



COUNTY OF MENDOCINO
DEPARTMENT OF PLANNING AND BUILDING SERVICES

860 NORTH BUSH STREET • UKIAH • CALIFORNIA • 95482
120 WEST FIR STREET • FT. BRAGG • CALIFORNIA • 95437

BRENT SCHULTZ, DIRECTOR
TELEPHONE: 707-234-6650
FAX: 707-463-5709
FB PHONE: 707-964-5379
FB FAX: 707-961-2427
pbs@mendocinocounty.org
www.mendocinocounty.org/pbs

March 10, 2020

Department of Transportation
Environmental Health - Fort Bragg
Native Plant Society

CalFire - Prevention
Department of Fish and Wildlife
Coastal Commission

State Clearinghouse
Mendocino Fire Protection District

CASE#: CDP_2018-0024

DATE FILED: 8/31/2018

OWNER/APPLICANT: CARRIE SAGE AND PAUL MILLER

AGENT: CYNTHIA SHARON, DANCING DOG DESIGN BUILD

REQUEST: Standard Coastal Development Permit to construct a Single Family Residence, deck, and ancillary development.

LOCATION: In the Coastal Zone, 1.1± mile north of the Town of Mendocino, lying on the north side of Jack Peters Creek Road (Private), and 0.1± miles north east of its intersection with Larkin Road (CR 443), located at 44860 Jack Peters Creek Rd., Mendocino (APN: 118-340-29).

ENVIRONMENTAL DETERMINATION: Categorically Exempt

SUPERVISORIAL DISTRICT: 5

STAFF PLANNER: JULIANA CHERRY

RESPONSE DUE DATE: March 24, 2020

PROJECT INFORMATION CAN BE FOUND AT:

<https://www.mendocinocounty.org/government/planning-building-services/public-agency-referrals>

Mendocino County Planning & Building Services is soliciting your input, which will be used in staff analysis and forwarded to the appropriate public hearing. You are invited to comment on any aspect of the proposed project(s). Please convey any requirements or conditions your agency requires for project compliance to the project coordinator at the above address, or submit your comments by email to pbs@mendocinocounty.org. Please note the case number and name of the project coordinator with all correspondence to this department.

We have reviewed the above application and recommend the following (please check one):

- ☐ No comment at this time.
- ☐ Recommend conditional approval (attached).
- ☐ Applicant to submit additional information (attach items needed, or contact the applicant directly, copying Planning and Building Services in any correspondence you may have with the applicant)
- ☐ Recommend denial (Attach reasons for recommending denial).
- ☐ Recommend preparation of an Environmental Impact Report (attach reasons why an EIR should be required).
- ☐ Other comments (attach as necessary).

REVIEWED BY:

Signature _____ Department _____ Date _____

CASE: CDP_2018-0024

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APN/S: 1183402900

PARCEL SIZE: 7.6± Acres

GENERAL PLAN: Coastal Element, Rural Residential (RR5(2):R*)

ZONING: Coastal Zoning Code, Rural Residential (RR:5)

EXISTING USES: Vacant Lot

DISTRICT: 5

RELATED CASES: None

	ADJACENT GENERAL PLAN	ADJACENT ZONING	ADJACENT LOT SIZES	ADJACENT USES
NORTH:	RR5-PD[RR1-PD]	RR5-PD[RR1-PD]	1± Acre	Residential
EAST:	RR5-DL[RR2-DL]	RR5-DL[RR2-DL]	3.8± Acres	Residential
SOUTH:	RR5[RR2]	RR5[RR2]	1.6± Acres	Residential
WEST:	RR5[RR2]	RR5[RR2]	4.6± Acres	Residential

REFERRAL AGENCIES

LOCAL <input type="checkbox"/> Assessor’s Office <input type="checkbox"/> Building Division (Fort Bragg) <input type="checkbox"/> County Addresser <input checked="" type="checkbox"/> Department of Transportation (DOT) <input checked="" type="checkbox"/> Environmental Health (Fort Bragg) <input checked="" type="checkbox"/> Mendocino Fire Protection District <input type="checkbox"/> Mendocino School District	<input type="checkbox"/> Planning Division (Ukiah) <input type="checkbox"/> Sonoma State University STATE <input checked="" type="checkbox"/> CALFIRE (Land Use) <input checked="" type="checkbox"/> California Coastal Commission <input checked="" type="checkbox"/> California Dept. of Fish & Wildlife <input checked="" type="checkbox"/> California Native Plant Society	<input checked="" type="checkbox"/> California State Clearinghouse TRIBAL <input type="checkbox"/> Cloverdale Rancheria <input type="checkbox"/> Redwood Valley Rancheria <input type="checkbox"/> Sherwood Valley Band of Pomo Indians
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ADDITIONAL INFORMATION:
Please see attached:
1. Revised site plan dated 12-19-2020
2. Supplemental ESHA assessment dated 1-8-2020. Figure 4 shows the proposed development more than 100-feet from a riparian forest. A buffer from the upland red alder forest is not shown.

