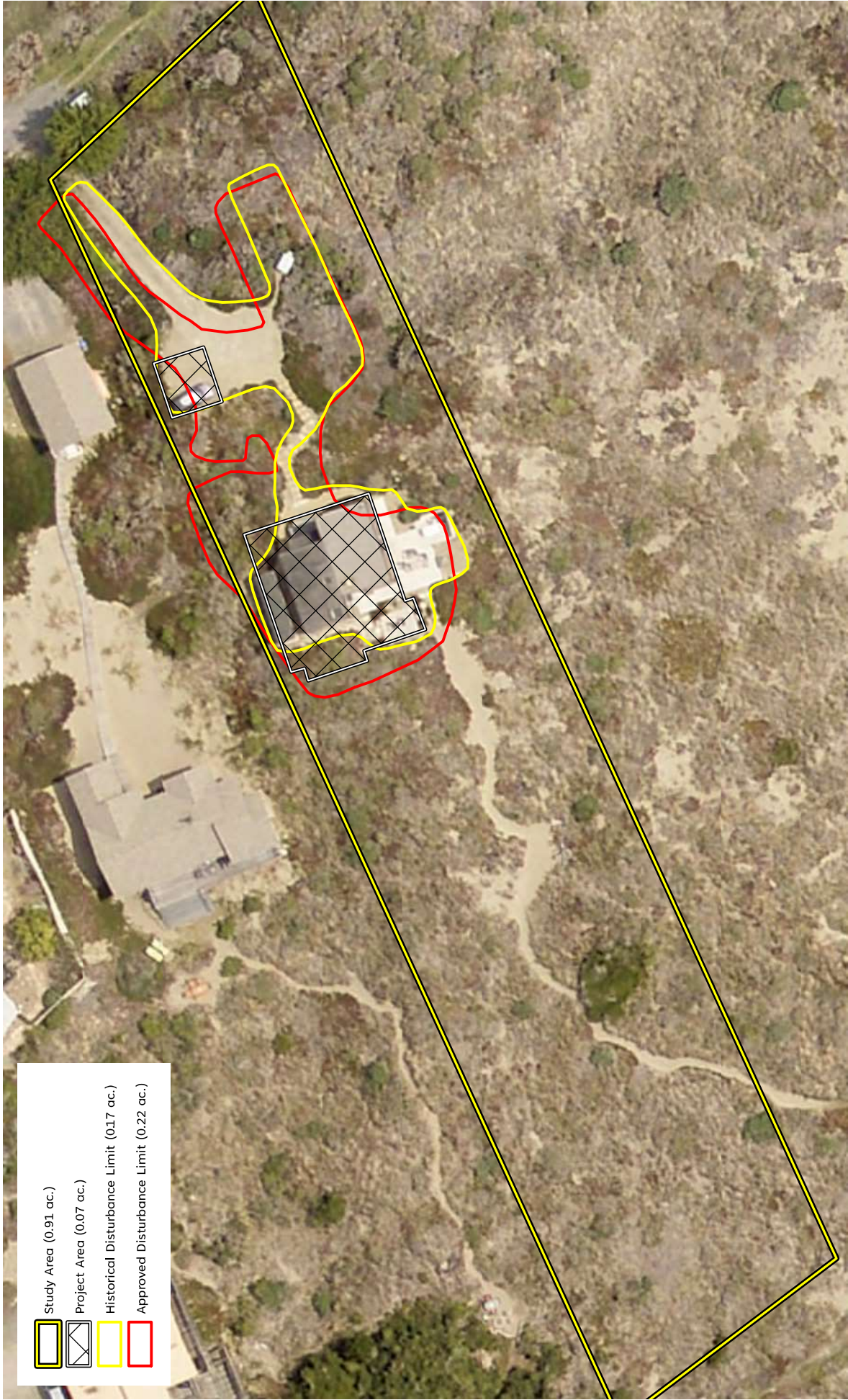




Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: Arthur, 8/13/2025

Figure A-2. Land Cover & Special-status Plants: Study Area & Project Area

435 McChristian Ave.
Sonoma County, CA



Sources: DigitalGlobe 2006 Aerial, WRA | Prepared By: Arthur, 8/13/2025

Figure A-3. Historical Disturbance Limit & Approved Disturbance Limit

435 McChristian Ave.
Sonoma County, CA



ATTACHMENT B – LIST OF OBSERVED SPECIES

Table B-1. Plant species observed in the Study Area: July 10, 2025

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS ¹	INVASIVE STATUS ²	WETLAND INDICATOR ³
Aizoaceae	<i>Carpobrotus edulis</i>	iceplant	perennial forb	non-native	--	high	NL
Apiaceae	<i>Daucus pusillus</i>	American wild carrot	annual forb	native	--	--	NL
Asphodelaceae	<i>Kniphofia uvaria</i>	redhot poker	perennial forb	non-native	--	--	NL
Asteraceae	<i>Achillea millefolium</i>	common yarrow	perennial forb	native	--	--	FACU
Asteraceae	<i>Baccharis pilularis</i> ssp. <i>consanguinea</i>	coyote brush	evergreen shrub	native	--	--	NL
Asteraceae	<i>Carduus pycnocephalus</i>	Italian thistle	annual forb	non-native	--	moderate	NL
Asteraceae	<i>Hypochaeris radicata</i>	rough cat's-ear	perennial forb	non-native	--	moderate	FACU
Asteraceae	<i>Leontodon saxatilis</i> ssp. <i>longirostris</i>	hawkbit	annual forb	non-native	--	--	FACU
Cupressaceae	<i>Hesperocyparis macrocarpa</i>	Monterey cypress	evergreen tree	native	--	--	NL
Fabaceae	<i>Lupinus arboreus</i>	yellow bush lupine	evergreen shrub	native	--	limited	NL
Geraniaceae	<i>Erodium cicutarium</i>	red-stemmed filaree	annual forb	non-native	--	limited	NL
Geraniaceae	<i>Geranium molle</i>	woodland geranium	perennial forb	non-native	--	assessed	NL
Onagraceae	<i>Camissoniopsis cheiranthifolia</i>	beach evening-primrose	perennial forb	native	--	--	NL
Papaveraceae	<i>Eschscholzia californica</i>	California poppy	perennial forb	native	--	--	NL
Pinaceae	<i>Pinus contorta</i> ssp. <i>contorta</i>	shore pine	evergreen tree	native	--	--	FAC
Pinaceae	<i>Pinus radiata</i>	Monterey pine	evergreen tree	native	--	limited	NL
Pinaceae	<i>Pseudotsuga menziesii</i>	Douglas fir	evergreen tree	native	--	--	FACU
Plantaginaceae	<i>Plantago lanceolata</i>	English plantain	perennial forb	non-native	--	limited	FAC
Poaceae	<i>Aira caryophyllea</i>	silver hairgrass	annual graminoid	non-native	--	assessed	FACU
Poaceae	<i>Ammophila arenaria</i>	European beachgrass	perennial graminoid	non-native	--	high	FACU
Poaceae	<i>Avena barbata</i>	wild oat	annual graminoid	non-native	--	moderate	NL
Poaceae	<i>Briza maxima</i>	big rattlesnake grass	annual graminoid	non-native	--	limited	NL
Poaceae	<i>Bromus diandrus</i>	rip-gut brome	annual graminoid	non-native	--	moderate	NL
Poaceae	<i>Bromus hordeaceus</i>	soft chess	annual graminoid	non-native	--	limited	FACU
Poaceae	<i>Dactylis glomerata</i>	orchard grass	perennial graminoid	non-native	--	limited	FACU
Poaceae	<i>Festuca arundinacea</i>	tall fescue	perennial graminoid	non-native	--	moderate	FACU

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS ¹	INVASIVE STATUS ²	WETLAND INDICATOR ³
Poaceae	<i>Festuca bromioides</i>	brome fescue	perennial graminoid	non-native	--	--	FACU
Polygonaceae	<i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	San Francisco spineflower	annual forb	native	CRPR 1B	--	NL
Polygonaceae	<i>Rumex acetosella</i>	sheep sorrel	perennial forb	non-native	--	moderate	FACU

All species identified using the *Jepson Manual*, 2nd Edition (Baldwin et al. 2012), *The Jepson Flora Project* (eFlora 2025), and *A Flora of Sonoma County* (Best et al. 1996); nomenclature follows *The Jepson Flora Project* (eFlora 2025) unless otherwise noted

Sp.: “species”, intended to indicate that the observer was confident in the identity of the genus but uncertain which species

Cf.: “confer” or “compared with”, intended to indicate a species appeared to the observer to be specific, but was not identified based on diagnostic characters

¹Rare Status: The CNPS Inventory of Rare and Endangered Plants (CNPS 2025a)

FE: Federal Endangered

FT: Federal Threatened

SE: State Endangered

ST: State Threatened

SR: State Rare

CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere

CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere

CRPR 2A: Plants presumed extirpated in California, but more common elsewhere

CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere

CRPR 3: Plants about which we need more information – a review list

CRPR 4: Plants of limited distribution – a watch list

²Invasive Status: California Invasive Plant Inventory (Cal-IPC 2006)

High: Severe ecological impacts; high rates of dispersal and establishment; most are widely distributed ecologically.

Moderate: Substantial and apparent ecological impacts; moderate-high rates of dispersal, establishment dependent on disturbance; limited moderate distribution ecologically

Limited: Minor or not well documented ecological impacts; low-moderate rate of invasiveness; limited distribution ecologically

Assessed: Assessed by Cal-IPC and determined to not be an existing current threat

³Wetland Status: National List of Plant Species that Occur in Wetlands, Arid West Region (Corps 2022)

OBL: Almost always a hydrophyte, rarely in uplands

FACW: Usually a hydrophyte, but occasionally found in uplands

FAC: Commonly either a hydrophyte or non-hydrophyte

FACU: Occasionally a hydrophyte, but usually found in uplands

UPL: Rarely a hydrophyte, almost always in uplands

NL: Rarely a hydrophyte, almost always in uplands

NI: No information; not factored during wetland delineation

Table B-2. Wildlife species observed in and around the Study Area: July 10, 2025

SCIENTIFIC NAME	COMMON NAME
Mammals	
<i>Lepus californicus</i>	black-tailed jackrabbit
<i>Odocoileus hemionus columbianus</i>	black-tailed deer
Birds	
<i>Aphelocoma californica</i>	California scrub jay
<i>Buteo jamaicensis</i>	red-tailed hawk
<i>Cathartes aura</i>	turkey vulture
<i>Corvus corax</i>	common raven
<i>Haemorhous mexicanus</i>	house finch
<i>Melospiza melodia</i>	song sparrow
<i>Melospiza crissalis</i>	California towhee
<i>Mimus polyglottos</i>	northern mockingbird

ATTACHMENT C – SPECIAL-STATUS SPECIES EVALUATION

Table C. Potential for Special-status Species to Occur in the Study Area. List compiled from the CDFW BIOS database (CDFW 2025a), USFWS IPaC Report (USFWS 2025a), and CNPS Electronic Inventory (CNPS 2025a) searches. For plants, the Arched Rock, Duncans Mills, Bodega Head, and Valley Ford USGS 7.5' quadrangles were included in the search. For wildlife, the entirety of Sonoma County was considered.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
PLANTS				
<i>Abronia umbellata</i> var. <i>breviflora</i> pink sand-verbena	CRPR 1B	Coastal dunes, coastal strand; located on foredunes and interdunes with sparse cover. Elevation range: 0 – 35 feet. Blooms: June – October.	Moderate Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.
<i>Agrostis blasdalei</i> Blasdale's bentgrass	CRPR 1B	Coastal dunes, coastal bluff scrub, coastal prairie; on sandy or gravelly soil near exposed rock; often in nutrient-poor soil. Elevation range: 15 – 490 feet. Blooms: May – July.	Moderate Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.
<i>Allium peninsulare</i> var. <i>franciscanum</i> Franciscan onion	CRPR 1B	Cismontane woodland, valley and foothill grassland; on clay substrate, often derived from serpentine. Elevation range: 170 – 985 feet. Blooms: May – June.	No Potential. The Study Area does not contain rocky, clay grassland or woodland habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Alopecurus aequalis</i> var. <i>sonomensis</i> Sonoma alopecurus	FE; CRPR 1B	Freshwater marshes and swamps, riparian scrub; closely associated with other wetland species. Elevation range: 15 – 1200 feet. Blooms: May – July.	No Potential. The Study Area does not contain perennial wetland (freshwater marsh, riparian wetland) habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Amorpha californica</i> var. <i>napensis</i> Napa false indigo	CRPR 1B	Openings in broadleaf upland forest, chaparral, cismontane woodland. Elevation range: 395 – 6560 feet. Blooms: April – July.	No Potential. The Study Area does not contain chaparral, woodland, or forest habitat to support this species.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	CRPR 1B	Cismontane woodland, valley and foothill grassland, coastal bluff scrub; located on gravelly substrates, frequently derived from serpentine. Elevation range: 10 – 1625 feet. Blooms: March – June.	No Potential. The Study Area does not contain coastal bluff scrub, rocky grassland, or woodland habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Arabis blepharophylla</i> coast rock cress	CRPR 4	Broadleaf upland forest, coastal bluff scrub, coastal prairie, coastal scrub; located on rocky sites, often on coastal bluffs. Elevation range: 10 – 3575 feet. Blooms: February – May.	No Potential. The Study Area does not contain rocky habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Arctostaphylos bakeri</i> ssp. <i>Bakeri's manzanita</i>	FSC; SR; CRPR 1B	Broadleaf upland forest, chaparral, closed-cone coniferous forest; located on serpentine substrate. Elevation range: 240 – 975 feet. Blooms: February – April.	No Potential. The Study Area does not contain serpentine habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Calamagrostis crassiglumis</i> Thurber's reed grass	CRPR 2B	Mesic areas within coastal scrub, freshwater marshes and swamps; typically in marshy swales surrounded by scrub or grassland. Elevation range: 10 – 45 feet. Blooms: May – July.	No Potential. The Study Area does not contain perennial wetland (freshwater marsh) habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Calochortus uniflorus</i> pink star-tulip	CRPR 4	Coastal prairie, coastal scrub, meadows and seeps, North Coast coniferous forest. Elevation range: 30 – 3480 feet. Blooms: April – June.	No Potential. The Study Area does not contain coastal prairie, coastal scrub, meadow, or forest habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Calystegia collina</i> ssp. <i>oxyphylla</i> Mt. Saint Helena morning-glory	CRPR 4	Chaparral; located on serpentine barrens, slopes, and hillsides. Elevation range: 815 – 3315 feet. Blooms: April – June.	No Potential. The Study Area does not contain serpentine chaparral habitat to support this species.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Calystegia purpurata</i> ssp. <i>saxicola</i> coastal bluff morning-glory	CRPR 1B	Coastal dunes, coastal scrub. Elevation range: 10 – 105 feet. Blooms: May – September.	High Potential. The Study Area contains coastal dune habitat that may support this species. This species is relatively tolerant of invasive species such as iceplant.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.
<i>Carex comosa</i> bristly sedge	CRPR 2B	Typically on lake and pond margins in coastal prairie, marshes and swamps, valley and foothill grassland. Elevation range: 0 – 425 feet. Blooms: May – September.	No Potential. The Study Area does not contain perennial wetland (freshwater marsh) habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Carex saliniformis</i> deceiving sedge	CRPR 1B	Coastal prairie, coastal scrub, meadows and seeps, coastal salt marshes and swamps; located in mesic sites. Elevation range: 10 – 750 feet. Blooms: June – July.	No Potential. The Study Area does not contain perennial wetland (freshwater marsh, seeps) habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Castilleja latifolia</i> Monterey paintbrush	CRPR 4	Closed-cone coniferous forest, cismontane woodland, coastal dunes, coastal scrub; situated in openings underlain by sandy substrates. Elevation range: 0 – 605 feet. Blooms: February – September.	Moderate Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.
<i>Ceanothus gloriosus</i> var. <i>exaltatus</i> glory bush	CRPR 4	Chaparral; typically located within maritime influence. Elevation range: 95 – 1985 feet. Blooms: March – June, sometimes August.	No Potential. The Study Area does not contain chaparral habitat to support this species.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Ceanothus gloriosus</i> var. Point Reyes ceanothus	CRPR 4	Coastal bluff scrub, closed-cone coniferous forest, coastal dunes, coastal scrub/sandy. Elevation ranges from 20 – 1710 feet. Blooms: March – May.	Moderate Potential. The Study Area contains coastal dune habitat that may support this species.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.
<i>Ceanothus purpureus</i> holly-leaved ceanothus	CRPR 1B	Chaparral, cismontane woodland; located on rocky, volcanic slopes. Elevation range: 395 – 3000 feet. Blooms: February – June.	No Potential. The Study Area does not contain chaparral or woodland habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Chloropyron maritimum</i> ssp. <i>palustre</i> Point Reyes bird's-beak	CRPR 1B	Coastal salt marshes; located in low-growing saltgrass and pickleweed mats. Elevation range: 0 – 35 feet. Blooms: June – October.	No Potential. The Study Area does not contain perennial wetland (coastal marsh) habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Chorizanthe cuspidata</i> var. San Francisco spineflower	CRPR 1B	Coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub; located on sandy substrates of terraces and slopes. Elevation range: 10 – 700 feet. Blooms: April – August.	High Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.
<i>Chorizanthe cuspidata</i> var. <i>villosa</i> woolly-headed spineflower	CRPR 1B	Coastal scrub, coastal dunes, coastal prairie; located on sandy substrates near the beach. Elevation range: 10 – 195 feet. Blooms: May – August.	High Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Chorizanthe valida</i> Sonoma spineflower	FE; SE; CRPR 1B	Coastal prairie; in sandy soils. Elevation range: 35 – 1000 feet. Blooms: June – August.	Moderate Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.
<i>Cirsium andrewsii</i> Franciscan thistle	CRPR 1B	Coastal bluff scrub, broadleaf upland forest, coastal scrub; sometimes located along serpentine seeps. Elevation range: 0 – 490 feet. Blooms: March – July.	No Potential. The Study Area does not contain coastal scrub, coastal bluff scrub, or forest habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Collomia diversifolia</i> serpentine collomia	CRPR 4	Chaparral, cismontane woodland; situated on rocky to gravelly serpentine substrates; serpentine indicator: SE. Elevation range: 975 – 1950 feet. Blooms: May – June.	No Potential. The Study Area does not contain serpentine habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Cuscuta pacifica</i> var. <i>papillata</i> Mendocino dodder	CRPR 1B	Coastal dunes; located in interdune depressions; likely hosts on lupines, catchflies, and cudweeds. Elevation range: 0 – 165 feet. Blooms: July – October.	Moderate Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species. Few host plants are present.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.
<i>Cypripedium californicum</i> California lady's-slipper	CRPR 4	Bogs and fens, lower montane coniferous forest; situated at seeps and along streambanks, typically serpentine; serpentine indicator: BE. Elevation range: 2750 – 9020 feet. Blooms: April – August, sometimes September.	No Potential. The Study Area does not contain forest habitat to support this species.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Delphinium bakeri</i> Baker's larkspur	FE; SE; CRPR 1B	Coastal scrub, valley and foothill grassland; located on rocky north-facing slopes derived of decomposed shale. Elevation range: 260 – 995 feet. Blooms: March – May.	No Potential. The Study Area does not contain grassland or coastal scrub habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Delphinium luteum</i> yellow larkspur	FE; SR; CRPR 1B	Chaparral, coastal prairie, coastal scrub; located on rocky north-facing slopes. Elevation range: 0 – 325 feet. Blooms: March – May.	No Potential. The Study Area does not contain coastal prairie, coastal scrub, or chaparral habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Dirca occidentalis</i> western leatherwood	CRPR 1B	Broadleaf upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, North Coast coniferous forest, riparian forest, riparian woodland; located on brushy, mesic slopes in woodland and forest. Elevation range: 165 – 1285 feet. Blooms: January – April.	No Potential. The Study Area does not contain chaparral, woodland, or forest habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Eastwoodiella californica</i> swamp harebell	CRPR 1B	Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, freshwater marshes and swamps, North Coast coniferous forest; in mesic sites in forested and grassland habitat. Elevation range: 1 – 405 feet. Blooms: June – October.	No Potential. The Study Area does not contain perennial wetland (freshwater marsh, seeps) habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Eleocharis parvula</i> small spikerush	CRPR 4	Marshes and swamps. Elevation range: 5 – 9815 feet. Blooms: sometimes April, June – August, sometimes September.	No Potential. The Study Area does not contain perennial wetland (freshwater marsh) habitat to support this species.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Elymus californicus</i> California bottle-brush grass	CRPR 4	Broadleaf upland forest, cismontane woodland, North Coast coniferous forest, riparian woodland; located in mesic areas. Elevation range: 50 – 1530 feet. Blooms: May – August, sometimes November.	No Potential. The Study Area does not contain woodland or forest habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Erigeron biolettii</i> Streamside daisy	CRPR 3	Broadleaf upland forest, cismontane woodland, North Coast coniferous forest; on rocky, mesic. Elevation range: 95 – 3610 feet. Blooms: June – October.	No Potential. The Study Area does not contain woodland or forest habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Erigeron Greenei</i> Greene's narrow-leaved daisy	CRPR 1B	Chaparral; located on volcanic or serpentine substrate. Elevation range: 260 – 3270 feet. Blooms: May – September.	No Potential. The Study Area does not contain volcanic or serpentine habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Erigeron serpentinus</i> serpentine daisy	CRPR 1B	Chaparral; serpentine shrubland. Elevation range: 60 – 670 feet. Blooms: May – August.	No Potential. The Study Area does not contain serpentine habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Erysimum concinnum</i> bluff wallflower	CRPR 1B	Coastal bluff scrub, coastal scrub, coastal dunes; situated on sandy substrate. Elevation range: 0 – 605 feet. Blooms: February – July.	Moderate Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Erysimum franciscanum</i> San Francisco wallflower	CRPR 4	Maritime chaparral, coastal dunes, coastal scrub, valley and foothill grassland; typically located on serpentine or volcanic substrate, often on roadsides. Elevation range: 0 – 1790 feet. Blooms: March – June.	Moderate Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. Although past the bloom season, this species would be identifiable vegetatively at the time of the site assessment but was not observed. No further actions are recommended for this species.
<i>Fritillaria liliacea</i> fragrant fritillary	CRPR 1B	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland; located in grassy sites underlain by clay, typically derived from volcanics or serpentine. Elevation range: 10 – 1335 feet. Blooms: February – April.	No Potential. The Study Area does not contain grassland, prairie, coastal scrub habitat or heavy, rocky clay soils to support this species.	Not Present. No further actions are recommended for this species.
<i>Gilia capitata</i> ssp. <i>chamissonis</i> blue coast gilia	CRPR 1B	Coastal dunes, coastal scrub. Elevation range: 5 – 600 feet. Blooms: April – July.	Moderate Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.
<i>Gilia capitata</i> ssp. <i>pacifica</i> Pacific gilia	CRPR 1B	Coastal bluff scrub, coastal prairie, valley and foothill grassland. Elevation range: 15 – 3090 feet. Blooms: April – August.	Moderate Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Gilia capitata</i> ssp. <i>tomentosa</i> woolly-headed <i>gilia</i>	CRPR 1B	Coastal bluff scrub; rocky outcrops on the coast. Elevation range: 15 – 155 feet. Blooms: May – July.	No Potential. The Study Area does not contain coastal bluff scrub or rocky habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Gilia millefoliata</i> dark-eyed <i>gilia</i>	CRPR 1B	Coastal dune. Elevation range: 5 – 100 feet. Blooms: April – July.	Moderate Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.
<i>Hemizonia congesta</i> ssp. <i>congesta</i> Hayfield tarplant	CRPR 1B	Coastal scrub, valley and foothill grassland. Elevation range: 65 – 1840 feet. Blooms: April – October.	No Potential. The Study Area does not contain coastal scrub or grassland habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Hesperervax sparsiflora</i> var. <i>brevifolia</i> short-leaved <i>evax</i>	CRPR 1B	Coastal bluff scrub, coastal dune; located on sandy bluffs and flats near the immediate coastline. Elevation range: 0 – 700 feet. Blooms: March – June.	Moderate Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. Although past the bloom season, this species would be identifiable vegetatively at the time of the site assessment but was not observed. No further actions are recommended for this species.
<i>Horkelia marinensis</i> Point Reyes <i>Horkelia</i>	CRPR 1B	Coastal dunes, coastal prairie, coastal scrub; located on sandy flats and dunes near the coast; in open grassy sites within scrub. Elevation range: 15 – 1140 feet. Blooms: May – September.	Moderate Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Horkelia tenuiloba</i> thin-lobed horkelia	CRPR 1B	Broadleaf upland forest, coastal scrub, valley and foothill grassland, chaparral; in mesic openings, on sandy substrate. Elevation range: 165 – 1640 feet. Blooms: May – July.	No Potential. The Study Area does not contain grassland, coastal scrub, or forest habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Hosackia gracilis</i> harlequin lotus	CRPR 4	Broadleaf upland forest, coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal prairie, coastal scrub, meadows and seeps, marshes and swamps, North Coast coniferous forest, valley and foothill grassland; located in wetlands and roadside ditches. Elevation range: 0 – 2275 feet. Blooms: March – July.	No Potential. The Study Area does not contain seasonal wetland (seeps, depressions, meadows) habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Iris longipetala</i> coast iris	CRPR 4	Coastal prairie, lower montane coniferous forest, meadows and seeps; located on mesic sites. Elevation range: 0 – 1950 feet. Blooms: March – May.	No Potential. The Study Area does not contain coastal prairie or forest habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Lasthenia californica</i> ssp. <i>bakeri</i> Baker's goldfields	CRPR 1B	Openings in closed-cone coniferous forest, coastal scrub, meadows and seeps, marshes and swamps. Elevation range: 60 – 520 feet. Blooms: April – October.	No Potential. The Study Area does not contain meadow, coastal scrub, or forest habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Lasthenia californica</i> ssp. <i>macrantha</i> perennial goldfields	CRPR 1B	Coastal bluff scrub, coastal dune, coastal scrub. Elevation range: 15 – 1690 feet. Blooms: January – November.	Moderate Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Lasthenia conjugens</i> Contra Costa goldfields	FE; CRPR 1B	Valley and foothill grassland, vernal pools, cismontane woodland; located in pools, swales, and depressions in mesic grassy sites underlain by alkaline substrate. Elevation range: 0 – 1530 feet. Blooms: March – June.	No Potential. The Study Area does not contain seasonal wetland (vernal pool) habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Lathyrus palustris</i> marsh pea	CRPR 2B	Bogs and fens, lower montane coniferous forest, marshes and swamps, North Coast coniferous forest, coastal prairie, coastal scrub; located in moist coastal areas. Elevation range: 3 – 325 feet. Blooms: March – August.	No Potential. The Study Area does not contain perennial wetland (freshwater marsh, bogs, fens) habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Leptosiphon aureus</i> bristly leptosiphon	CRPR 4	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland; often located on shallow, rocky substrate in foothill positions; typically, low-growing and sparse vegetation; often on edge of chaparral and shrub thickets. Elevation range: 175 – 4875 feet. Blooms: April – July.	No Potential. The Study Area does not contain thin, rocky soils to support this species.	Not Present. No further actions are recommended for this species.
<i>Leptosiphon grandiflorus</i> large-flowered leptosiphon	CRPR 4	Coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal dunes, coastal prairie, coastal scrub, valley and foothill grassland; typically on sandy substrate. Elevation range: 15 – 3965 feet. Blooms: April – August.	Moderate Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. This species was identifiable at the time of the site assessment but was not observed. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Leptosiphon rosaceus</i> rose leptosiphon	CRPR 1B	Coastal bluff scrub; situated on sandy substrates. Elevation range: 0 – 325 feet. Blooms: April – July.	Unlikely. The Study Area does contain coastal bluff scrub habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Lessingia arachnoidea</i> Crystal Springs lessingia	CRPR 1B	Coastal sage scrub, valley and foothill grassland, cismontane woodland; typically on grassy serpentine slopes; serpentine indicator: SE. Elevation range: 60 – 200 feet. Blooms: July – October.	No Potential. The Study Area does not contain serpentine habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Lessingia hololeuca</i> woolly-headed lessingia	CRPR 3	Broadleaf upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland; typically on clay, serpentine substrate. Elevation range: 3 – 2885 feet. Blooms: April – June.	No Potential. The Study Area does not contain serpentine habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Lupinus tidestromii</i> Tidestrom's lupine	FE; SE; CRPR 1B	Coastal dunes; on partially stabilized dunes immediately near the ocean. Elevation range: 0 – 100 feet. Blooms: April – June.	Moderate Potential. The Study Area contains small sandy opens in coastal dune habitat that may support this species.	Not Observed. Although past the bloom season, this species would be identifiable vegetatively at the time of the site assessment but was not observed. No further actions are recommended for this species.
<i>Microseris paludosa</i> marsh microseris	CRPR 1B	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. Elevation range: 5 – 300 feet. Blooms: April – June.	No Potential. The Study Area does not contain grassland, coastal scrub, woodland, or forest habitat to support this species.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Polemonium carneum</i> Oregon polemonium	CRPR 2B	Coastal prairie, coastal scrub, lower montane coniferous forest. Elevation range: 0 – 5950 feet. Blooms: April – September.	No Potential. The Study Area does not contain coastal prairie, coastal scrub, or forest habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Polygonum marinense</i> Marin knotweed	CRPR 3	Salt and brackish coastal marshes. Elevation range: 0 – 35 feet. Blooms: sometimes April, May – August, sometimes October.	No Potential. The Study Area does not contain perennial wetland (coastal marsh) habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Ranunculus lobbii</i> Lobb's buttercup	CRPR 4	Cismontane woodland, North Coast coniferous forest, valley and foothill grassland, vernal pools; located in vernal inundated areas (ponds, pools). Elevation range: 45 – 1530 feet. Blooms: February – May.	No Potential. The Study Area does not contain seasonal wetland (vernal pool) habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Sidalcea calycosa</i> ssp. <i>rhizomata</i> Point Reyes checkerbloom	CRPR 1B	Marshes and swamps; located in freshwater marsh habitat near the coast. Elevation range: 10 – 245 feet. Blooms: April – September.	No Potential. The Study Area does not contain perennial wetland (freshwater marsh) habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Sidalcea malviflora</i> ssp. <i>purpurea</i> purple-stemmed checkerbloom	CRPR 1B	Broadleaf upland forest, coastal scrub. Elevation range: 45 – 280 feet. Blooms: May – June.	No Potential. The Study Area does not contain coastal scrub or forest habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Silene scouleri</i> ssp. <i>scouleri</i> Scouler's catchfly	CRPR 2B	Coastal bluff scrub, coastal prairie, valley and foothill grassland; situated on rocky slopes and bluffs. Elevation range: 0 – 1950 feet. Blooms: sometimes March – May, typically June – August, sometimes September.	No Potential. The Study Area does not contain coastal bluff scrub, coastal prairie, or grassland habitat to support this species.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Streptanthus glandulosus</i> ssp. <i>hoffmanii</i> Freed's jewelflower	FSC; CRPR 1B	Chaparral, cismontane woodland, valley and foothill grassland; often on serpentine, rocky sites. Elevation range: 120 – 475 feet. Blooms: March – July.	No Potential. The Study Area does not contain serpentine habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Trifolium amoenum</i> showy rancheria clover	FE; CRPR 1B	Valley and foothill grassland, coastal bluff scrub, swales, open sunny sites, sometimes on serpentine. Elevation range: 15 – 1365 feet. Blooms: April – June.	No Potential. The Study Area does not contain coastal bluff scrub or grassland habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Triphysaria floribunda</i> San Francisco owl's-clover	CRPR 1B	Coastal prairie, valley and foothill grassland; located on serpentine and non-serpentine substrate. Elevation range: 30 – 520 feet. Blooms: April – June.	No Potential. The Study Area does not contain coastal prairie or grassland habitat to support this species.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
WILDLIFE				
Mammals				
<i>Antrozous pallidus</i> pallid bat	SSC, WBWG High	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, forages along river channels. Roost sites include crevices in rocky outcrops and cliffs, caves, mines, trees, and various manmade structures such as bridges, barns, and buildings (including occupied buildings). Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	No Potential. The Study Area contains few trees none of which have the size or structural elements to provide maternity roost habitat for this species.	Not Present. No further actions are recommended for this species.
<i>Arborimus pomo</i> Sonoma tree vole	SSC	Occurs in old-growth and mature coniferous forests, particularly bishop pine forest, Douglas fir forest, coast redwood forest, and montane mixed conifer-hardwood. Recent documentation from Monterey pine stands.	No Potential. The Study Area does not contain old-growth or mature forest habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Corynorhinus townsendii</i> Townsend's western big-eared bat	SSC, WBWG High	Humid coastal regions of northern and central California. Roosts in limestone caves, lava tubes, mines, buildings etc. Will only roost in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to disturbance	No Potential. The Study Area does not contain caves, mines, or buildings suitable for roosting; the on-site buildings are sealed, in good condition, and in regular use to preclude this species.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Lasiurus blossevillii</i> western red bat	SSC, WBWG High	Highly migratory and typically solitary, roosting primarily in the foliage of trees or shrubs. It is associated with broad-leaved tree species including cottonwoods, sycamores, alders, and maples. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas.	No Potential. The Study Area contains few trees none of which have the size or structural elements to provide maternity roost habitat for this species.	Not Present. No further actions are recommended for this species.
<i>Myotis thysanodes</i> fringed myotis	WBWG High	Associated with a wide variety of habitats including dry woodlands, desert scrub, mesic coniferous forest, grassland, and sage-grass steppes. Building, mines, and large trees and snags are important day and night roosts.	No Potential. The Study Area contains few trees none of which have the size or structural elements to provide maternity roost habitat for this species.	Not Present. No further actions are recommended for this species.
<i>Myotis volans</i> long-legged myotis	WBWG High	Primarily found in coniferous forests, but also occurs seasonally in riparian and desert habitats. Large hollow trees, rock crevices, buildings, mines, and caves are important day roosts.	No Potential. The Study Area contains few trees none of which have the size or structural elements to provide maternity roost habitat for this species.	Not Present. No further actions are recommended for this species.
<i>Pekania pennanti</i> fisher	FC, SSC	Known from mature to old-growth coniferous forest and deciduous riparian areas with high percent canopy closure. Uses cavities, snags, logs, and rocky areas for cover and denning. Requires large ranges of contiguous mature, dense forest.	No Potential. The Study Area does not contain old-growth or mature forest habitat to support this species. If present in Sonoma County, likely confined to the remote interior forests.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Reithrodontomys raviventris</i> salt marsh harvest mouse	FE, SE, SFP	Endemic to emergent salt and brackish wetlands of the San Francisco Bay Estuary. Pickleweed marshes are primary habitat; also occurs in various other wetland communities with dense vegetation. Does not burrow, builds loosely organized nests. Requires higher areas for dryland refugia during high tides.	No Potential. The Study Area contains no tidal or brackish marsh and is outside of this species' Sonoma County range.	Not Present. No further actions are recommended for this species.
<i>Sorex ornatus sinuosus</i> Suisun shrew	SSC	Tidal marshes of the northern shores of San Pablo and Suisun bays. Require dense low-lying vegetation cover, driftwood, and other litter above the mean high tide line for nesting and foraging.	No Potential. The Study Area contains no tidal or brackish marsh and is outside of this species' Sonoma County range.	Not Present. No further actions are recommended for this species.
<i>Taxidea taxus</i> American badger	SSC	Most abundant in drier open stages of most shrub, woodland, and herbaceous vegetation types. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	No Potential. The Study Area contains sandy soils of insufficient friability/stability to support dens for this species.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Birds				
<i>Agelaius tricolor</i> tricolored blackbird	ST, SSC	Nearly endemic to California, where it is most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets. Also uses flooded agricultural fields. Abundant insect prey near breeding areas essential.	No Potential. The Study Area does not provide vegetated ponds or emergent marsh suitable for nesting.	Not Present. No further actions are recommended for this species.
<i>Ammodramus savannarum</i> grasshopper sparrow	SSC	Summer resident. Breeds in open grasslands in lowlands and foothills, generally with low- to moderate-height grasses and scattered shrubs. Well-hidden nests are placed on the ground.	Unlikely. Although the Study Area contains open herbaceous habitat, this species prefers high grasses and coarser textured soils.	Presumed Absent. No further actions are recommended for this species.
<i>Aquila chrysaetos</i> golden eagle	BGEPA, SFP	Occurs year-round in rolling foothills, mountain areas, sage-juniper flats, and deserts. Cliff-walled canyons provide nesting habitat in most parts of range; also nests in large trees, usually within otherwise open areas.	No Potential. The Study Area does not provide large cliffs or typical large trees for nesting. Additionally, degree of human visitation likely precludes nesting.	Not Present. No further actions are recommended for this species.
<i>Ardea alba</i> great egret	no status (breeding sites protected by CDFW)	Year-round resident. Nests colonially or semi-colonially, usually in trees, occasionally on the ground or elevated platforms. Breeding sites usually near foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	No Potential. The Study Area does not contain large, tall tree groves and the degree of human activity precludes nesting of this species.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Ardea herodias</i> great blue heron	no status (breeding sites protected by CDFW)	Year-round resident. Nests colonially or semi-colonially in tall trees and cliffs, also sequestered terrestrial substrates. Breeding sites usually near foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	No Potential. The Study Area does not contain large, tall tree groves and the degree of human activity precludes nesting of this species.	Not Present. No further actions are recommended for this species.
<i>Asio flammeus</i> short-eared owl	SSC	Occurs year-round, but primarily as a winter visitor; breeding is very restricted in most of California. Found in open, treeless areas (e.g., marshes, grasslands) with elevated sites for foraging perches and dense herbaceous vegetation for roosting and nesting. Preys mostly on small mammals, particularly voles.	Moderate Potential. The Study Area and environs contain trees that may provide nesting substrate and open areas for foraging.	Presence Unknown. Project activities should occur outside of nesting season or conduct pre-construction surveys and avoid any active nests found. See Section 6.0 for details.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Asio otus</i> long-eared owl	SSC	Occurs year-round in California. Nests in trees in a variety of woodland habitats, including oak and riparian, as well as tree groves. Requires adjacent open land with rodents for foraging, and the presence of old nests of larger birds (hawks, crows, magpies) for breeding.	Unlikely. The Study Area does not contain woodland habitat to support this species.	Presumed Absent. No further actions are recommended for this species.
<i>Athene cunicularia</i> burrowing owl	SC, SSC	Year-round resident and winter visitor. Occurs in open, dry grasslands and scrub habitats with low-growing vegetation, perches and abundant mammal burrows. Preys upon insects and small vertebrates. Nests and roosts in old mammal burrows, most commonly those of ground squirrels.	No Potential. The Study Area does not contain open grassland or prairie in rolling hill or valley setting. Winter visitor to Sonoma County only.	Not Present. No further actions are recommended for this species.
<i>Brachyramphus marmoratus</i> marbled murrelet	FT, SE	Primarily occurs in and around marine waters but breeds in old-growth coast redwood and Douglas fir stands containing platform-like branches along the coast. Migrates daily from inland nests and roosts to forage in the Pacific Ocean.	No Potential. The Study Area does not contain old-growth or mature conifer or mixed broadleaf-conifer forest nor is any present in the immediate vicinity. There are no confirmed breeding records from Sonoma County (Burridge 1995).	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Buteo swainsoni</i> Swainson's hawk	ST	Summer resident in Central Valley and limited portions of the southern California interior. Nests in tree groves and isolated trees in riparian and agricultural areas, including near buildings. Forages in grasslands and scrub habitats as well as agricultural fields, especially alfalfa. Preys on arthropods year-round as well as smaller vertebrates during the breeding season.	No Potential. The Study Area does not contain riparian woodland, large groves, or similar to provide nesting. Nesting in Sonoma County only documented from the Baylands.	Not Present. No further actions are recommended for this species.
<i>Charadrius alexandrinus nivosus</i> western snowy plover	FT, SSC	Federal listing applies only to the Pacific coastal population. Year-round resident and winter visitor. Occurs on sandy beaches, salt pond levees, and the shores of large alkali lakes. Nests on the ground, requiring sandy, gravelly or friable soils.	Unlikely. Although the Study Area contains sandy substrate, it is densely vegetated with only small open patches and human activity that likely precludes the presence of this species.	Presumed Absent. No further actions are recommended for this species.
<i>Circus hudsonius</i> northern harrier	SSC	Year-round resident and winter visitor. Found in open habitats including grasslands, prairies, marshes and agricultural areas. Nests on the ground in dense vegetation, typically near water or otherwise moist areas. Preys on small vertebrates.	Moderate Potential. The Study Area contains dense herbaceous vegetation that may provide nesting substrate.	Presence Unknown. Project activities should occur outside of nesting season or conduct pre-construction surveys and avoid any active nests found. See Section 6.0 for details.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	FT, SE	Summer resident in California with limited breeding to Central Valley and southern California. Historical breeding as north as Sebastopol, Sonoma County. Breeds in dense riparian forests, typically with early successional vegetation. Nests in densely foliated deciduous trees and shrubs. Forages predominantly on caterpillars.	No Potential. The Study Area does not contain riparian woodland or riparian forest habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Contopus cooperi</i> olive-sided flycatcher	SSC	Summer resident. Typical breeding habitat is montane coniferous forests. At lower elevations, also occurs in wooded canyons and mixed forests and woodlands. Often associated with forest edges. Arboreal nest sites located well off the ground.	No Potential. The Study Area does not contain woodland or forest habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Cypseloides niger</i> black swift	SSC	Summer resident with a fragmented breeding distribution; most occupied areas in California either montane or coastal. Breeds in small colonies on cliffs behind or adjacent to waterfalls, in deep canyons, and sea-bluffs above surf. Forages aerially over wide areas. No modern nesting records in Napa County.	No Potential. The Study Area does not contain cliff, bluff faces, deep canyons, or similar structures for nesting.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Egretta thula</i> snowy egret	no status (breeding sites protected by CDFW)	Year-round resident. Nests colonially, usually in trees, at times in sequestered beds of dense emergent vegetation (e.g., tules). Rookery sites usually situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	No Potential. The Study Area does not contain large, tall tree groves and the degree of human activity precludes nesting of this species.	Not Present. No further actions are recommended for this species.
<i>Elanus leucurus</i> white-tailed kite	SFP	Year-round resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, marshes and agricultural areas. Nests in trees, of which the type and setting are highly variable. Preys on small mammals and other vertebrates.	Moderate Potential. The Study Area contains open habitat sufficient for foraging and trees that may provide nesting substrate.	Presence Unknown. Project activities should occur outside of nesting season or conduct pre-construction surveys and avoid any active nests found. See Section 6.0 for details.
<i>Falco peregrinus anatum</i> American peregrine falcon	SFP	Year-round resident and winter visitor. Occurs near water, including coastal areas, wetlands, lakes and rivers. Usually nests on sheltered cliffs or tall man-made structures. Preys primarily on waterbirds.	Unlikely. The Study Area does not contain large cliffs or suitable man-made structures for nesting. May forage over the site.	Not Present. No further actions are recommended for this species.
<i>Geothlypis trichas sinuosa</i> San Francisco (saltmarsh) common yellowthroat	SSC	Resident of the San Francisco Bay region, in fresh and saltwater marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	No Potential. No freshwater/coastal marsh vegetation is present within the Study Area.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Haliaeetus leucocephalus</i> bald eagle	BGEPA, SE, SFP	Occurs year-round in California, but primarily a winter visitor; breeding population is growing. Nests in large trees in the vicinity of larger lakes, reservoirs, and rivers. Wintering habitat somewhat more variable but usually features large concentrations of waterfowl or fish.	No Potential. The Study Area does not contain large, tall trees relatively free of human activity to support this species.	Not Present. No further actions are recommended for this species.
<i>Icteria virens</i> yellow-breasted chat	SSC	Summer resident, occurring in riparian areas with an open canopy, very dense understory, and trees for song perches. Nests in thickets of willow (<i>Salix</i> spp.), blackberry (<i>Rubus</i> spp.), and California grape (<i>Vitis californicus</i>).	No Potential. The Study Area does not contain stands of dense riparian understory favored by this species for nesting.	Not Present. No further actions are recommended for this species.
<i>Lanius ludovicianus</i> loggerhead shrike	SSC	Year-round resident in open woodland, grasslands, savannah, and scrub. Prefers areas with sparse shrubs, trees, posts, and other suitable perches for foraging. Preys upon large insects and small vertebrates. Nests are well-concealed in densely foliated shrubs or trees.	Moderate Potential. The Study Area contains open habitat sufficient for foraging and trees that may provide nesting substrate.	Presence Unknown. Project activities should occur outside of nesting season or conduct pre-construction surveys and avoid any active nests found. See Section 6.0 for details.
<i>Laterallus jamaicensis coturniculus</i> California black rail	ST, SFP	Year-round resident in marshes (saline to freshwater) with dense vegetation within four inches of the ground. Prefers larger, undisturbed marshes that have an extensive upper zone and are close to a major water source. Extremely secretive and cryptic.	No Potential. The Study Area does not contain tidal or brackish marsh. Within Sonoma County, this species is restricted to Baylands and the lower Petaluma River and Sonoma Creek.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Melospiza melodia samuelis</i> San Pablo song sparrow	SSC	Year-round resident of tidal marshes along the north side of San Francisco and San Pablo Bays. Typical habitat is dominated by pickleweed (<i>Salicornia</i> spp.), with gumplant (<i>Grindelia</i> spp.) and other shrubs present in the upper zone for nesting. May forage in areas adjacent to marshes.	No Potential. The Study Area contains no tidal or brackish marsh and is outside of this species' limited Sonoma County range.	Not Present. No further actions are recommended for this species.
<i>Nycticorax nycticorax</i> black-crowned night heron	no status (breeding sites protected by CDFW)	Year-round resident. Nests colonially, usually in trees but also in patches of emergent vegetation. Rookery sites are often on islands and usually located adjacent to foraging areas: margins of lakes and bays.	No Potential. The Study Area does not contain large, tall tree groves and the degree of human activity precludes nesting of this species.	Not Present. No further actions are recommended for this species.
<i>Passerculus sandwichensis alaudinus</i> Bryant's savannah sparrow	SSC	Year-round resident associated with the coastal fog belt, primarily between Humboldt and northern Monterey Counties. Occupies low tidally influenced habitats and adjacent areas, including grasslands. Also uses drier, more upland coastal grasslands. Nests near the ground in taller vegetation, including along levees and canals.	Unlikely. The Study Area does not contain coastal marsh or similar tidally influenced habitat preferred by this species.	Presumed Absent. No further actions are recommended for this species.
<i>Progne subis</i> purple martin	SSC	Summer resident. Inhabits woodlands and low-elevation coniferous forests. Nests in old woodpecker cavities and man-made structures (bridges, utility towers). Nest is often located in tall, isolated tree or snag.	No Potential. The Study Area does not contain woodland or forest habitat to support this species.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Rallus obsoletus obsoletus</i> California Ridgway's (clapper) rail	FE, SE, SFP	Year-round resident in tidal marshes of the San Francisco Bay estuary. Requires tidal sloughs and intertidal mud flats for foraging, and dense marsh vegetation for nesting and cover. Typical habitat features abundant growth of cordgrass and pickleweed. Feeds primarily on mollusks and crustaceans.	No Potential. The Study Area does not contain tidal or brackish marsh. Within Sonoma County, this species is restricted to Baylands and the lower Petaluma River and Sonoma Creek.	Not Present. No further actions are recommended for this species.
<i>Riparia riparia</i> bank swallow	ST	Summer resident in riparian and other lowland habitats near rivers, lakes, and the ocean in northern California. Nests colonially in excavated burrows on vertical cliffs and bank cuts (natural and manmade) with fine-textured soils. Historical nesting range in southern and central areas of California has been eliminated by habitat loss. Currently known to breed in Siskiyou, Shasta, and Lassen counties, portions of the North Coast, and along the lower Sacramento River.	No Potential. The Study Area does not contain cliffs or cuts with fine-textured soils or any other potentially suitable nesting substrate.	Not Present. No further actions are recommended for this species.
<i>Setophaga petechia brewsteri</i> (Brewster's) yellow warbler	SSC	Summer resident throughout much of California. Breeds in riparian vegetation close to water, including streams and wet meadows. Microhabitat used for nesting is variable, but dense willow growth is typical. Occurs widely on migration.	No Potential. The Study Area does not contain riparian habitat with dense, mature thickets of willows.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Strix occidentalis caurina</i> northern spotted owl	FT, ST, SSC	Year-round resident in dense, structurally complex forests, primarily those with stands of mature conifers. In Napa County, uses both coniferous and mixed (coniferous-hardwood) forests. Nests on platform-like substrates in the forest canopy, including in tree cavities. Preys on mammals.	No Potential. The Study Area does not contain old-growth or mature conifer or mixed broadleaf-conifer forest nor is any present in the immediate vicinity.	Not Present. No further actions are recommended for this species.
<i>Xanthocephalus xanthocephalus</i> yellow-headed blackbird	SSC	Summer resident. Breeds colonially in freshwater emergent wetlands with dense vegetation and deep water, often along borders of lakes or ponds. Requires abundant large insects such as dragonflies; nesting is timed for maximum emergence of insect prey.	No Potential. The Study Area does not provide vegetated ponds or emergent marsh suitable for nesting.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Reptiles and Amphibians				
<i>Ambystoma californiense</i> California tiger salamander – Sonoma County DPS	FE, ST	Occurs in grasslands, oak savannah, and open woodlands with a mosaic of vernal pools or similar seasonal wetlands. Requires vernal pools or similarly inundated waters for breeding and larvae. Adults are fossorial utilizing small mammal burrows for estivation.	No Potential. The Study Area does not contain vernal pool habitat and is not situated on the Santa Rosa Plain.	Not Present. No further actions are recommended for this species.
<i>Dicamptodon ensatus</i> California giant salamander	SSC	Occurs in the north-central Coast Ranges. Moist coniferous and mixed forests are typical habitat; also uses woodland and chaparral. Adults are terrestrial and fossorial, breeding in cold, permanent or semi-permanent streams. Larvae usually remain aquatic for over a year.	No Potential. The Study Area does not contain perennial or intermittent stream habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Emys marmorata</i> western pond turtle	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	No Potential. The Study Area does not contain pond, lake, or similar slack water habitat to support this species.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Rana boylei</i> foothill yellow-legged frog	SSC	Found in or near rocky streams in a variety of habitats; highly aquatic. Prefers partial-sunlight, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on invertebrates (aquatic and terrestrial).	No Potential. The Study Area does not contain perennial or intermittent stream habitat to support this species.	Not Present. No further actions are recommended for this species.
<i>Rana draytonii</i> California red-legged frog	FT, SSC	Lowlands and foothills in or near permanent sources of deep water with dense emergent and/or overhanging riparian vegetation. Favors perennial to intermittent ponds, marshes, and stream pools. Requires 11 to 20 weeks of continuous inundation for larval development. Disperses through upland habitats during and after rains.	No Potential. The Study Area and environs do not contain freshwater marsh, pond, riparian wetland, or similar aquatic resources to support this species.	Not Present. No further actions are recommended for this species.
<i>Taricha rivularis</i> red-bellied newt	SSC	Inhabits coastal forests from southern Sonoma County northward, with an isolated population in Santa Clara County. Redwood forest is typical habitat, though other forest types (e.g., hardwood) are also occupied. Adults are terrestrial and fossorial. Breeding occurs in streams, usually with relatively strong flows.	No Potential. The Study Area does not contain mesic forest habitat to support this species.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Fishes				
<i>Eucyclogobius newberryi</i> tidewater goby	FE, SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches. Requires still but not stagnant water and high oxygen levels.	No Potential. The Study Area does not contain brackish or estuarine waters.	Not Present. No further actions are recommended for this species.
<i>Hysteroecarpus traskii</i> pomo Russian River tule perch	SSC	Found in lower elevation streams of the Russian River basin. Requires clear, flowing water with abundant cover. They also require deep (greater than three feet) pool habitat.	No Potential. The Study Area does not contain riverine or perennial stream habitat for this species.	Not Present. No further actions are recommended for this species.
<i>Lampetra ayresi</i> river lamprey	SSC	Lower Sacramento River, San Joaquin River and Russian River. May occur in coastal streams north of San Francisco Bay. Adults need clean, gravelly riffles, Ammocoetes need sandy backwaters or stream edges, good water quality and temps less than 77 degrees Fahrenheit.	No Potential. The Study Area does not contain suitable anadromous or estuarine waters.	Not Present. No further actions are recommended for this species.
<i>Lavinia symmetricus parvipinnis</i> Gualala roach	SSC	Known from the Gualala River watershed in predominantly warmer waters. Presumably prefers pools but may favor stream margins when pike-minnows are present. Feeds on filamentous algae, crustaceans, and insects.	No Potential. The Study Area is not on the Gualala River or contain riverine habitat.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Mylopharodon conocephalus</i> hardhead	SSC	Known from mid-elevation streams in the Sacramento, San Joaquin, Napa River, and Russian River drainages. Prefer clear, deep pools with sand-gravel-boulder bottoms and slow water velocity.	No Potential. The Study Area does not contain riverine or perennial stream habitat for this species.	Not Present. No further actions are recommended for this species.
<i>Oncorhynchus kisutch</i> coho salmon – central CA coast ESU	FE, SE	Occurs in inland and coastal rivers, and marine waters. Requires beds of loose, silt-free, coarse gravel for spawning. Also requires riparian cover to contribute to cool, well-aerated water. Federal listing applies to populations between Punta Gorda and San Lorenzo River. State listing applies populations south of San Francisco Bay only.	No Potential. The Study Area does not contain suitable anadromous or estuarine waters.	Not Present. No further actions are recommended for this species.
<i>Oncorhynchus mykiss irideus</i> steelhead – central CA coast DPS	FT	Occurs from the Russian River south to Soquel Creek and Pajaro River. Also, in San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	No Potential. The Study Area does not contain suitable anadromous or estuarine waters.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Oncorhynchus tshawytscha</i> Chinook salmon – California coastal ESU	FT	This ESU includes all naturally spawned populations of Chinook salmon from rivers and streams south of the Klamath River (exclusive) to the Russian River (inclusive). Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temps less than 80 degrees Fahrenheit is lethal to adults.	No Potential. The Study Area does not contain suitable anadromous or estuarine waters.	Not Present. No further actions are recommended for this species.
<i>Pogonichthys macrolepidotus</i> Sacramento splittail	SSC	Formerly endemic to the lakes and rivers of the Central Valley, but now confined to the Sacramento Delta, Suisun Bay and associated marshes. Occurs in slow-moving river sections and dead-end sloughs. Requires flooded vegetation for spawning and foraging for young. A freshwater species, but tolerant of moderate salinity (10–18 ppt.).	No Potential. The Study Area does not contain riverine or estuarine waters.	Not Present. No further actions are recommended for this species.
<i>Spirinchus thaleichthys</i> longfin smelt	FC, ST, SSC	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15 to 30 ppt. but can be found in completely freshwater to almost pure seawater.	No Potential. The Study Area does not contain riverine or estuarine waters.	Not Present. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Invertebrates				
<i>Bombus crotchii</i> Crotch bumblebee	SC	Range largely restricted to California. Favors grassland and scrub habitats. Typical of bumblebees, nests are usually constructed underground. Visits a variety of plants.	Unlikely. The Study Area contains sandy soils of insufficient friability/stability to support nests for this species.	Not Present. No further actions are recommended for this species.
<i>Bombus occidentalis</i> western bumblebee	SC	Formerly common throughout much of western North America; populations from southern British Columbia to central California have nearly disappeared (Xerces 2015). Occurs in a wide variety of habitat types. Nests are constructed annually in pre-existing cavities, usually on the ground (e.g., mammal burrows). Many plants are visited and pollinated.	Unlikely. The Study Area contains sandy soils of insufficient friability/stability to support nests for this species.	Not Present. No further actions are recommended for this species.
<i>Danaus plexippus</i> monarch butterfly	FC (E), roosting sites protected by CDFW	Winter roost sites along the coast from Baja California north to Mendocino County. Roosts are wind-protected tree groves, typically of eucalyptus (<i>Eucalyptus</i> spp.), Monterey cypress (<i>Hesperocyparis macrocarpa</i>), and Monterey pine (<i>Pinus radiata</i>).	Unlikely. Although the Study Area contains a small stand of Monterey cypress trees, it is not of the size or dimension sufficient to provide overwintering roosting. (Trees are not scheduled for removal as part of the project).	Presumed Absent. No further actions are recommended for this species.
<i>Speyeria zerene behrensii</i> Behren's silverspot butterfly	FE	Inhabits coastal terrace prairie habitat. Larval plant is dog violet (<i>Viola adunca</i>). Known from six historic locations from City of Mendocino to Salt Point; currently considered extant from Point Arena south to Salt Point.	Unlikely. This species' host plant requires mesic to hydric soil moisture regimes in coarser textured soils (i.e., clay loams, clays) than are present in the Study Area.	Presumed Absent. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
<i>Speyeria zerene myrtleae</i> Myrtle's silverspot butterfly	FE	Inhabits coastal terrace prairie habitat. Larval plant is dog violet (<i>Viola adunca</i>). Historic populations from Russian River to San Mateo County; currently known only from western Marin County and southwestern Sonoma County.	Unlikely. This species' host plant requires mesic to hydric soil moisture regimes in coarser textured soils (i.e., clay loams, clays) than are present in the Study Area.	Presumed Absent. No further actions are recommended for this species.
<i>Syncaris pacifica</i> California freshwater shrimp	FE, SE	Endemic to Marin, Napa, and Sonoma counties. Found in low elevation, low gradient streams where riparian cover is moderate to heavy. Shallow pools away from main stream flow. Winter: undercut banks with exposed roots. Summer: leafy branches touching water.	No Potential. The Study Area does not contain perennial stream habitat for this species.	Not Present. No further actions are recommended for this species.