Previous July 2019 referral included the following:
- CalFire File No. 7-19 (PDF pages 16-18)
- Botanical Survey Update, 2018 (PDF pages 19-36)
- Biological Survey May 2011 (PDF 37-52)
- Wildlife Assessment April 2019 (PDF 53-
- Revised geotechnical investigation report (PDF page 71-95)
Accessed via: <https://www.mendocinocounty.org/home/showdocument?id=29388>

Comments may be sent to cherryj@mendocinocounty.org

ENVIRONMENTAL DATA

1. MAC:

GIS

2. FIRE HAZARD SEVERITY ZONE:

CALFIRE FRAP maps/GIS

Very High Fire Hazard

3. FIRE RESPONSIBILITY AREA:

CALFIRE FRAP maps/GIS

CalFire

4. FARMLAND CLASSIFICATION:

GIS

5. FLOOD ZONE CLASSIFICATION:

FEMA Flood Insurance Rate Maps (FIRM)

1% Annual Chance Flood Hazard

6. COASTAL GROUNDWATER RESOURCE AREA:

Coastal Groundwater Study/GIS

Critical Water Area

7. SOIL CLASSIFICATION:

Mendocino County Soils Study Eastern/Western Part

Western 174

8. PYGMY VEGETATION OR PYGMY CAPABLE SOIL:

LCP maps, Pygmy Soils Maps; GIS

9. WILLIAMSON ACT CONTRACT:

GIS/Mendocino County Assessor's Office

NO

10. TIMBER PRODUCTION ZONE:

GIS

NO

11. WETLANDS CLASSIFICATION:

GIS

Estuarine & Marine Wetland

12. EARTHQUAKE FAULT ZONE:

Earthquake Fault Zone Maps; GIS

NO

13. AIRPORT LAND USE PLANNING AREA:

Airport Land Use Plan; GIS

NO

14. SUPERFUND/BROWNFIELD/HAZMAT SITE:

GIS; General Plan 3-11

NO

15. NATURAL DIVERSITY DATABASE:

CA Dept. of Fish & Wildlife Rarefind Database/GIS

YES

16. STATE FOREST/PARK/RECREATION AREA ADJACENT:

GIS; General Plan 3-10

17. LANDSLIDE HAZARD:

Hazards and Landslides Map; GIS; Policy RM-61; General Plan 4-44

18. WATER EFFICIENT LANDSCAPE REQUIRED:

Policy RM-7; General Plan 4-34

19. WILD AND SCENIC RIVER:

www.rivers.gov (Eel Only); GIS

20. SPECIFIC PLAN/SPECIAL PLAN AREA:

Various Adopted Specific Plan Areas; GIS

21. STATE CLEARINGHOUSE REQUIRED:

Policy

Coastal Commission, California Department of Forestry & Fire Prevention, Fish and Wildlife Service