***Key to status codes:**

FC Federal Candidate for Listing
FE Federal Endangered
BGEPA Bald and Golden Eagle Protection Act Species
FT Federal Threatened
SC (E/T) State Candidate for Listing (Endangered/Threatened)
SE State Endangered
SFP State Fully Protected Animal
SR State Rare
SSC State Species of Special Concern
ST State Threatened
CRPR 1A CNPS CRPR 1A: Plants presumed extinct in California
CRPR 1B CNPS CRPR 1B: Plants rare, threatened or endangered in California and elsewhere
CRPR 2A CNPS CRPR 2A: Plants presumed extirpated in California, but more common elsewhere
CRPR 2B CNPS CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 3 CNPS CRPR 3: Plants about which CNPS needs more information (a review list)
CRPR 4 CNPS CRPR 4: Plants of limited distribution (a watch list)
WBWG Western Bat Working Group High or Medium-high Priority Species

Potential to Occur:

No Potential: Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
Unlikely: Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
Moderate Potential: Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
High Potential: All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Results and Recommendations:

Present: Species was observed on the site or has been recorded (i.e. CNDDDB, other reports) on the site recently.
Assumed Present: Species is assumed to be present on-site based on the presence of key habitat components.
Assumed Present without Impact: Species assumed present; however, project activities will not have an impact on the species.
Presumed Absent: Species is presumed to not be present due to a lack of key habitat components.
Not Present: Species is considered not present due to a clear lack of any suitable habitat and/or local range limitations.
Not Observed: Species was not observed during dedicated/formal surveys.
Presence Unknown: Species has the potential to be present, but no dedicated surveys to determine absence/presence were performed.

ATTACHMENT D – REPRESENTATIVE PHOTOGRAPHS



Existing single-family residence, the subject of the proposed project. Note existing development (e.g., stairs, residence) and iceplant mats in the foreground.



Residence in background from western edge of Study Area with European beachgrass sward in the foreground and middle ground.



Existing single-family residence, proposed redevelopment in European beachgrass sward circled in red; note the high density of invasive species in this area.



Existing development of residence, proposed redevelopment in iceplant mat circled in blue; note the high density of invasive plants in this area.



Existing residence and outbuilding to be redeveloped.



Special-status plant, San Francisco spineflower (*Chorizanthe cuspidata* var. *cuspidata*) individual in small opening in European beachgrass sward on loose sand.

ATTACHMENT E – STATEMENT OF QUALIFICATIONS



Appendix E – Statement of Qualifications

WRA is an environmental consulting firm with over 30 years of experience conducting biological resources assessments, wetland delineations, protocol-level rare plant surveys, special-status wildlife assessments and species-specific surveys, as well as preparing applications with state and federal natural resource agencies for avoiding, minimizing, and mitigating impacts to sensitive natural resources. Other services and products with which WRA has expertise include preparation of CEQA/NEPA documents, habitat mitigation and monitoring plans, natural resource management plans, mitigation and conservation bank enabling instruments, grazing management plans, and wetland and other natural resources restoration plans.

Matt Richmond, BS, Principal with WRA, has over 20 years performing botanical assessments, rare plant surveys, environmentally sensitive habitat area surveys, wetland delineations, and vegetation mapping. He also has experience performing protocol-level surveys for California red-legged frog, Ridgeway's rail, marbled murrelet, northern spotted owl, Point Arena mountain beaver, and Behren's silverspot butterfly. His project focus is in conservation and mitigation banking, coastal development projects, vineyard development, and timber resources. Mr. Richmond regularly manages large-scale mitigation banking projects, as well as coastal development permits, coastal restoration projects, vineyard grading permits with a focus in Mendocino, Napa, Lake, and Sonoma counties. Mr. Richmond's technical training includes the flora of Northern California, plant ecology, and forest ecology. Additionally, he has completed the 40-hour Corps wetland delineation training. Mr. Richmond received his Bachelor of Science in Biology from Humboldt State University.

Aaron Arthur, MS, Associate Plant Biologist with WRA, has nearly 20 years performing vegetation & habitat mapping, rare plant surveys, botanical assessments, vegetation change analysis, and wetland delineations. His project focus is vineyard development, timber resources, coastal development permits, habitat mitigation and monitoring plans, conservation and mitigation banking, and long-term management plans in Sonoma, Marin, Napa, and Mendocino counties. Mr. Arthur's technical training includes the flora of Northern California, the flora of the Pacific Northwest, agrostology, aquatic botany, plant ecology, forest ecology, and soil science. Additionally, he has completed the 40-hour Corps wetland delineation course, holds 2081(a) Plant Voucher Permit, and is Certified California Consulting Botanist #0016 from the California Native Plant Society. Mr. Arthur received his Bachelor of Arts in Geography and received his Master of Science in Physical Geography from Oregon State University, where his research focused on forest floristics and vegetation change.

December 6, 2024
Job No. 4420.0

Pringl Miller
435 McChristian Avenue
Bodega Bay, CA 94923

Report
Geotechnical Investigation
Planned Residence Addition
455 McChristian Avenue
Bodega Bay, California

This report presents the results of our geotechnical investigation for the subject project. The parcel is indicated on the Test Hole Location Plan, Plate 1.

We understand that the project will consist of constructing an addition onto the existing residence and possibly a detached garage. We understand that the addition will be a wood frame, one-story structure with either raised wood floors (i.e. crawl space) or concrete slab-on-grade floors. Further, we understand that the addition floor elevation is planned to be about 3 feet lower than the elevation of the house floor. Foundation loads are expected to be typical for the type of construction indicated. We anticipate that unretained fills will be relatively minor and less than about 6 feet high. Retaining walls may be needed.

The scope of our investigation, as outlined in our agreement dated September 24, 2024, included reviewing selected published geotechnical and geologic information from our files, exploring subsurface conditions, and performing laboratory tests on selected samples. Based upon our work, we have developed conclusions and recommendations concerning:

1. Proximity of the site to published active faults.
2. Soil and ground water conditions observed, including evaluation of liquefaction potential.
3. Site preparation and grading.
4. Foundation type(s) and design criteria.
5. Concrete slabs-on-grade.
6. Retaining walls, if needed.

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7. Geotechnical engineering drainage.
8. Supplemental services.

Our scope of work did not include evaluation of any potential hazardous waste contamination or corrosion potential of the soil or groundwater at the site. Further, our scope of work does not include evaluating areas beyond the described improvement areas. (i.e., driveway, landscaping, etc.).

WORK PERFORMED

A listing of the geologic related literature reviewed is presented in the Bibliography at the end of this report.

On October 16, 2024, our engineering geologist visited the site to: 1) observe the existing site conditions; 2) confirm our exploration approach; and 3) locate our proposed test borings. On October 25, 2024, our geologist explored the subsurface conditions to the extent of two test borings. The test borings were drilled with a track mounted and portable, drill rig equipped with 6-inch diameter hollow stem augers. The completed test borings were drilled to a maximum depth of 20-1/2 feet. The test boring locations, are approximately shown on Plate 1. The test boring locations should be considered accurate only to the degree implied by the method used.

Our geologist logged the conditions encountered and obtained relatively undisturbed samples at selected intervals for visual identification and laboratory testing. The samples were obtained with either a 2.4-inch, inside-diameter (i.d.), split-spoon sampler or a 1.4-inch i.d. Standard Penetration Test (SPT) sampler driven with a 140-pound automatic trip hammer. The stroke during driving was about 30 inches. The blows required to drive the 2.4-inch i.d. sampler were recorded and converted to Standard Penetration Resistance Values for correlation with other data. The blows required to drive the SPT sampler do not require conversion. The logs of the test borings showing the materials encountered, sample depths, and converted and unconverted blow counts are presented on Plates 2 and 3. The materials are classified in accordance with the Unified Soil Classification System, presented on Plate 4.

The log shows our interpretation of the subsurface conditions on the date and location indicated, and it is not warranted that they are representative of the subsurface conditions at other locations and times. Also, the stratification lines on the logs represent the approximate boundaries between soil types; the transition may be gradual.

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Representative samples of the soils encountered were laboratory tested to determine their classification (percent passing No. 200 sieve), moisture content, and density. The test results are generally presented on the test boring logs in the manner described in the Key to Test Data, Plate 4.

SITE CONDITIONS

The parcel is located on west side of McChristian Avenue south of the intersection with Miwok Road, in the southeastern portions of the Salmon Creek neighborhood of Bodega Bay. The parcel is approximately 80 feet above sea level, and located about 2000 feet east of the Pacific Ocean and about 900 feet south of Salmon Creek. The parcel is situated on the eastern boundary of a large dune sand field that stretches from Salmon Creek to Bodega Bay. An approximate 10- to 15-foot-high dune situated at the center of the parcel has been developed with a residence on its crest. Beyond the development, the terrain descends westerly at a gradient of about 10:1 (horizontal to vertical) to the Pacific Ocean. The undeveloped portion of the parcel is covered with dune grasses.

The published geologic reference maps the area to be underlain by predominantly Holocene-age dune sands with smaller portions of marine terrace deposits and marine deposits comprised of mud, gritty mud, silt, and sand. During our work, we observed the site to be covered by eolian dune sands that are deposited and re-deposited by wind-blown processes.

Our test borings indicate the ground surface is covered by about 2 to 6 feet of brown medium-grained sands that are loose and moist. These sands are typically unconsolidated and clean (estimated to be less than 10 percent silts and clays). Based on our visual observations, the loose surface sands exhibit low plasticity to non-plastic, and very low cohesion. The shallow sand deposits are generally compressible and susceptible to densification and settlement during ground shaking. The thicknesses of these weak sand deposits are shown on the test boring logs.

Below the loose surface sands, we encountered brown sands that are medium dense. These soils are considered to be less compressible and less susceptible to densification during seismically-induced ground shaking than the loose sand. The underlying sands also have low expansion potential.

Groundwater was not encountered during our exploration. Groundwater conditions are expected to vary seasonally and at different locations.

The site is located within a zone of high seismic activity. Interactive geologic maps by the California Geological Survey (CGS, 2024 revision) indicate the site is located within Alquist-

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Priolo (A-P) Earthquake Fault Zone boundaries for historically active traces of the San Andreas Fault system. The CGS considers active faults as those having experienced surface rupture within about the last 11,000 years. Based on the maps, multiple traces are located to the immediate southeast of the parcel. The maps show a fault trace crossing the western portion of the site. However, the actual locations of the fault traces are generally approximated as the traces can be obscured by the migrating dune sands.

As throughout Sonoma County, ground shaking from earthquakes represents a significant geologic hazard to developments. Severe vibrations caused by earthquakes can trigger a phenomenon called liquefaction, which involves a temporary transformation of loose, cohesionless sands and occasionally soft silts below the groundwater level into a fluid-like mass due to an increase in pore water pressure. Loose, cohesionless sands above the groundwater level can result in densification and differential settlement in response to seismic shaking. Our review of liquefaction susceptibility maps prepared by USGS and CGS for the Association of Bay Area Governments (ABAG) indicates the site is located in an area of “high” liquefaction susceptibility. The occurrence of liquefaction and densification is dependent on many factors, including the intensity and duration of ground shaking, soil density, particle size distribution, and position of the ground water table (Seed and Idriss, 1982).

DISCUSSION AND CONCLUSIONS

Based on the results of our investigation, we conclude that the proposed improvements are feasible from a geotechnical engineering viewpoint. The primary geotechnical concerns at the site is the presence of approximately 9 feet of loose sands subject to densification that underlie the proposed development and proximity to the San Andreas Fault.

We anticipate the site will be subjected to very strong ground shaking during future, large magnitude earthquakes generated on nearby active traces of the San Andreas fault zone. Due to groundwater levels well below the depth of the susceptible sands, we judge the potential for liquefaction at the site is low. However, the loose, cohesionless sands encountered within the upper 9 feet of the ground surface are considered to be susceptible to densification and differential settlements during earthquakes. We estimate that densification induced settlement on the order of 1-1/2 inches could occur. Settlement and densification of the loose sands could potentially result in damage to structures. Therefore, we conclude that the existing surface materials are unsuitable for support of new fills, shallow foundations, and critical concrete slabs in their present condition.

For this project, we recommend the use of a mat slab for structural support of the addition and garage. Mat slab foundations are foundation systems commonly used to mitigate the damaging

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effects of densification and liquefaction. Heavily reinforced concrete mat slabs are designed to span and cantilever voids associated with differential settlement, and accommodate tilting. If tilting of the mat were to occur, a properly designed and constructed structure could experience distress; however, collapse of the structure would not be expected. In addition, the mat and structure could possibly be leveled if necessary.

The potential adverse effects resulting from differential movements of the loose sands can further be reduced in building areas by removal of the upper portion of the loose sands and replacement as properly engineered fill. The excavation and recompaction should be a minimum of 4 feet in depth. The materials encountered in our test borings are non-plastic and therefore are suitable for re-use as compacted fill. However, the on-site sands are clean (i.e., contain very little silt/clay binder materials). The lack of binder material may result in difficulty achieving and maintaining minimum recommended percent relative compaction. In addition, these materials will be easily disturbed and create erodible surfaces. Therefore, we judge the upper 12 inches of the building pad should consist of imported, non-expansive "select" fill, placed and compacted in accordance with the *Site Preparation and Grading* section of this report.

At the addition location, there will be a potential for differential movements between the new and existing foundations as the structures experience vertical movements from new loading. Such differential movements may result in some distress. The location of distress, if it occurs, will depend upon the type of connection between the addition and existing structure, and type of movements. Our recommendations are intended to reduce the potential for distress. The potential for distress of the new foundations or slabs, or existing foundations and slabs may be reduced if the new construction is separated from the existing structure.

The existing structure could, if desired, be monitored for distress during construction if new construction is planned. Should distress of the existing structure be noted, or if the risk of distress to the structure is unacceptable to the owner, then underpinning, bracing and/or shoring may be necessary and should be considered. Such monitoring, if desired, should begin prior to, and continue during and after, construction.

The contractor must use extreme caution when excavating directly adjacent to existing footings. Excavations adjacent to, and lower than, the bottom of footings must be performed in alternating short sections not exceeding 5 feet in length to avoid removing lateral confinement. A maximum of one-third of the existing foundation should be exposed at one time. Construction operations must be carefully planned to allow for the installation of fill or new footings as soon as possible after completing the excavation. Heavy vibratory equipment that could cause settlement must not be used within 5 feet of existing footings.

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Shoring of the existing residence may be required for excavation adjacent to the existing structure. Also care should be taken to not allow the sands below the existing foundation to pass through the shoring creating voids under the existing residence. Pressure grouting of the sands under the residence could be considered to act as a binder to reduce the difficulties of excavation within the loose sands. We should be contacted to provide supplemental recommendations and comments as needed when pressure grouting, shoring, or another method is chosen.

Noncritical use slabs-on-grade, such as strip walkways, equipment pads, etc., may be constructed on properly prepared subgrade (i.e., leveled and organics removed) provided: 1) the slabs are separated from foundations; 2) the slabs are designed to minimize cracking (i.e., reinforced with steel rebar and provided with control joints); and 3) some soil-related cracking is considered acceptable. Improved performance of less critical use slabs, if desired, can be attained by removal of some of the weak soils and replacement as engineered fill, previously discussed. The depth of over-excavation is dependent upon the level of performance desired by the owner.

Groundwater seepage was not encountered in our test borings. We anticipate that groundwater seepage and perched groundwater conditions will vary seasonally and by location across the site and in response to rainfall and irrigation. Excavations performed in the summer or autumn months will typically result in a lower risk of encountering groundwater or wet soil conditions than in winter or spring months and may require less mitigation during site work should groundwater be encountered.

Control of surface run-off will significantly enhance the stability of the site. The site should be graded to slope away from foundations, and slab edges. The discharge of roof gutter downspouts must be collected into non-perforated pipes. All collected water must be discharged into the storm drain system or onto erosion resistant areas away from foundations and slabs.

The literature reviewed indicates the site is located within an *Earthquake Zone of Required Investigation* for active traces of the San Andreas Fault. The purpose of the Alquist-Priolo Act is to avoid constructing structures across active fault traces. According to the A-P Act, the actual risk associated with surface fault rupture is assessed by performing a site-specific fault investigation typically with subsurface exploration. A detailed fault study was not authorized or conducted for this site. Single family residences are generally exempt from the A-P Act. However, the permitting agency (city, county, or state) typically has the authority to require or waive a fault investigation. Some constraints to performing a fault investigation include the high caving potential of the loose dune sands which would obscure potentially active fault traces and limited area for trenching due to public improvements and private properties. As indicated previously, the literature shows fault traces crossing the western portion of the site. In addition, our interpretations of geomorphic features, such as depressions, northwest trending drainage swales, etc., suggest that the active portions of the fault are located west-southwest of the parcel.

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However, the possibility of future surface rupture cannot be dismissed entirely although the dune sand may act as a buffer to prevent the surface expression of a rupture at the ground surface. As in all seismically active areas, new faults can be generated and/or long inactive faults can be reactivated as a result of regional earth stresses.

Ground shaking from earthquakes represents a significant geologic hazard to developments throughout the entire Northern California area. The San Andreas fault ruptured in 1906 with an estimated moment magnitude of 7.9 and a modified Mercalli Intensity of XI (extreme). The intensity of ground shaking will be dependent on several factors such as distance from the site to the earthquake focus, depth of the earthquake, magnitude of the earthquake, duration of ground shaking, and response of the underlying soil. It will be necessary to design and construct the structure in accordance with current standards for earthquake-resistant construction. Construction in accordance with our recommendations will enhance the integrity of the development. However, damage related to faulting/earthquake shaking may still occur during the life of the development and is a known risk when building in seismically active areas.

The site is located approximately 80 feet above mean sea level. The Tsunami Inundation Map For Emergency Planning (California Emergency Management Agency, February 15, 2009) of the Bodega Head Quadrangle shows the site to be located outside of Tsunami inundation areas. Therefore, we consider the risk of tsunami related damage to be low.

RECOMMENDATIONS

Site Preparation and Grading

The following is presented for general grading. We must review and approve any grading planned, since site grading may have a negative impact on slope stability and site performance.