22. OAK WOODLAND AREA:

USDA

23. HARBOR DISTRICT:

Sec. 20.512

FOR PROJECTS WITHIN THE COASTAL ZONE ONLY

24. LCP LAND USE CLASSIFICATION:

LCP Land Use maps/GIS

Rural Residential

25. LCP LAND CAPABILITIES & NATURAL HAZARDS:

LCP Land Capabilities maps/GIS; 20.500

Flooding Hazard

26. LCP HABITATS & RESOURCES:

LCP Habitat maps/GIS; 20.496

Riparian Habitat

27. COASTAL COMMISSION APPEALABLE AREA:

Post LCP Certification Permit and Appeal Jurisdiction maps/GIS; 20.544

Appeal Jurisdiction

28. CDP EXCLUSION ZONE:

CDP Exclusion Zone maps/GIS

NO

29. HIGHLY SCENIC AREA:

Highly Scenic & Tree Removal Area Maps/GIS; Secs. 20.504.015, 20.504.020

NO

30. BIOLOGICAL RESOURCES & NATURAL AREAS:

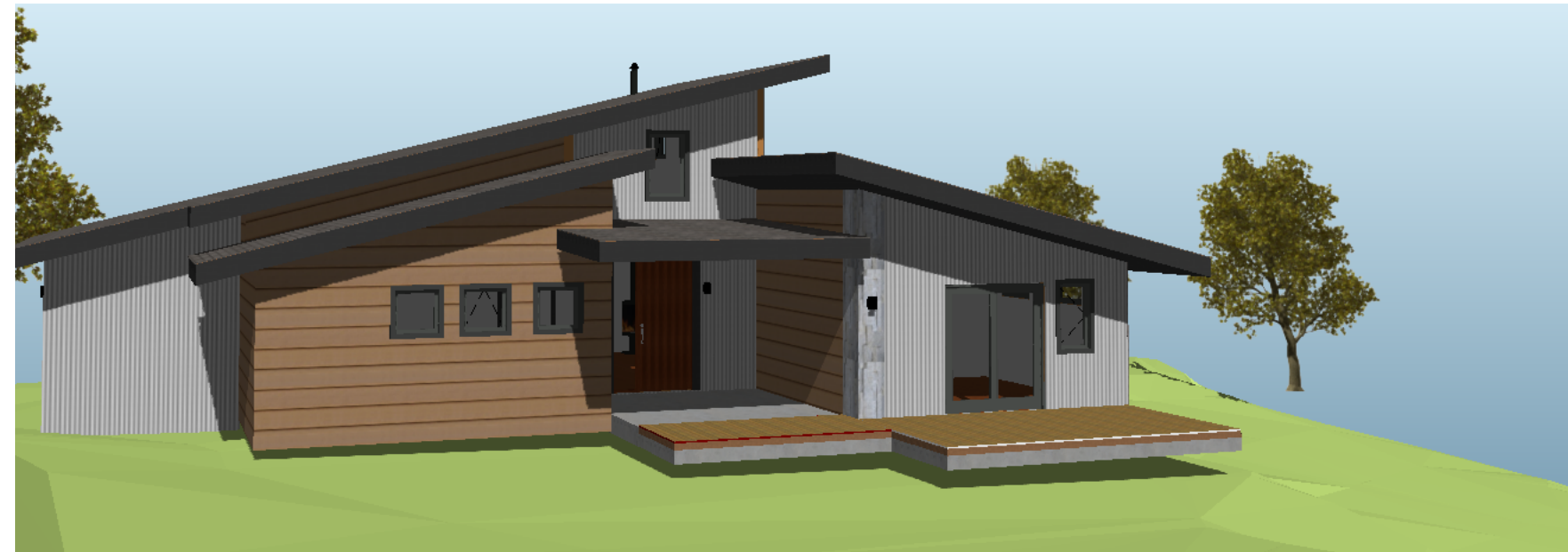
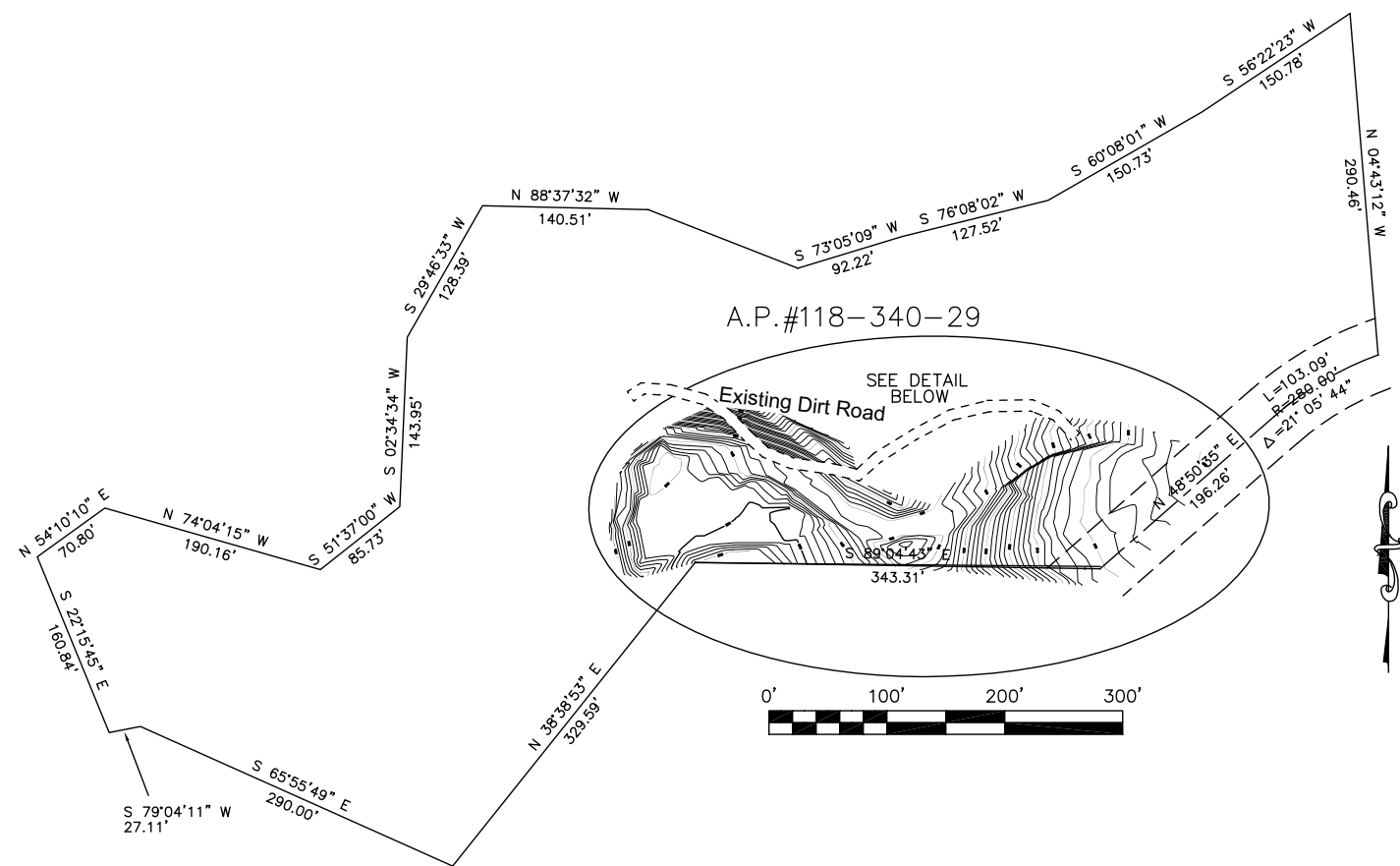
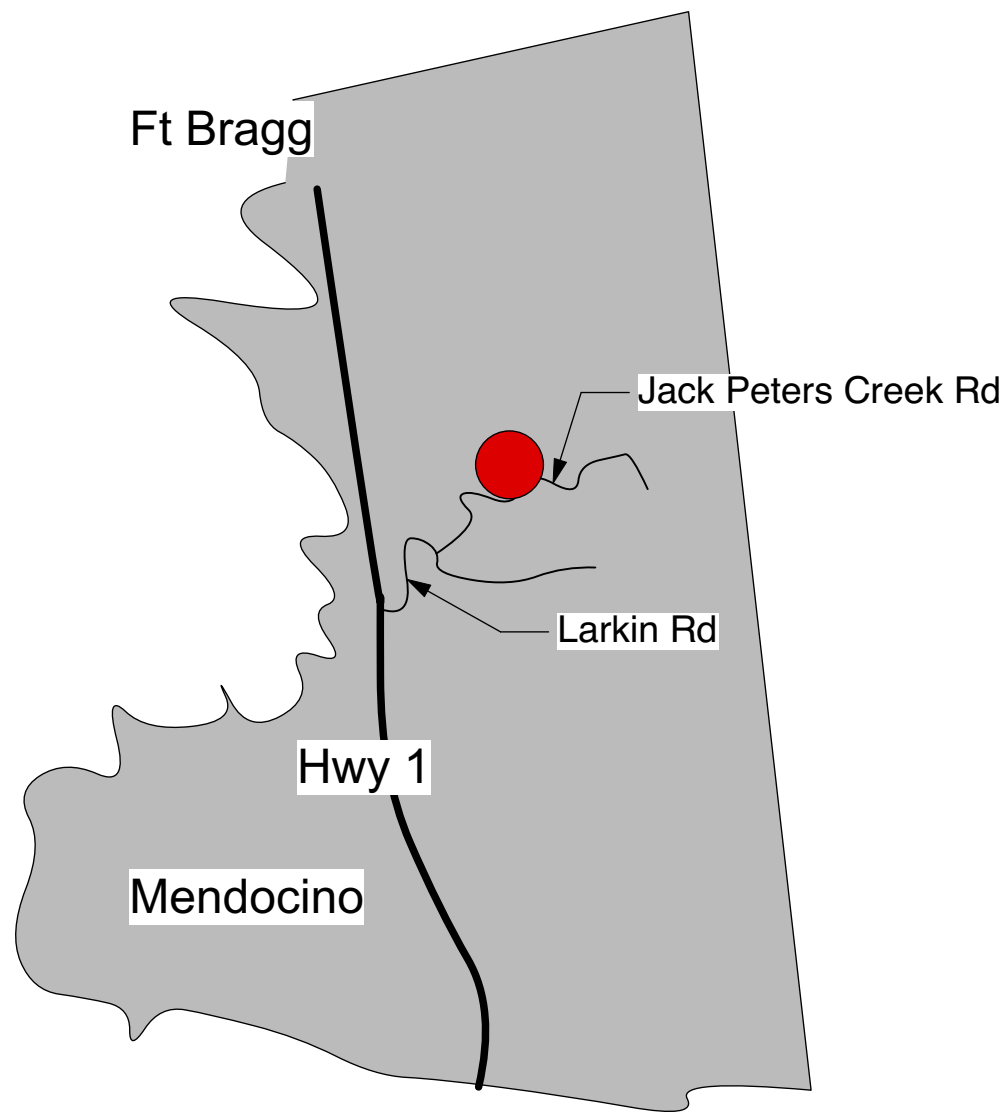
Biological Resources & Natural Area Map; GIS; General Plan 4-9