Areas to be graded should be cleared of existing improvements (e.g., footings, slabs, landscape features, etc.) debris, vegetation, tree roots, and deleterious substances. Material generated by the clearing operations should be removed from the site. Wells, cesspools, and other voids encountered or generated during clearing should be either backfilled with granular material or compacted soil or capped with concrete as determined by us and in accordance with Sonoma County requirements.

Areas to be graded should be stripped of the upper soils containing root growth and organic matter. We anticipate that the required depth of stripping will average about 2 to 4 inches. The strippings should be removed from the site, stockpiled for reuse as topsoil, or mixed with at least two parts soil and used as fill in areas beyond structures and slabs.

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For the purpose of definition, “select fill areas” referred to in this report are building areas and their zones extending at least 5 feet beyond the outside edge of mat slab foundations. In select fill areas, the loose surface soils should be excavated for a minimum depth of 4 feet below the existing ground surface or subgrade, whichever is deeper. The depths and extent of excavations should be reviewed and approved by us in the field during grading.

The site is underlain by damp, cohesionless sands. As a result, additional grading efforts may be required to reduce the likelihood of caving and sloughing at excavations and to achieve proper compaction where these soils are not confined.

Within the select fill areas, the exposed bottoms should be scarified to a minimum depth of 6 inches, moisture conditioned to about 2 percent above optimum moisture content, and compacted to at least 90 percent relative compaction. Relative compaction refers to the in-place dry density of soil expressed as a percentage of the maximum dry density of the same soil, as determined by ASTM D 1557-12. Optimum moisture content is the water content (percentage by dry weight) corresponding to the maximum dry density.

The on-site soils are suitable for reuse as general fill in building areas provided that: 1) all rock sizes greater than 6 inches in largest dimension and perishable materials are removed; and 2) the fill materials are approved by us prior to use. The upper 12 inches of the building pad and cut or fill slopes steeper than 5:1 should consist of imported, non-expansive “select” fill free of organic matter, and should conform to the following requirements:

<u>Sieve Size</u>	<u>Percent Passing</u>
6-inch	100
4-inch	90-100
No. 200	15-60

Liquid Limit - 40 Maximum	
Plasticity Index - 15 Maximum	
(ASTM D 4318-10 Wet Test Method)	

Fill should be placed in thin lifts (normally 6 to 8 inches depending on compaction equipment), uniformly moisture conditioned to about 2 percent above optimum moisture content and compacted to at least 90 percent relative compaction. In select fill areas, the upper 12 inches of subgrade should be imported, select fill. All surfaces should be finished to present a smooth, unyielding subgrade.

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Graded slopes should be planted with quick growing, dense vegetation or protected from erosion by other measures upon completion of grading. Ground cover should be maintained on the slopes.

At all times, temporary construction excavations should conform to the regulations of the State of California, Department of Industrial Relations, Division of Industrial Safety or other stricter governing regulations. The performance of temporary cut slopes is the responsibility of the contractor/owner.

Mat Foundation

Foundation support for structures should be obtained from a mat foundation. Mats supporting structures should be underlain by engineered fill placed and compacted in accordance with the recommendations presented in this report. Further, the mat should be at least 12 inches thick and reinforced with steel in both directions to span at least 9 feet and cantilever at least 6 feet at the edges of non-support. The mat should be designed using allowable bearing pressures of 1,500 pounds per square foot (psf) for dead plus long-term live loads, and 2,250 psf for total design loads.

Where portions of the foundation extend 12 inches below lowest adjacent grade, those areas may impose a passive equivalent fluid pressure of 200 pounds per cubic foot (pcf) and a friction factor of 0.3 times the net vertical dead load. Passive pressures should be neglected within the upper foot unless footings are confined by other construction. A coefficient of subgrade reaction of 150 pounds per cubic inch may be used for mat design.

Utility line connections at the edge of the mat should be flexible to resist breakage in the event that tilting of the mat or differential settlement occurs.

Seismic Design Criteria

Using Google Earth site latitude and longitude coordinates of 38.34797° N; -123.0612° W, respectively, the following seismic design criteria are based on 2022 CBC guidelines, ASCE 7-16 and the USGS Earthquake Ground Motion Parameters:

Spectral Response Acceleration	g
S_s (0.2 sec.)	2.478
S_1 (1.0 sec.)	1.039

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S _{DS} (0.2 sec.)	1.652
Peak Ground Acceleration (PGA)	1.059
Seismic Design Category	D

Title 24, Part 2, Section 1613.2.2, of the 2022 CBC indicates that site categorization for seismic design should be based on the average soil values within the upper 100 feet of the site. We performed a geophysical site evaluation which included subsurface seismic imaging and earthquake ground shaking potential evaluation using Terēan's VsSurf ReMi™ seismic data processing software. Seismic surveys were performed to determine the soil profile with depth and the seismic site class per ASCE 7-16 using the weighted-average soil shear wave velocity for the upper 100 feet (Vs100). The surveys were performed by recording active and/or ambient (passive) seismic sources. The seismic recording array for these surveys consisted of 12, 4.5 Hz geophones at 26.25 ft spacing, for a total survey length of 289 feet. Noise was generated by hammer blows adjacent to the seismic line during data acquisition while ambient noise was generated from traffic along the nearby roads. The seismic data were acquired using a ReMiDAQ™ 4-12 channel seismograph, while data was processed using Terēan's ReMi™ software. Survey results indicate a weighted-average soil shear wave velocity of the upper 100 feet (Vs100) of 937 ft/s. This results in a designation of a Seismic Site Class D according to Table ASCE 7-16.

Concrete Slabs-On-Grade

Non-critical use exterior slabs, such as strip walkways, equipment pads, etc., may be constructed on properly prepared subgrade (i.e., leveled and free of organics) provided that: 1) the slabs are separated from foundations with felt paper, mastic, or other positive and low friction separation; 2) slabs are designed to minimize cracking (i.e., reinforced and provided with control joints); and 3) some soil related cracking and settlement is considered acceptable. We should be contacted if improved performance of non-critical exterior slabs is desired.

Slab-on-grade subgrade should be maintained at a uniform moisture, at least 2 percent above optimum moisture content, until the concrete slabs are placed. Slabs should be underlain with a capillary moisture break and cushion layer consisting of at least four inches of clean, free-draining crushed rock. The crushed rock should be at least 1/4-inch, and no larger than 3/4-inch, in size.

Moisture will condense on the underside of slabs. Where moisture migration through slabs is detrimental, waterproofing methods and specifications determined by others should be incorporated into the project plans.

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Slab thickness should be recommended by the structural engineer to support the anticipated loads and to reduce cracking. However, some cracking of slabs must be anticipated considering concrete shrinkage. Reinforcing must be carefully installed in accordance with the structural engineer's recommendations to minimize the potential of cracking. We typically recommend the use of rebar reinforcement, placed on blocks, as directed by the structural engineer. We have commonly observed that welded wire mesh is not properly located in the slabs.

Retaining Walls

Foundation support for retaining walls can be obtained from mat foundations designed in accordance with the recommendations presented above.

Retaining walls free to rotate (yield more than 0.1 percent of the wall height at the top of the backfill) and with backfill sloping flatter than 3:1 should be designed to resist an active earth equivalent fluid pressure (triangular distribution) of 45 pounds per cubic foot (pcf). Where the backfill slopes up steeper than 3:1 and less than 2:1, the pressures indicated above should be increased to 55 pcf. We should be consulted if backfill slope gradients are steeper than 2:1. Rigid walls with backfill sloping less than 3:1 which cannot yield should be designed for an "at-rest" earth equivalent fluid pressure of 60 pcf. A minimum factor of safety of 1.5 against overturning and sliding should be used in the design of retaining walls.

Where applicable, seismic wall stability for cantilever retaining walls with level and sloping backfill may be evaluated based on an earth equivalent fluid pressure (triangular distribution) of 20 pcf and 32 pcf, respectively. Seismic wall stability for rigid retaining walls may be evaluated based on an earth equivalent fluid pressure (triangular distribution) of 40 pcf. This pressure is in addition to the active earth equivalent fluid pressures presented in this report. Incremental seismic lateral earth pressures should not be added to at-rest lateral earth pressures. The resultant force should be considered to act at a height of 0.33H on the wall. The factor of safety against instability under seismic loading should be at least 1.1.

These pressures do not consider additional loads resulting from adjacent foundations, traffic, or other downward loads. If additional surcharge loadings are anticipated, we can assist in evaluating their effects.

Retaining walls should be provided with permanent backdrains to prevent the build-up of hydrostatic pressure. The drains and backfill should be constructed as shown on Plate 5. The top of the perforated drainage pipe should be located at least 8 inches below any adjacent interior slabs to reduce the risk of seepage through walls into interior building areas.

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Where migration of moisture through retaining walls would be detrimental, retaining walls should be waterproofed as specified by the Project Architect or Structural Engineer. Backfill materials should be compacted in a manner to prevent over-stressing the wall. Further, wall bracing should be considered. Retaining walls will yield slightly during backfilling. Therefore, retaining walls should be backfilled prior to building on or adjacent the walls. The use of imported granular material will generally require less backfilling effort. We should be contacted to observe the backfill of retaining walls.

We typically recommend that foundations not be located within retaining wall backfills to avoid the potential for differential settlement. Mitigation may include designing foundations to span from retaining walls to beyond the backfill area. We should be contacted to provide supplemental consultation if foundations will extend across retaining wall backfills.

Geotechnical Engineering Drainage

Ponding water will be detrimental to building foundations and structural elements. The site should be graded to provide positive drainage away from the building foundations, slab edges, and slopes. Outlets should be provided in the slab rock to reduce the risk of water build up in the slab rock.

Roofs should be provided with gutters and the downspouts connected to non-perforated pipes discharging into the storm drainage system or erosion resistant areas away from the structures. Roof downspouts and surface drains must be maintained entirely separate from subsurface drainage.

Supplemental Services

We should be consulted during design to discuss alternative approaches for design, as applicable. We should review the final plans for conformance with the intent of our recommendations.

During grading and foundation construction, we should provide intermittent geotechnical engineering observations, along with necessary field and laboratory testing, during: 1) removal of weak soils; 2) placement of fill and compaction; 3) preparation and compaction of subgrade; and 4) mat slab foundations (i.e., placement of reinforcing steel and concrete). These observations and tests would allow us to check that the contractor's work conforms with the intent of our recommendations and the project plans and specifications. These observations also

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permit us to check that conditions encountered are as anticipated, and modify our recommendations, as necessary.

Upon completion of the project, we should be contacted to perform a final observation prior to occupancy. We should summarize the results of this work in a final report.

These supplemental services are performed on an as-requested basis, and we can accept absolutely no responsibility for items that we are not notified to observe. Supplemental services are in addition to this investigation and are charged for on an hourly basis in accordance with our Schedule of Charges. We must be provided with at least 48 hours notice for scheduling our initial site visit, and 24 hours thereafter.

MAINTENANCE

Periodic land maintenance will be required. Surface and subsurface drains should be checked frequently and cleaned and maintained as necessary. Vegetation should be maintained on all slopes.

LIMITATIONS

We performed the investigation and prepared this report in accordance with generally accepted standards of the geotechnical engineering profession. No other warranty, either express or implied, is given.

Subsurface conditions are complex and may differ from those indicated by surface features and those encountered at the test hole location. Additional exploration could reveal conditions not evident at this time. As requested, we would be pleased to provide supplemental exploration of the site to improve the site characterization. Such characterization may assist in better evaluating development risks and may reduce the risk of construction changes. Development of this site is contingent on the owner(s) understanding and accepting that serious or irreparable damage could occur during earthquakes. Therefore, we recommend that earthquake insurance be obtained.

If the project is revised, or if conditions different from those described in this report are encountered during construction, we should be notified immediately so that we can take timely action to modify our recommendations, if warranted. Site conditions and standards of practice change. Therefore, we should be notified to update this report if construction is not performed within 24 months of the submittal date.

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We trust this provides the information you require at this time. If you have questions or wish to discuss this further, please call.

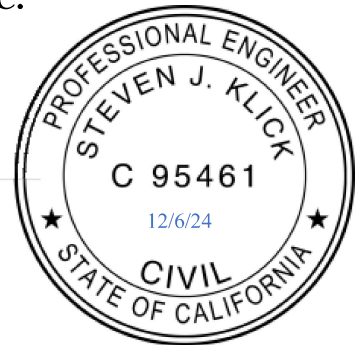
Very truly yours,

BAUER ASSOCIATES, INC.



A handwritten signature in blue ink, appearing to read "S. Klick", with a horizontal line extending to the right.

Steven J. Klick
Engineering Geologist
Civil Engineer



A handwritten signature in blue ink, appearing to read "Arthur H. Graff", with a horizontal line extending to the right.

Arthur H. Graff
Geotechnical Engineer



SJK/AHG (gi/mcchristian ave)
Attachments: Plates 1 through 5
Email only
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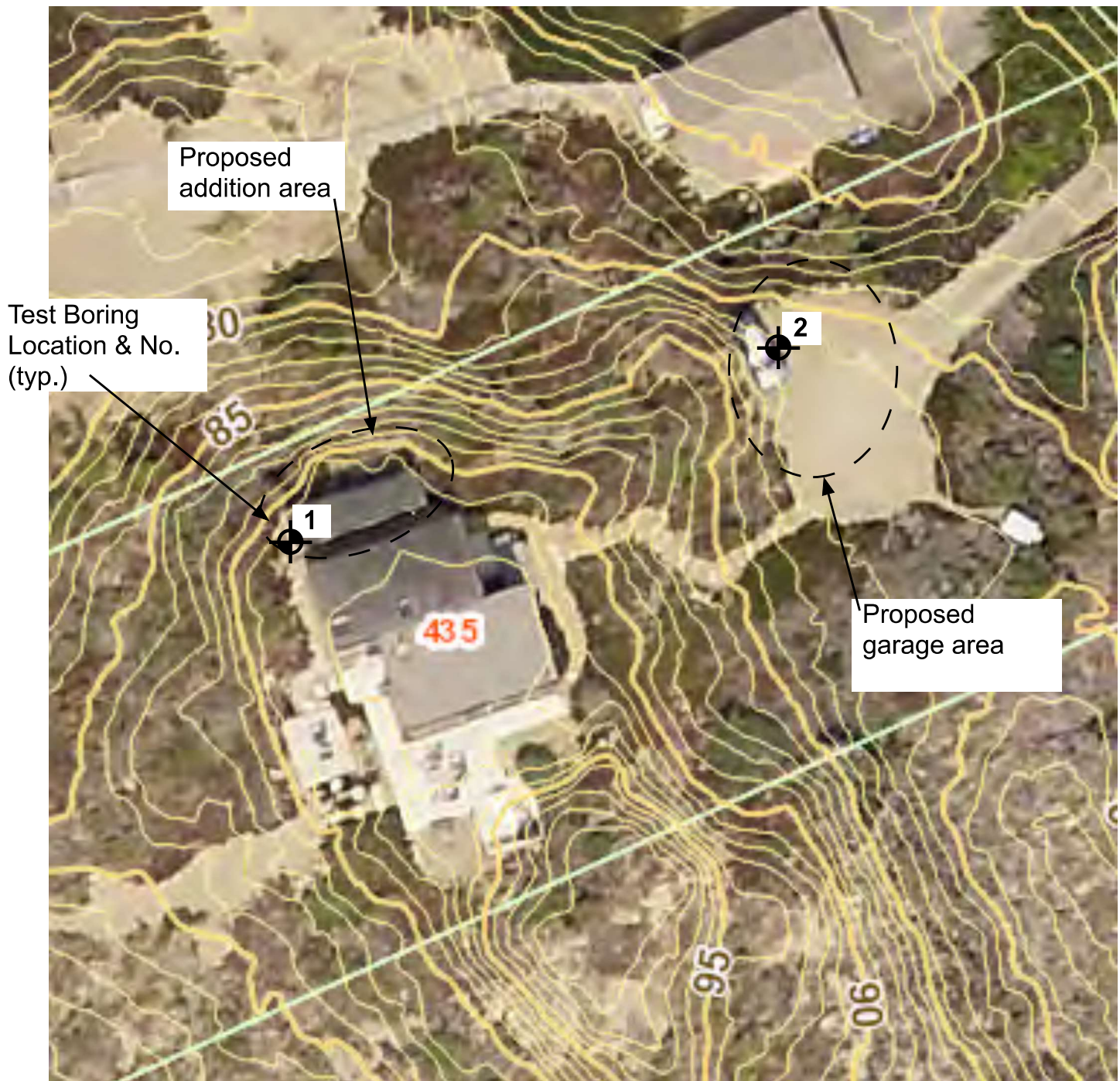
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Reference North

Reference: City of Santa Rosa GIS, December 2024.

Note: The locations of all features are approximate and may vary.

BAUER ASSOCIATES, INC.	Job No: 4420.0 Date: 12/24	TEST HOLE LOCATION PLAN	PLATE
GEOTECHNICAL CONSULTANTS	By: SJK	435 MCCHRISTIAN AVENUE Bodega Bay, California	1

Laboratory Tests	Blows/Foot*	Moisture Content (%)	Dry Density (pcf)	Depth	Sample	Weak Soils	Equipment:	6" Hollow Stem Auger
							Date:	October 25, 2024
							Elevation:	Not Available
Minus No. 200 = 3 percent	16			3			BROWN SAND (SP) loose, moist medium dense below 2 feet.	
	18**	3.3	98	6				
	11			9				
				12				
	24			15				
				18				
	28			21				
* Sampled with 1.5" diameter sampler **Blows converted to Standard Penetration Resistance Values								
BAUER ASSOCIATES, INC. GEOTECHNICAL CONSULTANTS		Job No: 4420.0 Date: 12/24 By: SJK		LOG OF TEST BORING 1 435 MCCHRISTIAN AVENUE Bodega Bay, California			PLATE 2	

Laboratory Tests	Blows/Foot*	Moisture Content (%)	Dry Density (pcf)	Depth	Sample	Weak Soils	Equipment:	6" Hollow Stem Auger	
							Date:	October 25, 2024	
							Elevation:	Not Available	
	6			3			BROWN SAND (SP) loose, moist		
	5**			6			medium dense below 6 feet.		
				9					
	11								
				12					
				15					
	13								
				18					
				21					
BAUER ASSOCIATES, INC.			Job No: 4420.0			LOG OF TEST BORING 2			PLATE 3
GEOTECHNICAL CONSULTANTS			Date: 12/24			435 MCCHRISTIAN AVENUE			
			By: SJK			Bodega Bay, California			

MAJOR DIVISIONS					TYPICAL NAMES	
COURSE GRAINED SOILS	GRAVELS more than half coarse fraction is larger than no. 4 sieve size	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES	
			GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES	
		GRAVELS WITH OVER 12% FINES	GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND MIXTURES	
			GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND MIXTURES	
	SANDS more than half coarse fraction is smaller than no. 4 sieve size	CLEAN SANDS WITH LITTLE OR NO FINES	SW		WELL GRADED SANDS, GRAVELLY SANDS	
			SP		POORLY GRADED SANDS, GRAVEL-SAND MIXTURES	
		SANDS WITH OVER 12% FINES	SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES	
			SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES	
FINE GRAINED SOILS	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50		ML		INORGANIC SILTS, SILTY OR CLAYEY FINE SANDS, VERY FINE SANDS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY	
			CL		INORGANIC SCLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS OR LEAN CLAYS	
			OL		ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50		MH		INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS	
			CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
			OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	
HIGHLY ORGANIC SOILS			Pt		PEAT AND OTHER HIGHLY ORGANIC SOILS	

KEY TO TEST DATA

LL = Liquid Limit (in %)
 PL = Plastic Limit (in %)
 PI = Plasticity Index (in %)
 -200 = % Passing
 -No. 4 = % Passing

	Shear Strength, psf		Confining Pressure, psf	
Tx	320	(2600)		Unconsolidated Undrained Triaxial
Tx CU	320	(2600)		Consolidated Undrained Triaxial
DS	2750	(2600)		Consolidated Drained Direct Shear
UC	2000			Unconfined Compression

Note: All strength tests on 2.4 in. inside diameter sample unless otherwise indicated

SAMPLER GRAPHIC SYMBOLS



Standard California Sampler (2.4 in. ID)



No Sample Recovery



Standard Penetration Test (SPT) (1.4 in. ID)



Grab Sample

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GEOTECHNICAL
CONSULTANTS

Job No: 4420.0

Date: 12/24

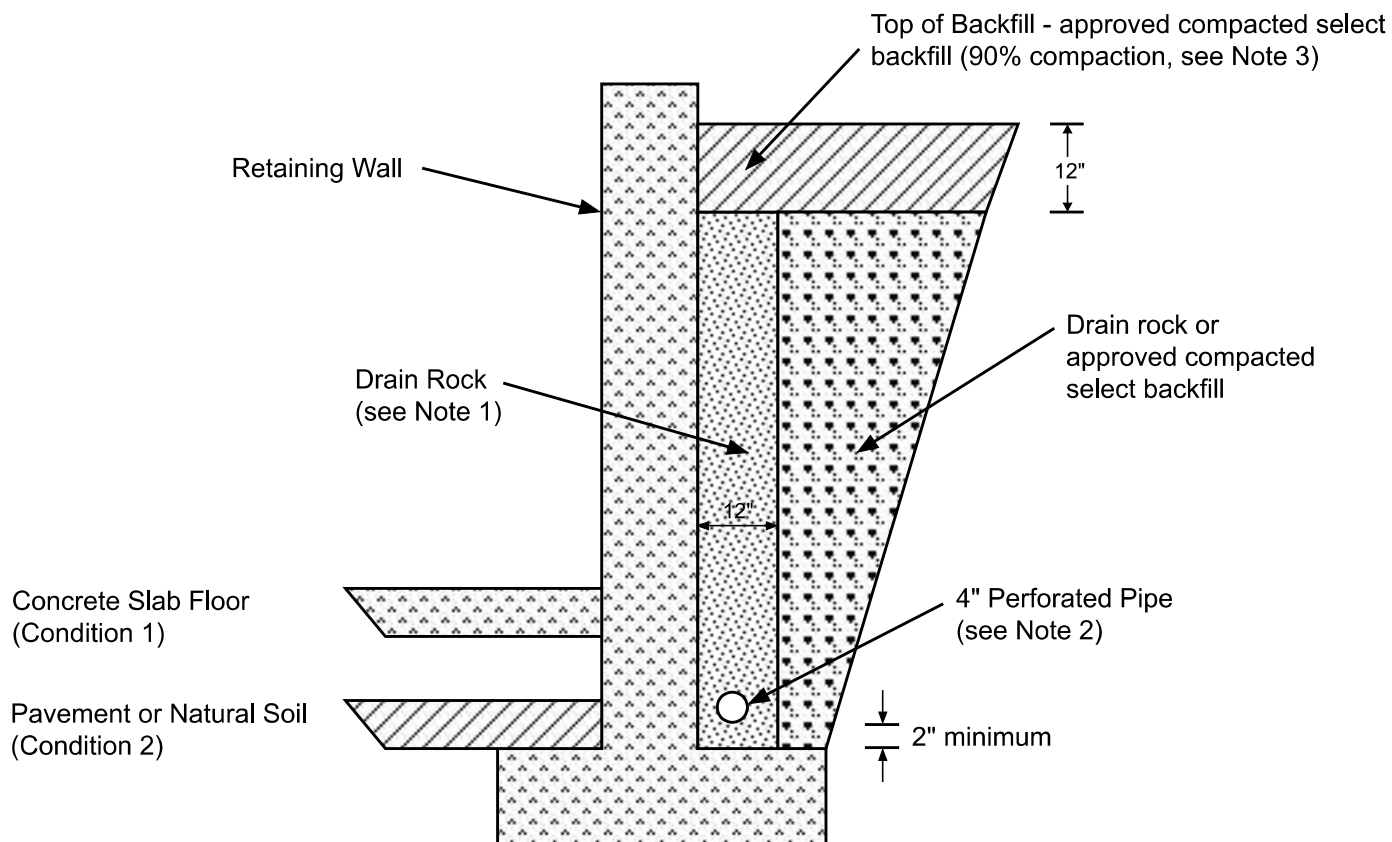
By: SJK

SOIL CLASSIFICATION CHART & KEY TO TEST DATA

435 MCCHRISTIAN AVENUE
Bodega Bay, California

PLATE

4



WALL DRAINAGE DETAIL
(Not to scale)

NOTES:

- (1) Drain rock should be either: 1) clean, free-draining, and meet the requirements for Class II Permeable material, Section 68, State of California "Caltrans" Standard Specifications, latest edition; or 2) 3/4 or 1-1/2 inch crushed drain rock separated from the adjacent soil/rock by non-woven filter fabric.

Prefabricated synthetic drainage structure, such as Miradrain 6000 or equivalent, may be used in lieu of drainrock along the back of the retaining wall.
- (2) Pipe should consist of PVC Schedule 40 or ABS with an SDR of 35 or better, installed perforations down. Pipes for subsurface walls should be sloped at a minimum gradient of 1% to drain to outlets by gravity or sump with automatic pump. The pipe invert should be a minimum of 8 inches below adjacent interior slabs-on-grade. Surface drainage should not be connected to subsurface drain pipes.
- (3) The upper 12 inches of the drain should be backfilled with compacted clayey soils to exclude surface water. Retaining walls should be backfilled with materials approved by us and per the recommendations in the report. Backfilling methods should be appropriate to avoid over-stressing the wall structures. Wall bracing should be considered prior to backfilling.

**BAUER
ASSOCIATES, INC.**

GEOTECHNICAL
CONSULTANTS

Job No: 4420.0

Date: 12/24

By: SJK

WALL DRAINAGE DETAIL

**435 MCCHRISTIAN AVENUE
Bodega Bay, California**

PLATE

5



4/22/26

Existing System Findings Report for Proposed Non-Bedroom Addition

Property Address: 435 McChristian Ave. Bodega Bay

APN:100-230-006

Permit Number: WSR26-_____

Permit Sonoma Well & Septic Division,

I am pleased to submit the Existing System Findings Report for the subject property. This report has been prepared in accordance with the requirements outlined in Section 6 of the OWTS Manual v8.0 to facilitate Well & Septic Approvals for the proposed non-bedroom addition. Based on the evaluation conducted on the existing septic system, the following findings and determinations have been made:

1. System Type and Condition:

- The existing dispersal system was verified as conventional standard leach line system. Records indicate a 1991 installation, making the system approximately 35 year old at the time of inspection.
- Hydraulic load testing resulted in an "Excellent" rating and confirmed that the system is functioning properly with no evidence of field failure.
- The concrete septic tank, with inlet/outlet baffles is in acceptable condition for continued use.

2. Reserve Replacement Area:

- Record Non-conforming Reserve area remains suitable for use.
- The parcel has less than 50% Land Encumbrance, therefore proof of code-compliant reserve/replacement area is not triggered by the proposed improvements.

3. System Documentation:

- Historical records, including plans and permits, are on file and included in this package.

No repairs or modifications are **required** at this time, and the existing system appears to meet minimum non-conforming standards of Section 6 requirements of the OWTS Manual. The system should be deemed acceptable for the proposed non-bedroom addition with no increase in flow. Any increase in flow would require a new code compliant system in full conformance with the current OWTS. The parcel is within the Salmon Creek waiver prohibition area.

Recommended system maintenance and improvements are made on page 4 of the detailed report, however are not a requirement for a non-conforming system, but will improve system performance and longevity.



Please refer to the attached detailed report and site map for additional information.

Should you require further clarification or additional supporting documentation, please do not hesitate to contact me directly.

Thank you for your attention to this matter. I look forward to your review and approval of the submitted findings.



Sincerely,
Daniel Byrne, PE 80078
President & CEO at TruNorth
Dan@TruNorth.co

Attached:

- Existing System Inspection Report
- Site Exhibit
- OWTS Photos
- Pump Receipt
- Permit History & System Records



EXISTING SYSTEM INSPECTION REPORT

FOR:
NON-BEDROOM ADDITION

SITE: 435 MCCHRISTIAN AVE. BODEGA BAY, CA
APN: 100-230-006

GENERAL SEPTIC SYSTEM INFORMATION:

Is the existing septic system a cesspool? No ☒ Yes ☐ (If "Yes" then a new septic system is required)

Was the existing septic system permitted? Yes ☒ No ☐ Pre-code ☐ Unknown ☐

Permit Number Record approved plans attached, no permit number listed. OPR Number (if applicable): NA

Design capacity (identify number of permitted bedrooms, gallons per day, or unknown)

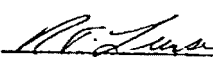
1991 system approved for 3 bedrooms, 2 bedroom SFD constructed, with proposed future 3rd bedroom addition which was never constructed.

Is there a site plan provided with evaluation? Yes ☒ No ☐

Are there historical records or supporting documentation provided with evaluation? Yes ☒ No ☐

Comments/Recommendations Waiver Prohibition area. No increase in flow is proposed. Site is in sandy soils, however hydros found >5% fines.

Approval for system given in 1991 based on comprehensive soils testing and consideration.

SONOMA COUNTY PUBLIC HEALTH DEPARTMENT REVIEWED BY  5-31-90 DATE ENVIRONMENTAL HEALTH	
TANK SIZE	1200
LEACH TRENCH	
LENGTH	105'
WIDTH	24"
DEPTH	60"
ROCK	36"
NO. OF BEDROOMS	2
	

DISPERSAL SYSTEM INFORMATION:

Type of existing dispersal system: Standard ☒ Mound ☐ At-Grade ☐ Filled Land ☐
Shallow Sloping ☐ Subsurface Drip ☐ Shallow Trench Pressure Distribution ☐
Bottomless Sand Filter ☐ Seepage Pit ☐ Unknown ☐ Other _____

Determination of dispersal system type and location: Existing County records used? Yes ☒ No ☐

Uncovered/Observed portions of disposal system? Yes ☒ No ☐ Assumption(s) made? Yes ☒ No ☐

If dispersal system type or location was assumed, explain why and how _____

Located and exposed d-box 1. observed pipe to d-box 2, but did not dig up 2nd d-box.

Other _____

Determination of dispersal system function: Uncovered and evaluated distribution boxes? Yes ☐ No ☐

Hydraulic load test performed? Yes ☒ No ☐ Result Excellent

150 gallons at 6gpm dosed directly to d-box 1. All went to LL1, water level never increased above

Other the invert out elevation to LL1. No signs of effluent surface discharge in the field.

Condition of dispersal system: Functioning properly and acceptable for reuse? Yes ☒ No ☐

Replacement required? Yes ☐ No ☒ Other _____

Comments/Recommendations: D-box 1 lid was concrete and corroded around the lipped perimeter.

Consider replacement with new concrete or plastic d-box.

SEPTIC TANK INFORMATION:

Does the existing septic system have a septic tank? Yes ☒ No ☐ Size: 1200 Gallons

Septic tank material¹: Concrete ☒ Fiberglass ☐ Plastic ☐ Metal ☐ Wood ☐ Other: _____

Number of compartments in septic tank: 1 ☐ 2 ☒ Other: _____

Lids and risers present? Yes ☒ No ☐

Effluent filter present? Yes ☐ No ☒

Inlet baffle/Tee present? Yes ☒ No ☐

Outlet baffle/Tee present? Yes ☒ No ☐

Septic tank condition: Acceptable for reuse? Yes ☒ No ☐ (If "No" then tank replacement required with permit)

Comments/Recommendations: Root intrusion on inlet side, primarily at inlet pipe tank penetration.

Roots knocked down into tank and should deteriorate over time. Inlet and riser should be sealed to slow root intrusion.

¹ Tanks not made of concrete, fiberglass, or plastic materials must be replaced with permit to comply with county standards.

SUMP TANK INFORMATION

Does the existing septic system have a separate sump tank? Yes ☐ No ☒ Size: _____ Gallons

Sump tank material²? Concrete ☐ Fiberglass ☐ Plastic ☐ Metal ☐ Wood ☐ Other: _____

Lids and risers present? Yes ☐ No ☐ Pump Operational? Yes ☐ No ☐ (Pump replacement required)

Sump tank condition: Acceptable for reuse? Yes ☐ No ☐ (If "No" then tank replacement required with permit)

Does the existing septic system have a control panel? Yes ☐ No ☐ Type/Model: _____

Condition of control panel: Acceptable for reuse? Yes ☐ No ☐ (If "No" then replacement required with permit)

Comments/Recommendations: _____

² Tanks not made of concrete, fiberglass, or plastic materials must be replaced with permit to comply with county standards.

PRETREATMENT UNIT INFORMATION

Does the existing septic system have a pretreatment unit? Yes ☐ No ☒ Type/Model: _____

Condition of pretreatment unit: Acceptable for reuse? Yes ☐ No ☐ (If "No" then replacement required with permit)

Comments/Recommendations: _____

APPURTENANT COMPONENTS INFORMATION

Identify components that have been repaired or replaced in-kind without permit as allowed under the permitting guidelines for septic system repair or replacement work for properties impacted by a County declared disaster.

☐ Lids, Risers, or covers ☒ Effluent filter ☒ Inlet baffle/Tee ☐ Outlet baffle/Tee

☐ Cleanout(s) ☐ Monitoring well(s) ☒ Distribution box(es)

☐ Valve boxes (balancing, purge, diversion) ☐ Valves (balancing, purge, diversion, air release)

☐ Minor non-structural cracks in septic tank ☐ Minor non-structural cracks in sump tank

☐ Transmission lines from dwelling(s) to septic tank

☐ Transmission lines from septic tank to distribution box(es)/lateral(s) or diversion valve(s)

☐ Sump tank components (pumps, piping, floats set per original design specifications)

☐ Hydrojetting lines to remove blockages in order to correct or improve system function

Comments/Recommendations: Recommend (not required for non-confirming system) that landowner seal the inlet to prevent/slow root intrusion. Recommend replacement of d-boxes with plastic and installation of outlet effluent filter.



Recommendation, not a requirement for a non-confirming system.

RESERVE REPLACEMENT AREA³:

Was a reserve replacement area identified on the originally permitted site plan? Yes ☒ No ☐

Has the reserve replacement area been compromised in any way? Yes ☐ No ☒

Is a reserve replacement area identified on the current site plan? Yes ☒ No ☐

Comments/Recommendations: Record approved reserve area appears intact and usable. Site does not have a land encumbrance over 50%, no additional reserve area analysis required.

³ Required to be identified when 1) a structure is relocated, 2) a structure will increase in footprint size, or 3) additional structures are proposed.

CONDITIONS FOR USE OF SEPTIC SYSTEM:

The following conditions apply or must be satisfied prior to use of overall septic system:

- ☐ Replace entire septic system (septic permit required from Permit Sonoma)
- ☐ Replace dispersal system (septic permit required from Permit Sonoma)
- ☐ Repair dispersal system (septic permit required from Permit Sonoma)
- ☐ Replace septic tank (septic permit required from Permit Sonoma)
- ☐ Replace sump tank (septic permit required from Permit Sonoma)
- ☐ Replace pretreatment unit (septic permit required from Permit Sonoma)
- ☐ Replace or repair electrical components (electrical permit required from Permit Sonoma)
- * ☐ Replace or repair minor appurtenant septic system components (no permit required from Permit Sonoma)

RECOMMENDED, NOT REQUIRED.

☒ Reserve replacement area adequate

☒ Septic system is acceptable

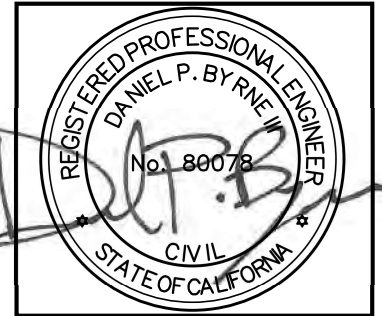
☐

☐ Other: _____

Comments/Recommendations: System meets OWTS 8.0 requirements for an addition without increase in flow.

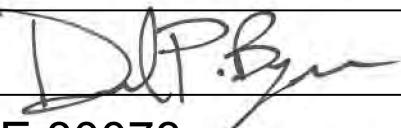
QUALIFIED PROFESSIONAL STATEMENT:

"I have evaluated the existing septic system and find it to be acceptable for the proposed use with the conditions listed above. I certify that I have observed the replacement of any septic system components that did not require a septic permit and/or have included documentation of replacement of applicable appurtenant components. The septic system may not meet current septic system requirements but was repaired to documented or assumed original design standards. Due to limited ability to test or make observations of systems on some sites, no guaranty of future system functionality is implied. Assumptions have been documented but not guaranteed."



Professional Seal (if applicable)

Name of Qualified Professional TRUNORTH, DANIEL BYRNE

Signature of Qualified Professional  Date 4/22/26

License/Registration Number RCE 80078 License/Registration Expiration Date 9/30/2026

TO BE COMPLETED BY PERMIT SONOMA STAFF

Existing septic system may be used as proposed based on evaluation by Qualified Professional: Yes ☐ No ☐

Requirements to be met prior to use of existing septic system:

☐ None ☐ Repair or replace components identified by Qualified Professional (no permit required)

☐ Obtain a permit to repair _____

☐ Obtain a permit to replace _____

☐ Other: _____

Existing septic system may be used for temporary housing: Yes ☐ No ☐

Existing septic system may be used for permanent housing: Yes ☐ No ☐

☐ Approved for _____ bedrooms or _____ gallons per day

☐ Approved for rebuilding in original building footprint only

Evaluation reviewed by: _____

Date: _____ Activity #: _____



T R U N O R T H

SITE EXHIBIT
(NOT A TOPO OR BOUNDARY SURVEY)

MILLER
RESIDENCE
ADDITION

OWNER INFORMATION:

PRINGL MILLER
TRUST

SITE INFORMATION:

435 MCCHRISTIAN AVE
BODEGA BAY, CA
APN: 100-230-006

PUBLISHED 4/3/2026

SHEET TITLE:

SITE EXHIBIT

SHEET NUMBER:

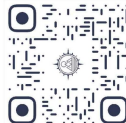


EXHIBIT NOTES:

HORIZONTAL COORDINATE SYSTEM:

CONCINA MEG MAP 2013 | INAP, MA(M)

4444

0000000000

[illegible]

THIS EXHIBIT HAS BEEN PREPARED USING GISGIS DATA AND PUBLICLY AVAILABLE MAP DATA. A COMPLETE PROFESSIONAL BOUNDARY AND TOPOGRAPHIC SURVEY WAS NOT PROVIDED OR CONDUCTED AS PART OF THIS EXHIBIT. PARCEL BOUNDARIES, EASEMENTS, AND LAND ENCUMBRANCES SPECIFIED HEREIN ARE APPROPRIATE AND FOR THE EXHIBITOR'S INFORMATION ONLY. THE USER IS THE SOLE RESPONSIBLE FOR THE LANDOWNER TO TYPICAL PARCEL BOUNDARIES, EASEMENTS, AND LAND ENCUMBRANCES. THE USER SHALL BE RESPONSIBLE FOR ANY DISCREPANCIES, OMISSIONS, OR DISCREPANCIES RELATED TO PROPERTY BOUNDARIES OR LAND ENCUMBRANCES ARE THE RESPONSIBILITY OF THE LANDOWNER. PROCEEDING WITH CONSTRUCTION WITHOUT A PROFESSIONAL SURVEY S AT THE OWNERS RISK.