See survey report & recommendations

31. BLUFFTOP GEOLOGY:

GIS; 20.500.020

NO



PROJECT ADDRESS:
44860 Jack Peters Cr Rd.
Mendocino, CA 95460
PARCEL# 118-340-29

OWNERS:
PAUL MILLER/ CARRIE SAGE

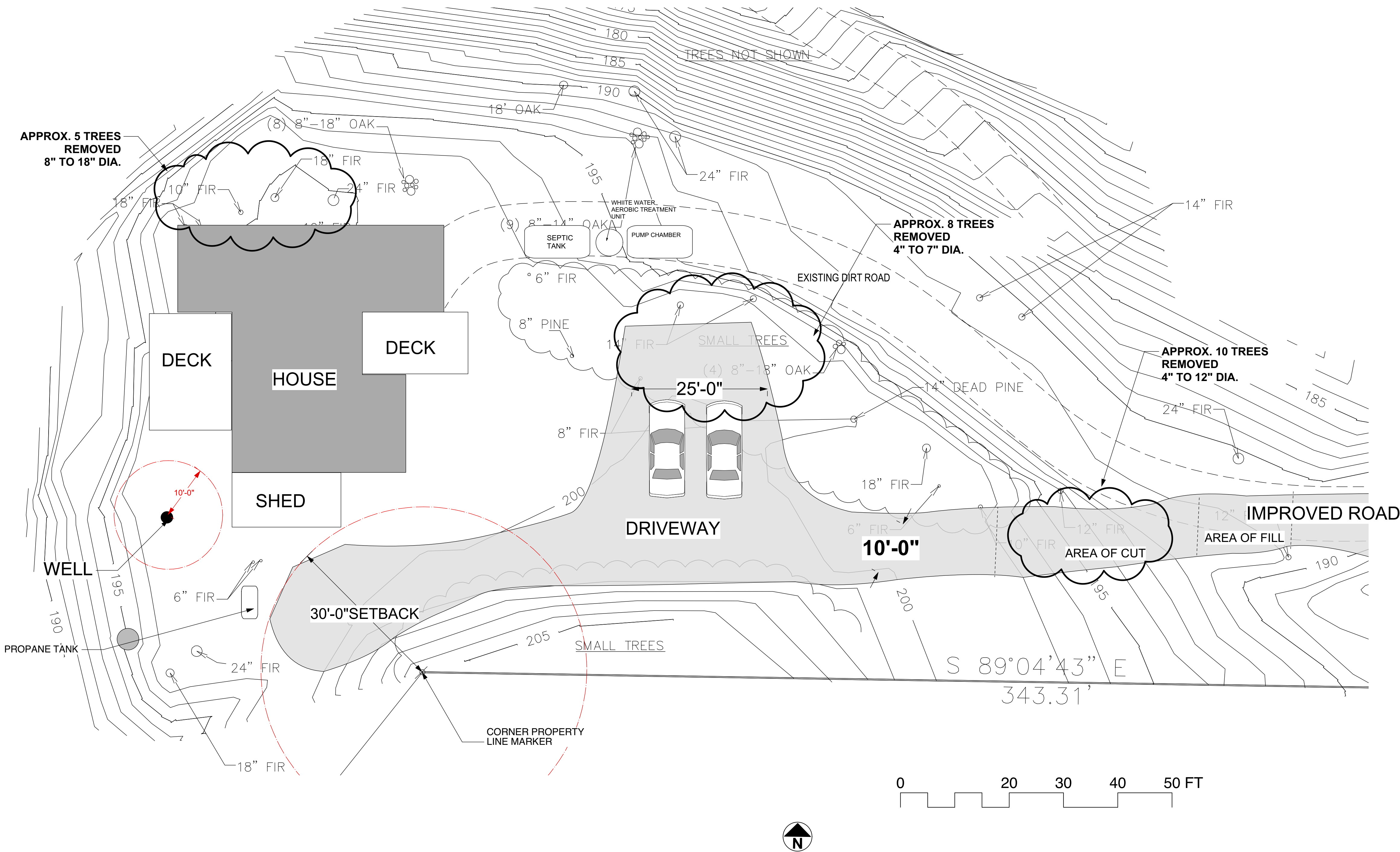
GENERAL CONTRACTOR
CYNTHIA SHARON
DANCING DOG DESIGN BUILD
16312 OLD CASPAR RAILROAD RD
FT. BRAGG, CA
707-357-0339
LIC# 901297