EXISTING CONDITIONS DERIVED ON THIS PLAN SET ARE BASED ON PUBLICLY SOURCED PARCEL & GROUND SURFACE MODELS AND GEOGRAPHIC INFORMATION SYSTEM (GIS) DATA AND IS INTENDED FOR GENERAL REFERENCE PURPOSES ONLY. IT IS NOT A SUBSTITUTE FOR A PROFESSIONAL BOUNDARY SURVEY OR COMPREHENSIVE SITE TOPOGRAPHIC MAPPING. THIS INFORMATION IS PROVIDED "AS IS" WITHOUT ANY WARRANTY OF ACCURACY, COMPLETENESS, OR RELIABILITY. THE OWNER SHALL BE RESPONSIBLE FOR CONFIRMING BOUNDARY AND/OR TOPOGRAPHIC DATA PRIOR TO COMMENCING ANY WORK BY USING THIS PLAN SET. YOU ACKNOWLEDGE AND AGREE TO THESE TERMS AND CONDITIONS.

THE PURPOSE OF THE CONTENT OF THIS EXHIBIT IS TO FACILITATE THE REVIEW, APPROVAL AND CONSTRUCTION OF THE PROPOSED RESIDENTIAL DEVELOPMENT. UNAUTHORIZED CHANGES OR ADDITIONS TO THE DATA SHOWN ON THIS PLAN IS STRICTLY PROHIBITED AND ANY USES BEYOND THE STATED PURPOSE REQUIRES AUTHORIZATION

SITE EXHIBIT

Scale: 1" = 10'



T R U N O R T H

OWTS PHOTOS



SEPTIC TANK



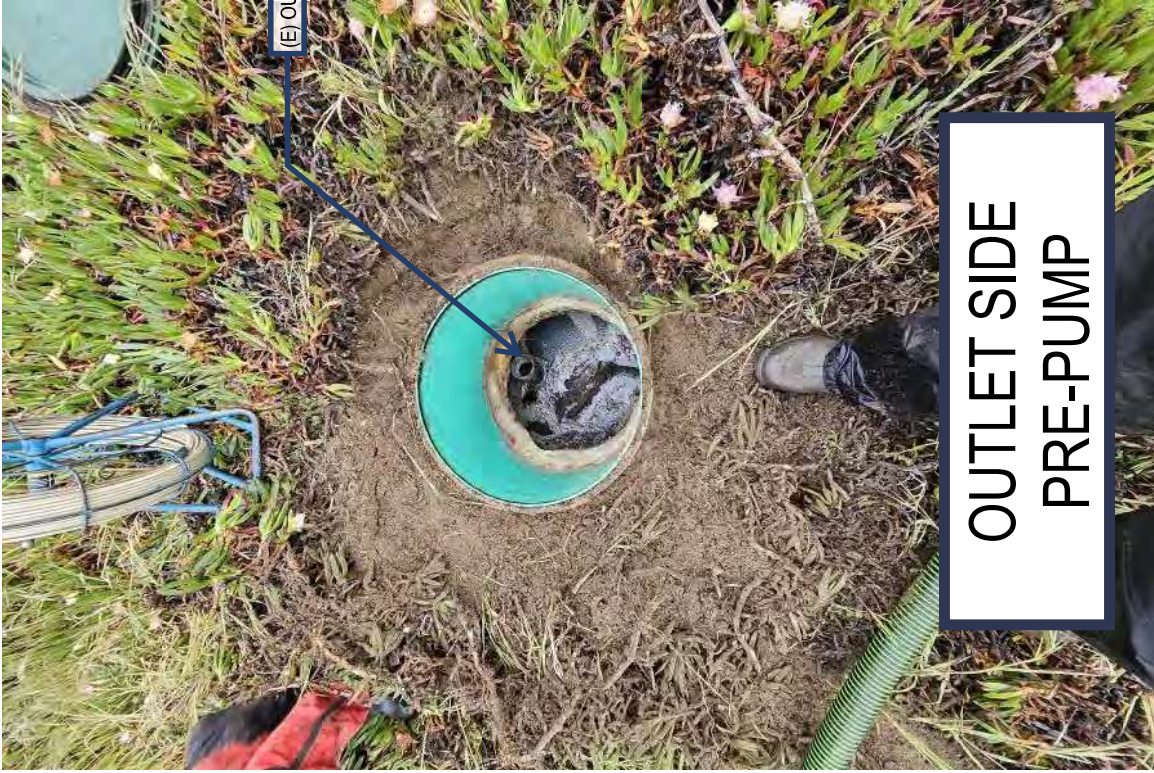
ROOT INTRUSION AT INLET TEE
PENETRATION.

(E) INTLET SANITARY TEE

INLET PRE-PUMP



T R U N O R T H



OUTLET SIDE
PRE-PUMP

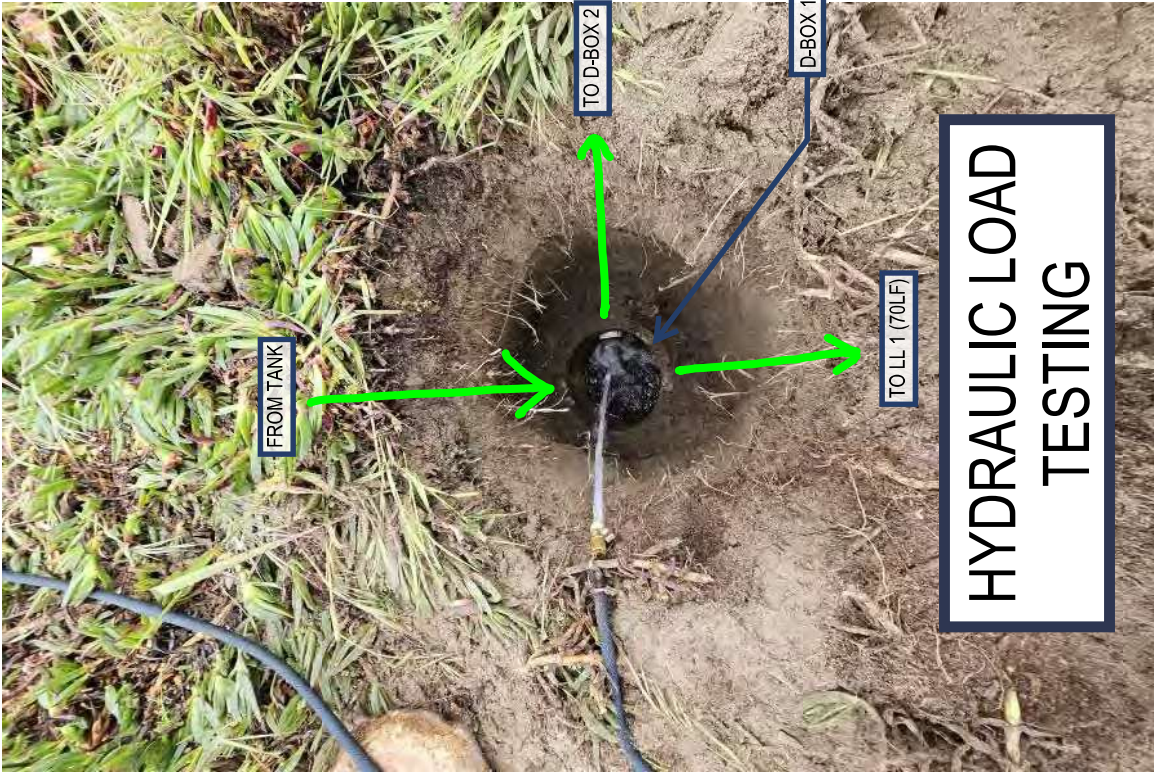
(E) OUTLET SANITARY TEE



OUTLET SIDE
POST-PUMP



T R U N O R T H







T R U N O R T H

PUMP RECEIPT

□ P1 □ P2



Quality Septic Service

Septic Tank Pumping
Post Office Box 6781 • Santa Rosa, CA 95406
(707) 585-9000

No. 30418

Date 4/20/26

Name PRINCE MILLER - TRUNORTH

Address 435 McChristian Ave.

City Bodega Bay

Phone 707 308 8638 Daniel

DESCRIPTION	AMOUNT
☐ Pump septic tank	
☐ Labor	
☐ Tank inspection	
☐ Pump grease	
☐ Additional charges	
☐ Material	
<u>Pump Septic Tank 1200 galls</u>	<u>675</u>
<u>Loc Disb box electronic loc.</u>	<u>145=</u>
	<u>+</u>
<u>Total</u>	<u>820=</u>

Paid on account ☐ Mastercard/Visa Pending

☐ Check #

☐ Cash

NOTICE: Under the Mechanics' Lien Law (California Code of Civil Procedure) any contractor, subcontractor, laborer, supplier, or other person who helps to improve your property but is not paid for his work or supplies has a right to enforce a claim against your property. This means that after a court hearing, your property could be sold by a court officer and the proceeds of the sale used to satisfy the indebtedness. This can happen even if you have paid your own contractor in full, if the subcontractor, laborer, or supplier remains unpaid.

**This company will not be held responsible for damage or breakage on property.
The owner assumes all responsibility.**

Signature _____

Alma 707 478 2344



T R U N O R T H

PROPERTY PROFILE & PERMIT HISTORY

Zoning & Parcel Report

Parcel Number: 100-230-006



Associated Addresses

435 McChristian Ave, Bodega Bay, CA 94923

Parcel Report

Parcel Number	100-230-006
Jurisdiction	Unincorporated Sonoma County

	RR CC B7, G
Zoning	<u>Find Out What the Zoning Codes Mean</u>
Land Use	RR 5
Air Quality Control Board	Northern Sonoma County Air Pollution Control District
ALUC Referral Area	No
Appealable to Coastal Commission	Yes
Area & Specific Plan	Not Applicable
Assessor Use Code	0010 [Single Family Dwelling]
Bodega Bay PUD	No
California Tiger Salamander	No
F1 - Floodway	No
F2 - Floodplain	No
Farmlands	Other Land, Urban and Built-Up Land
Fire District	Sonoma County FD
Fire Event - Within	Not Applicable
Fire Hazard Severity Zone	High, Moderate
Fire Protection Response Area	State (SRA)
Flood Prone Urban Area	Not Applicable
Groundwater Availability	Zone 4 - Areas with low or highly variable water yield
Groundwater Subbasin Priority	BODEGA BAY AREA (Very Low)
Historic District	Not Applicable
Inspector - Building	Rick Behrens
Inspector - Code Enforcement	Michael Tollack
Inspector - Code Enforcement Cannabis	Michael Tollack
Inspector - Well & Septic	Erick Medina
Land Size - Acre	1
Land Size - Sq. Ft.	0
Landslide	Surficial Deposits
Lat/Long (Parcel Center)	38.347873, -123.061359

	Moderate Susceptibility, Very Low Susceptibility
Liquefaction	
Local Area Development Guideline	Not Applicable
NRCS Soils (Expansive Soils*)	DuE, RrC
Parcel Specific Policy	Not Applicable
Planning Area	1 - Sonoma Coast/Gualala Basin
Public Trust Review Area	Not Applicable
Redevelopment Plan	Not Applicable
Sanitation District	Not Applicable
School District - Elementary	Shoreline Jt(21,49)
School District - High	Shoreline Jt(21,49)
Sphere of Influence	Not Applicable
Supervisory District	District 5
Tax Rate Area	057020
Tobacco Retail License	Zoning prohibits sale of tobacco
Urban Growth	Not Applicable
Urban Service Area	Not Applicable
Waiver Prohibition Area	Salmon Creek
Water Quality Control Board	North Coast Region
Wet Weather Zone	D - Sebastopol
Williamson Act Land Contract	No

3. Coastal Subdivisions of Carmet, Rancho del Paradiso, **Salmon Creek**, Sereno del Mar and the Community of Jenner

- a. Variance requests for new construction of structures on vacant lots and construction on existing structures that would result in an increase of flow prohibited.

The County of Sonoma assumes no responsibility arising from the use of this information.

This information and associated data are provided without warranty of any kind, either expressed or implied, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Do not make any business or financial decisions based on this data before validating the data with Permit Sonoma.

- The Permit History provided may not include all records for this property. Further investigation may be required to obtain a more complete history due to: address changes, parcel mergers, splits, retirements, etc.

- Date(s) listed in this report reflect the earliest known date(s) associated with each record. The date(s) listed are not associated with the current status.
- Permit Status Definitions have been modified through time to better identify milestones during the lifespan of a specific record type. Many historical records reflect statuses which are no longer in use.
- Although every reasonable effort is made to provide complete and accurate information on this website, visitors are advised to contact appropriate Permit Sonoma staff before making project decisions or property purchase/lease decisions. This may involve contacting more than one section within Permit Sonoma (Building Inspection, Plan Check, Planning/Zoning, Well & Septic, etc.) since each section implements specific codes or ordinances which may affect your project.



Permit Sonoma



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Email Address

PermitSonoma@sonomacounty.gov

Phone Operator

Phone: [\(707\) 565-1900](tel:(707)565-1900)

CA Relay Service: [711](tel:711)

In Person Hours

Monday - Tuesday,

Thursday - Friday

8:00 AM - 4:00 PM

Wednesday

10:30 AM - 4:00 PM

Permit Center & Mailing Address

2550 Ventura Avenue

Santa Rosa, CA 95403

[Google Maps™ Directions](#)

Zoning & Parcel Report

Parcel Number: 100-230-006



PERMIT NUMBER	DATE	STATUS	PERMIT TYPE	DESCRIPTION
ROS24-0183	12/17/2024	Filed	Record of Survey	
CPH18-0006	4/10/2018	Withdrawn	Coastal Permit - With Hearing	Request for a Coastal Permit to allow for existing improvements on a 1+/- acre residential parcel in the RR (Rural Residential), CC (Coastal Combining), B7 (Frozen Lot Size), G (Geologic Hazard). The improvements include: 1) back yard flat work (concrete) and 2) 150+/- s.f. shed.

PERMIT NUMBER	DATE	STATUS	PERMIT TYPE	DESCRIPTION
CPN18-0003	4/2/2018	Paid	Coastal Permt - No Hearing	Request for a Coastal Permit to allow for existing improvements on a 1+/- acre residential parcel in the RR (Rural Residential), CC (Coastal Combining), B7 (Frozen Lot Size), G (Geologic Hazard). The improvements include: 1) back yard flat work (concrete) and 2) 120+/- s.f. shed. File transferred to CPH18-0006.
VBU16-0086	3/29/2016	File Closed	Building Violation	DETACHED SHED 6' X 25', RETAINING WALL.
VPL16-0081	3/29/2016	File Closed	Zoning Violation	REMOVAL VEGETATION 400 SQ FT IN COASTAL ZONE.
BLD07-1808	4/18/2007	Finaled	Building Permit No Plan Check	SFD: REPLACE ELEC PANEL 125 AMPS
B-110820	12/27/1991	Finaled	Building History Record	SFD 1/1
PX023023	1/7/1991	Finaled	Building History Record	SFD W/O GARAGE

Important Disclaimers

- All reasonable effort has been made to ensure the accuracy of the data provided. However, some of the data may be out of date or inaccurate.
- The County of Sonoma assumes no responsibility arising from the use of this information. This information and associated data are provided without warranty of any kind, either expressed or implied, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Do not make any business or financial decisions based on this data before validating the data with Permit Sonoma.
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Permit Sonoma



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CA Relay Service: [711](tel:711)

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Monday - Tuesday,

Thursday - Friday

8:00 AM - 4:00 PM

Wednesday

10:30 AM - 4:00 PM

Permit Center & Mailing Address

2550 Ventura Avenue

Santa Rosa, CA 95403

[Google Maps™ Directions](#)

Application is hereby made to the Sonoma County Health Officer for a permit to construct or repair a sewage disposal system as described below in compliance with the code of Sonoma County or for clearance for other construction.

APPLICANT: PLEASE PRESS HARD (USE BLACK INK). FILL IN BETWEEN HEAVY LINES ONLY AND SEE REVERSE SIDE FOR INSTRUCTIONS.

This permit application must be signed on all 3 signature lines by the same person (i.e., contractor or owner/builder). A letter of authorization from owner must accompany this application if agent is signing on owner's behalf.

BLDG. PERMIT NO. SPS PERMIT NO. DATE ISSUED CLEARANCE

A

S

JOB ADDRESS 435 Mc CHRISTIAN AVENEAREST CROSS STREET MIWOKASSESSOR'S PARCEL NO. 100-230-6SUB DIVISION LOT BLK.CITY SALMON CREEK PODEGA BAYSEWAGE DISPOSAL SYSTEM CONTRACTOR BOHANN & CANEELSADDRESS 600 AUSTIN CREEK RD. CARPENTERS 632-5296GENERAL CONTRACTOR SELFOWNER'S NAME JOHN KELLEYMAILING ADDRESS 862 EUCLID AVE.CITY BERKELEY CA 94708 TELEPHONE 415-526-1024

INSTALLATION WILL SERVE:

RESIDENCE ☒APARTMENT HOUSE ☐COMMERCIAL ☐MOBILE HOME ☐MOTEL ☐OTHER ☐BUILDING CONST. NEW ☐ADDN/ALTER ☐NO. OF UNITS: 1TOTAL NO. OF BEDROOMS: 3WATER SUPPLY: PUBLIC ☒ PRIVATE ☐LOT SIZE: 95' x 490'

TERMS OF PERMIT:

APPLICANT AGREES THAT:

1. HEALTH DEPARTMENT SANITARIAN WILL BE NOTIFIED A MINIMUM OF 24 HOURS PRIOR TO COMMENCING WORK.

2. HEALTH DEPARTMENT SANITARIAN AND ENGINEER'S OR CONSULTING SANITARIAN'S INSPECTION, WHEN INDICATED, WILL BE OBTAINED PRIOR TO COMMENCING THE SYSTEM.

3. THE JOB CARD AND A COPY OF THE APPROVED SEWAGE DISPOSAL SYSTEM DESIGN SHALL BE AVAILABLE AT THE JOB SITE AT ALL TIMES.

4. ANY DEVIATION FROM APPROVED PLAN WITHOUT PRIOR APPROVAL OF THE HEALTH OFFICER WILL BE CAUSE FOR STOPPING WORK UNTIL THE CHANGES ARE FULLY JUSTIFIED AND APPROVED.