PROJECT DESCRIPTION:
CONSTRUCTION OF NEW
SINGLE FAMILY HOME, INSTALL
SEPTIC, POWER, IMPROVE ROAD

AREA SPECIFICATION:

LOT SIZE	7.6 ACRE
LIVING AREA (HOUSE)	1600 SQ FT
DECK/ PORCH	200 SQ FT
REAR DECK	325 SQ FT

INDEX OF DRAWINGS	
'0.0	TITLE PAGE AND SITE PLAN
'0.1	SITE PLAN TREE REMOVAL
ARCHITECTURAL	
A1.0	PLAN VIEW
A2.0	ELEVATIONS- N & W
A2.1	ELEVATIONS- S & E
A3.0	SECTIONS- E - W



No.	Date	Issue Notes
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PROJECT
DESCRIPTION

Miller/ Sage House
44880 Jack Peters Cr Rd
Mendocino, CA 95460
APN# 020-042-13

Project Manager
Cynthia Sharon

Drawn By
MAS

Scale

Date
12/11/19

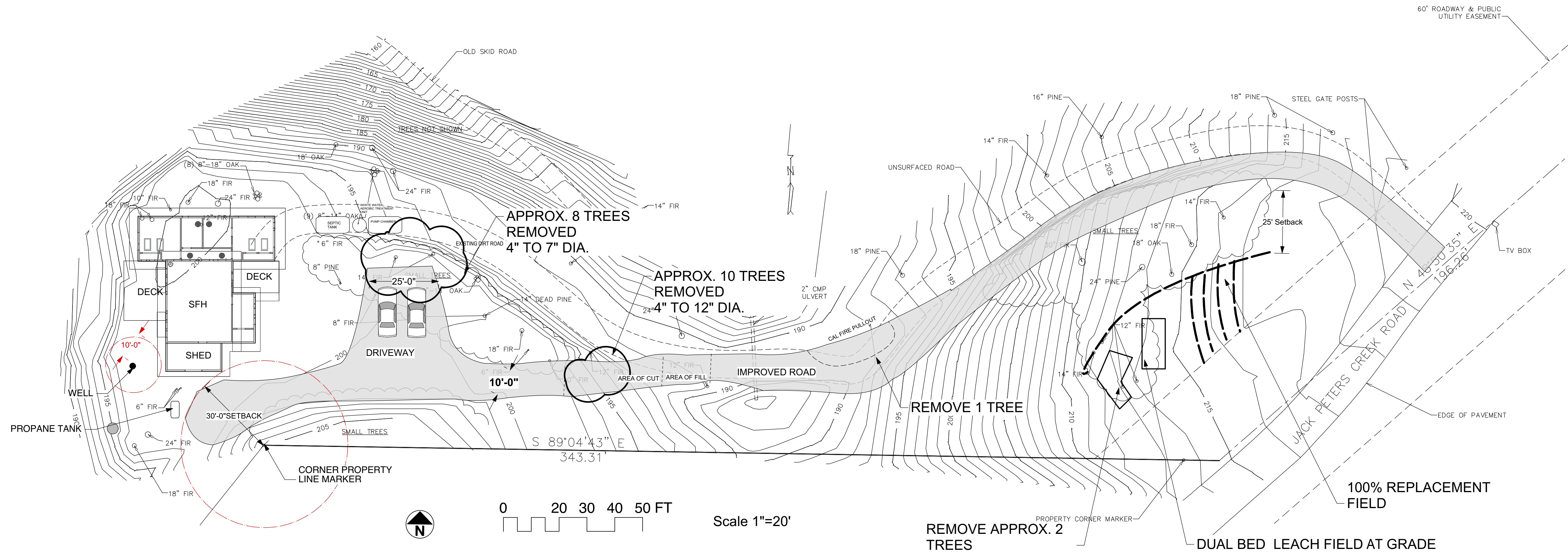
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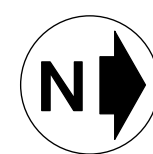
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1 of 7

Total Sheets



No.	Date	Issue Notes
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SHEET		
Project Miller/ Sage House 44880 Jack Peters Cr Rd Mendocino, CA 95460 APN# 020-042-13		
Project Manager Cynthia Sharon		
Drawn By MAS		
Scale		
Date 12/11/19		
CAD File Name		
Drawing No. <div>0.1</div> <div>2 of 7</div> <div>Total Sheets</div>		



WINDOW SCHEDULE						
	ID	Width	Height	Type		Head Ht
W-	01	2'5"	2'5"	Fixed Glass	4'5"	6'10"
W-	02	2'5"	2'5"	Awning	4'5"	6'10"
W-	03	2'5"	2'5"	Fixed Glass	4'5"	6'10"
W-	05	2'5"	6'11"	Fixed Glass	1'1"	8'0"
W-	06	2'5"	6'11"	Fixed Glass	1'1"	8'0"
W-	07	2'5"	6'11"	Fixed Glass	1'1"	8'0"
W-	08	2'5"	6'11"	Fixed Glass	1'1"	8'0"
W-	09	2'5"	6'11"	Fixed Glass	1'1"	8'0"
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W-	11	2'3"	2'3"	Fixed Glass	11'3"	13'6"
W-	12	2'3"	2'3"	Fixed Glass	13'9"	16'0"
W-	13	1'11"	1'11"	Fixed Glass	9'1"	11'0"
W-	14	1'11"	1'11"	Awning	9'1"	11'0"
W-	15	1'11"	1'11"	Fixed Glass	9'1"	11'0"
W-	16	6'5"	3'11"	Custom	2'11"	6'10"
W-	17	2'1"	2'9"	Fixed Glass	4'1"	6'10"
W-	18	3'5"	3'5"	Custom	3'5"	6'10"
W-	19	3'5"	1'7"	Custom	5'3"	6'10"
W-	20	3'5"	1'7"	Custom	5'3"	6'10"
W-	21	2'1"	3'9"	Casement	3'1"	6'10"
W-	23	2'5"	3'11"	Fixed Glass	11'4"	15'3"
W-	24	2'11"	2'11"	Awning	14'1"	17'0"
W-	25	2'11"	2'11"	Awning	14'1"	17'0"
W-	26	2'11"	2'11"	Awning	14'1"	17'0"
W-	27	2'11"	2'11"	Awning	14'1"	17'0"
W-	28	11"Dia		Light Tube		
W-	29			Light Tube		
W-	30			Light Tube		
W	31			Light Tube		

No.	Date	Issue Notes
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PLAN VIEW

Chester

Project

Project Manager
Cynthia Sharon

Drawn By
MAS

Scale
1/2" = 1'-0"