5. STRUCTURAL PLANS FOR THE SEPTIC TANK MUST BE SUBMITTED TO AND APPROVED BY THE BUILDING INSPECTION DEPARTMENT PRIOR TO INSTALLATION.

6. PRIOR TO AUTHORIZING OCCUPANCY OF ANY BUILDING WITH AN ENGINEER OR CONSULTING SANITARIAN DESIGNED SYSTEM, A SIGNET SYSTEM WAS INSTALLED IN COMPLIANCE WITH THE APPROVED PLAN MUST BE SUBMITTED TO THE PUBLIC HEALTH OFFICER.

7. THIS PERMIT IS SUBJECT TO REVOCATION IF FOUND TO BE IN NONCONFORMANCE WITH SONOMA COUNTY CODE OR STANDARDS OF THE PUBLIC HEALTH DEPARTMENT.

IT IS UNDERSTOOD THAT THE ISSUANCE OF A PERMIT IN NO WAY INDICATES THAT A GUARANTEE OF PERFECT AND INDEFINITE OPERATION OF THIS SYSTEM IS MADE BY THE COUNTY OF SONOMA PUBLIC HEALTH DEPARTMENT AND THAT THE OWNER IS REQUIRED TO MAKE ANY REPAIRS NECESSARY TO CONFINE SEWAGE BELOW THE SURFACE OF THE GROUND.

I HEREBY ACKNOWLEDGE THAT I HAVE READ THIS APPLICATION AND THE INSTRUCTIONS ON THE REVERSE SIDE AND STATE THAT THE ABOVE IS CORRECT AND AGREE TO COMPLY WITH ALL COUNTY ORDINANCES AND STATE LAWS REGULATING CONSTRUCTION OF PRIVATE SEWAGE DISPOSAL SYSTEMS. THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK AUTHORIZED IS NOT COMMENCED WITHIN 120 DAYS.

The undersigned applicant for private sewage disposal permit certifies as follows:

CONTRACTOR'S LICENSE LAW CERTIFICATE

(COMPLETE EITHER A OR B)

☒ A. THE APPLICANT IS LICENSED UNDER THE PROVISIONS OF THE CONTRACTOR'S LICENSE LAW UNDER LICENSE NUMBER # 409597 WHICH LICENSE IS IN FULL FORCE AND EFFECT.☐ B. THE APPLICANT IS EXEMPT FROM THE PROVISIONS OF THE CONTRACTOR'S LICENSE LAW FOR THE FOLLOWING REASONS:1) OWNER/BUILDER ☐2) OTHER (EXPLAIN) ☐

WORKMEN'S COMPENSATION CERTIFICATE

(One or Two must be completed)

☒ 1. A currently effective certificate of Workmen's Compensation Insurance coverage is on file with the Sonoma County Public Health Department.

Compensation Insurance Policy # _____

is currently in force.

☐ 2. I certify that in the performance of the work for which this permit is issued I shall not employ any person in any manner so as to become subject to the workmen's compensation laws of California.

DATE 5-14-90 APPLICANT X BOHANN & CANEELS BY Joseph Mencia APPLICANT X BOHANN & CANEELS BY Joseph Mencia

LAYOUT PLAN APPROVED BY

CONSTRUCTION APPROVED BY

DATE

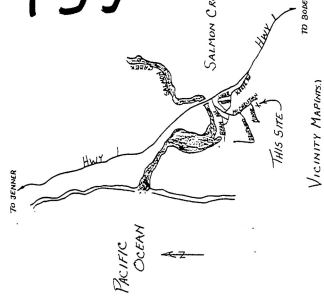
DATE

PNS EN 3 1/84

WHEN APPROVED THIS IS YOUR PERMIT

24 May 90
Check # 1165
200 11

435 McChristian



SUNSHINE COUNTY PUBLIC HEALTH DIVISION	
LEACH BENCH	12
LENGTH	200
WIDTH	300
DEPTH	20
NO. OF BEDROOMS	2
DATE	12/20/20

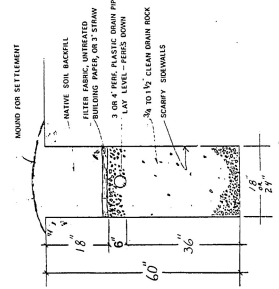
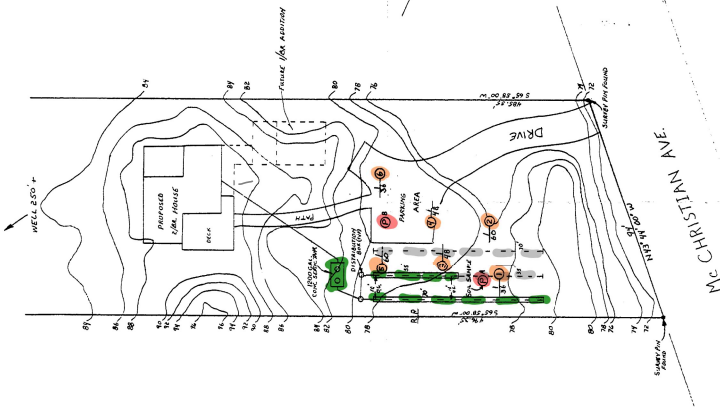
Sewage Disposal System

JOHN KELLEY
435 MC CHRISTIAN AVE. AP#100-230-6
SALMON CREEK

Date	5-14-20
Drawn By	JJK
Designed By	JJK
Reviewed	JJK
Sheet	1-1



24X



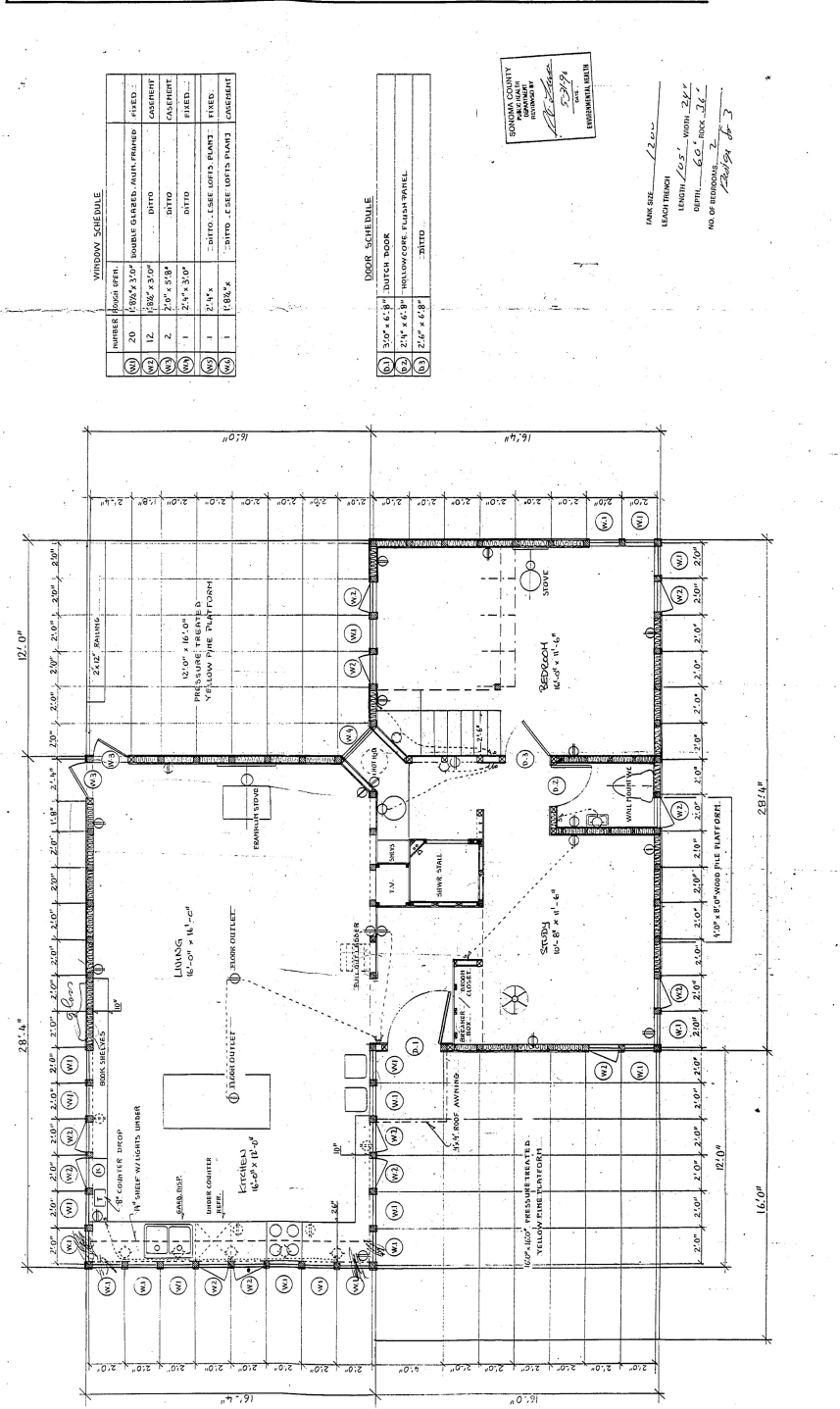
Typical Trench X-Section

- LEGEND
- PERC. HOLE
 - PROPOSED GROUND WATER PIPE
 - CONTINUOUS LINE
 - PERC. LEACH TRENCH
 - EXISTING LEACH TRENCH

435 MCCCHRISTIA

KELLEY'S CABIN
FLOOR PLAN
SCALE: 3/8" = 1'-0"

RESIDENTIAL & INTERIOR DESIGN
NEW BLADE ST. SUITE 1, STREETLY CA 94041-0074-100



WINDOW SCHEDULE

NO.	SIZE	TYPE	FINISH
W1	12'-0" x 16'-0"	DOUBLE HUNG	MAIN PRIMER
W2	12'-0" x 16'-0"	DOUBLE HUNG	MAIN PRIMER
W3	2'-0" x 5'-0"	FIXED	PAINT
W4	2'-0" x 5'-0"	FIXED	PAINT
W5	2'-0" x 5'-0"	FIXED	PAINT
W6	2'-0" x 5'-0"	FIXED	PAINT
W7	2'-0" x 5'-0"	FIXED	PAINT
W8	2'-0" x 5'-0"	FIXED	PAINT
W9	2'-0" x 5'-0"	FIXED	PAINT
W10	2'-0" x 5'-0"	FIXED	PAINT

DOOR SCHEDULE

NO.	SIZE	TYPE	FINISH
D1	3'-0" x 6'-0"	DOOR	PAINT
D2	3'-0" x 6'-0"	DOOR	PAINT
D3	3'-0" x 6'-0"	DOOR	PAINT
D4	3'-0" x 6'-0"	DOOR	PAINT
D5	3'-0" x 6'-0"	DOOR	PAINT
D6	3'-0" x 6'-0"	DOOR	PAINT
D7	3'-0" x 6'-0"	DOOR	PAINT
D8	3'-0" x 6'-0"	DOOR	PAINT
D9	3'-0" x 6'-0"	DOOR	PAINT
D10	3'-0" x 6'-0"	DOOR	PAINT

SANJOAQUIN COUNTY
PUBLIC WORKS
DEPARTMENT
APPROVED
DATE: 12/1/00
BY: [Signature]

DATE: 12/1/00
BY: [Signature]
NO. OF SHEETS: 3
SHEET NO.: 3

24X

on the East aspect of the property where a garage would be.

Please advise about this.

Also, I haven't seen any language that speaks to the deed restriction being explicitly removed. Is that implicit in what you just emailed me?

On Aug 2, 2023, at 9:48 AM, Brian Keefer <Brian.Keefer@sonoma-county.org> wrote:

Hello Pringl,

Per the email below that I sent to Code Enforcement on 17 July, 2023, the violations on your property have been closed, including VPL16-0081 and VBU16-0086. Further, the Coastal Permit Application, CPH18-0006 has been withdrawn. You have no further obligations under these violations or applications.

Please secure a coastal permit for any future development of your property before commencing construction.

All the best,

Brian Keefer
Ombudsman
www.PermitSonoma.org
County of Sonoma
Administration Division | Customer Service
2550 Ventura Avenue, Santa Rosa, CA 95403
Direct: 707-565-8350 | Office: 707-565-1900



From: Brian Keefer
Sent: Monday, July 17, 2023 8:39 AM
To: Andrew Lee <Andrew.Lee@sonoma-county.org>
Cc: Cecily Condon <Cecily.Condon@sonoma-county.org>; Tyra Harrington <Tyra.Harrington@sonoma-county.org>; Mark Franceschi <Mark.Franceschi@sonoma-county.org>
Subject: VPL16-0081 and VBU16-0086_435 McChristian Ave., Bodega Bay_APN 100-230-006

Hi Andrew

Hi Andrew,

On 29 March 2016, property owner Pringl Miller received violations VPL16-0081 for "Removal Vegetation 400 SF in Coastal Zone", and VBU16-0086 for "Detached Shed 6'x25', retaining wall". The applicant then submitted Coastal Permit application CPH18-0003, later converted to CPH18-0006, to legalize this work.

However, upon further review and after meetings with Permit Sonoma Planning Project Review Manager Cecily Condon and Coastal Commission Staff, we have determined that this work was permitted by and/or in substantial conformance with CPH 90-239, a Coastal Permit which approved approximately 9,530 SF of disturbance to facilitate development on the property. The total area disturbed for construction, which included the area of "vegetation removal", the "detached shed", and "retaining wall", was approximately 7,315 SF, substantially less than that approved by the coastal permit. Additionally, as the shed is in architectural character with the home, we found it to also be in substantial conformance with CPH 90-239, and therefore, approval of a new Coastal Permit is unnecessary. Planning will void CPH18-0006 and forgive the balance of the fees.

I personally visited the site to review the "retaining wall" and the shed structure. The wall is a landscape wall not requiring a building permit, as it does not retain a surcharge greater than 3 feet. I also measured the shed structure at 6x20 feet, which does not exceed 120 SF and has no electrical or plumbing, also not requiring a building permit. I do not include in the floor area calculations the small exterior portion under roof that is used for storing firewood, potting mix, and such.

In consideration of these new findings and determinations, please clear VPL16-0081 and VBU16-0086.

Thanks much,

Brian Keefer

Ombudsman

www.PermitSonoma.org

County of Sonoma

Administration Division | Customer Service

2550 Ventura Avenue, Santa Rosa, CA 95403

Direct: 707-565-8350 | Office: 707-565-1900



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Warning: If you don't know this email sender or the email is unexpected,
do not click any web links, attachments, and **never** give out your user ID or password.

From: Jesse Cablk Jesse.Cablk@sonomacounty.gov 
Subject: RE: VPL16-0081 & VPL19-0086: 435 McChristian Avenue and Code Enforcement Case APN 100-230-006
Date: April 14, 2026 at 12:01 PM
To: Pringl Miller pringlmillermd@gmail.com, Cecily Condon Cecily.Condon@sonomacounty.gov
Cc: Jacob Sedgley Jacob.Sedgley@sonomacounty.gov, Steve Sharpe sharpeplanner@comcast.net, David Battenfield dbattenfield@gmail.com, Brian Keefer Brian.Keefer@sonomacounty.gov

JC

Good Afternoon,

I am including a permit history report for the subject property which shows that the code enforcement files were closed in July of 2023. I verified that no cloud on the title or lien was ever placed, so the property record is clear.
Please keep this communication as evidence that there is no code enforcement case active on this parcel.

Thank you,
Jesse

Jesse Cablk
Code Enforcement Manager
Permit Sonoma | County of Sonoma
2550 Ventura Avenue, Santa Rosa, CA 95403
Office: (707) 565-1900 | Direct: (707) 565-1148
Jesse.Cablk@sonomacounty.gov

From: Pringl Miller <pringlmillermd@gmail.com>
Sent: Tuesday, April 14, 2026 11:43 AM
To: Cecily Condon <Cecily.Condon@sonomacounty.gov>
Cc: Jacob Sedgley <Jacob.Sedgley@sonomacounty.gov>; Steve Sharpe <sharpeplanner@comcast.net>; David Battenfield <dbattenfield@gmail.com>; Brian Keefer <Brian.Keefer@sonomacounty.gov>; Jesse Cablk <Jesse.Cablk@sonomacounty.gov>
Subject: Re: VPL16-0081 & VPL19-0086: 435 McChristian Avenue and Code Enforcement Case APN 100-230-006

EXTERNAL

Thank you so much Cecily -

Pringl

On Apr 14, 2026, at 1:36 PM, Cecily Condon
<Cecily.Condon@sonomacounty.gov> wrote:

Pringl,
I have added the new Code Enforcement Manager, Jesse Cablk, to the thread to resolve documentation related to the Closed Violations below and we are gathering the fee related items for the Coastal Permit and plan to provide the available accounting records by the end of the week.

I have also attached for Jesse confirmation on the planning resolution which

Sonoma County - Permit and Resource Management Department

Permit History Lookup Selection by PARCEL: 100-230-006

(PRMD Internal Use)

Address: 435 MCCHRISTIAN AVE

PRMD Area: Bodega Bay [BBY]

Tax Area : 057020

APN: 100-230-006

Records: 10

Permit History as of April 14, 2026

Number	Date	Status	Type	Description	Parcel	Scan
ROS24-0183	1/14/2025	Filed	Record of Survey		100-230-006 P	
VPL16-0081	7/19/2023	File Closed	Zoning Violation	REMOVAL VEGETATION 400 SQ FT IN COASTAL ZONE.	100-230-006 P	
VBU16-0086	7/19/2023	File Closed	Building Violation	DETACHED SHED 6' X 25', RETAINING WALL.	100-230-006 P	
SEW90-0399	5/10/2023	Void	Engineering History Record	METER SETTING & INSPECTION FEES	100-230-006 P	
CPH18-0006	9/25/2020	Withdrawn	Coastal Permit - With Hearing	Request for a Coastal Permit to allow for existing improvements on a 1+/- acre residential parcel in the RR (Rural Residential), CC (Coastal Combining), B7 (Frozen Lot Size), G (Geologic Hazard). The improvements include: 1) back yard flat work (concrete) and 2) 150+/- s.f. shed.	100-230-006 P	
CPN18-0003	4/2/2018	Paid	Coastal Permt - No Hearing	Request for a Coastal Permit to allow for existing improvements on a 1+/- acre residential parcel in the RR (Rural Residential), CC (Coastal Combining), B7 (Frozen Lot Size), G (Geologic Hazard). The improvements include: 1) back yard flat work (concrete) and 2) 120+/- s.f. shed.	100-230-006 P	
VCM16-0163	3/29/2016	Closed	Complaint	File transferred to CPH18-0006.	100-230-006 P	Yes
BLD07-1808	6/29/2007	Finald	Building Permit No Plan Check	SFD: REPLACE ELEC PANEL 125 AMPS	100-230-006 P	Yes
B-110820	9/22/1992	Finald	Building History Record	SFD 1/1	100-230-006 P	Yes

Number	Date	Status	Type	Description	Parcel	Scan
PX023023	12/27/1991	Final	Building History Record	SFD W/O GARAGE	100-230-006 P	