Date	12/11/19
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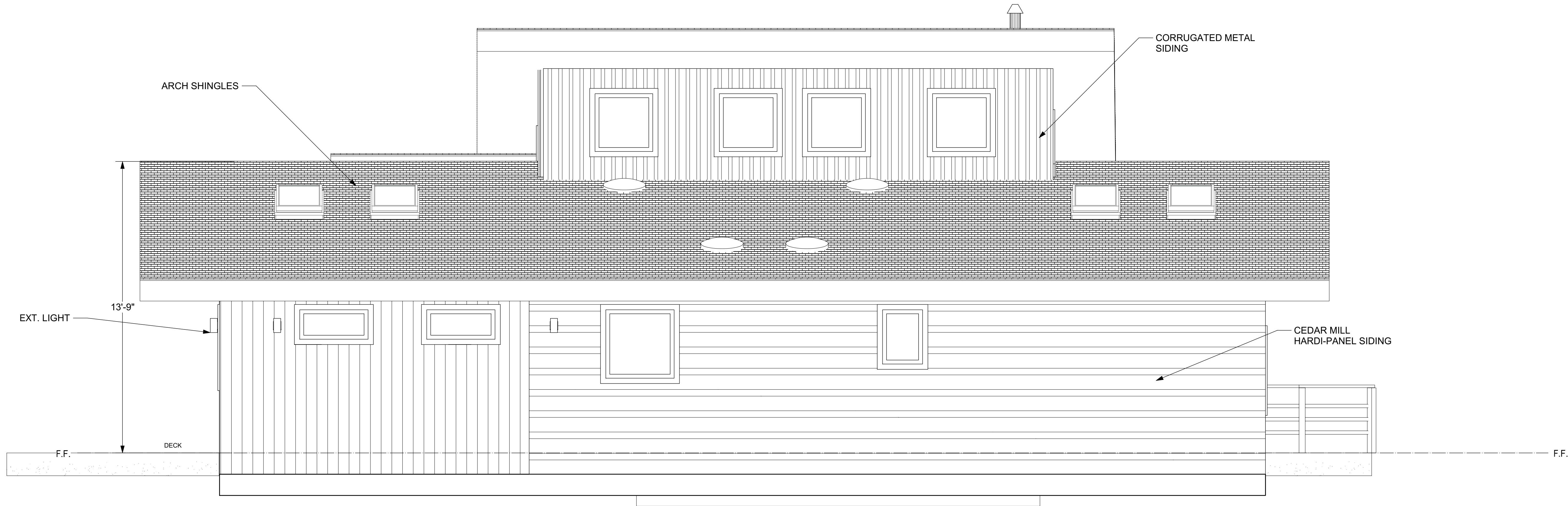
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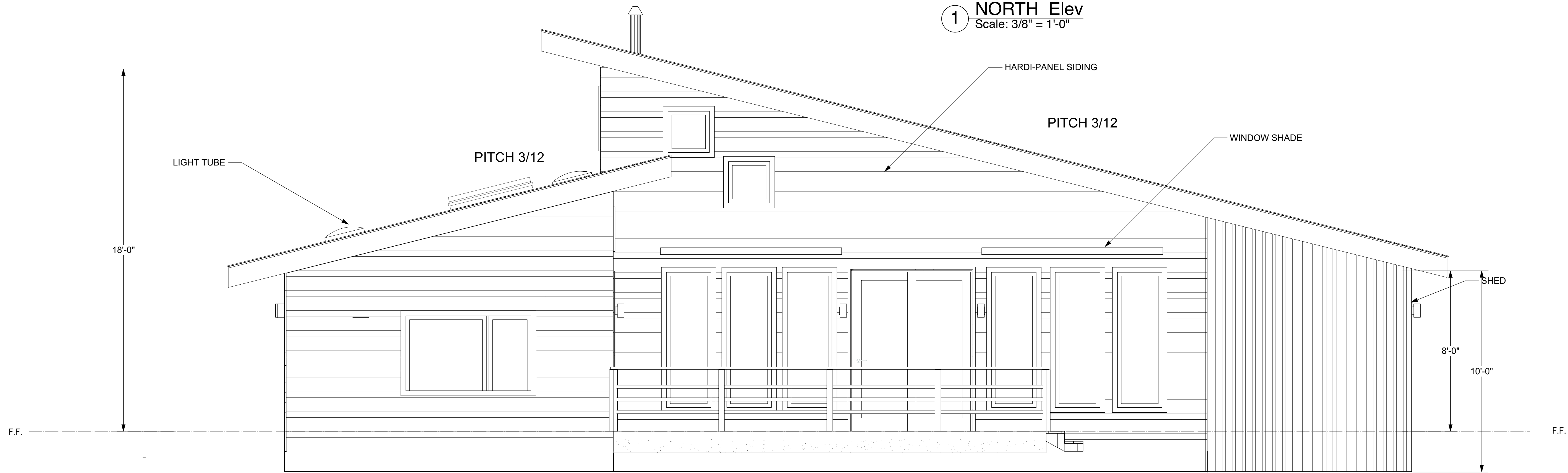
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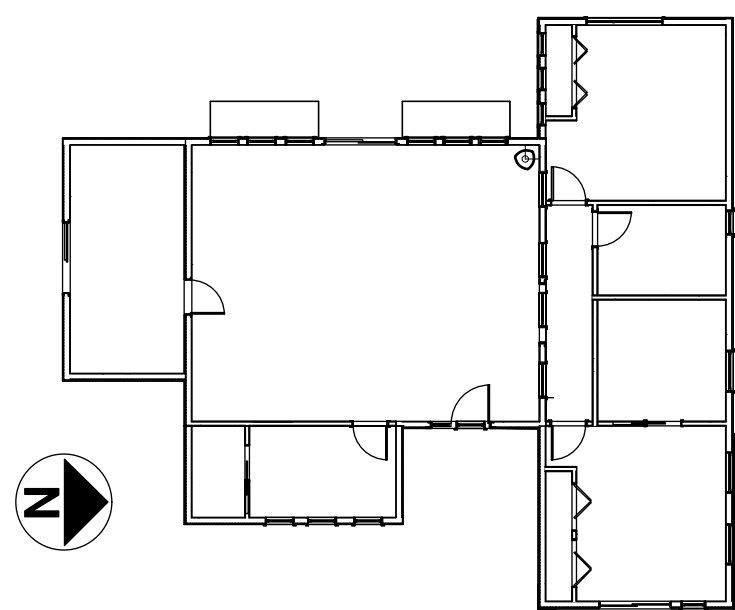
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1 NORTH Elev
Scale: 3/8" = 1'-0"



2 WEST Elev
Scale: 3/8" = 1'-0"



No.	Date	Issue Notes
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ELEVATIONS

Sheet

Project
Miller/ Sage House
44880 Jack Peters Cr Rd
Mendocino, CA 95460
APN# 020-042-13

Project Manager
Cynthia Sharon

Drawn By
MAS

Scale
3/8" = 1'-0"

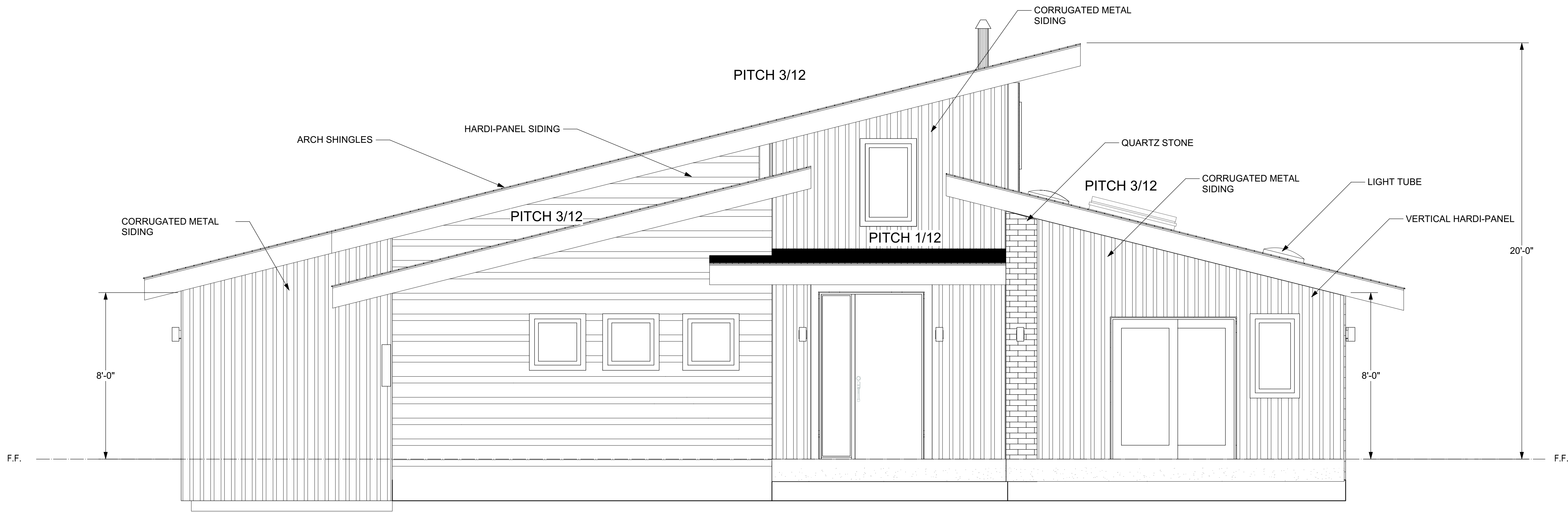
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12/11/19

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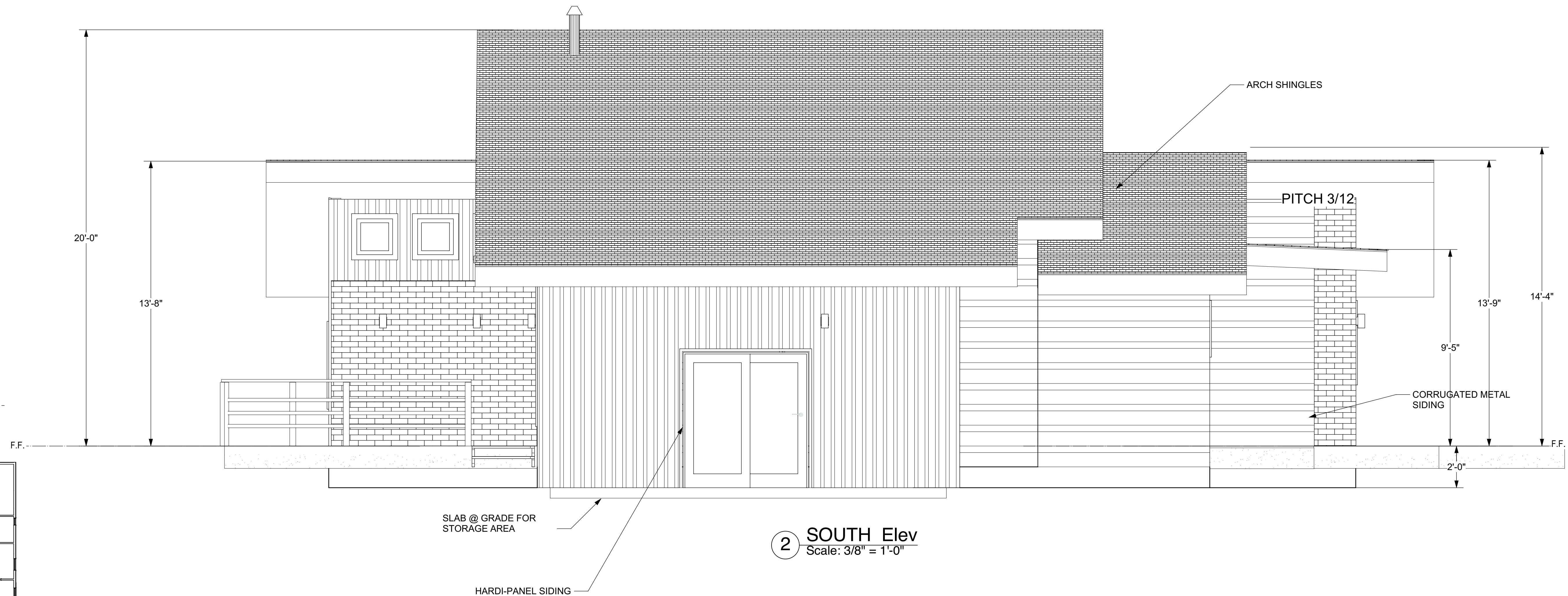
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4 of 7
Total Sheets



1 EAST Elev
Scale: 3/8" = 1'-0"



2 SOUTH Elev
Scale: 3/8" = 1'-0"

No.	Date	Issue Notes
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ELEVATIONS

Project
Miller/ Sage House
44880 Jack Peters Cr Rd
Mendocino, CA 95460
APN# 020-042-13

Project Manager
Cynthia Sharon

Drawn By
MAS

Scale
1/2" = 1'-0"

Date
12/11/19

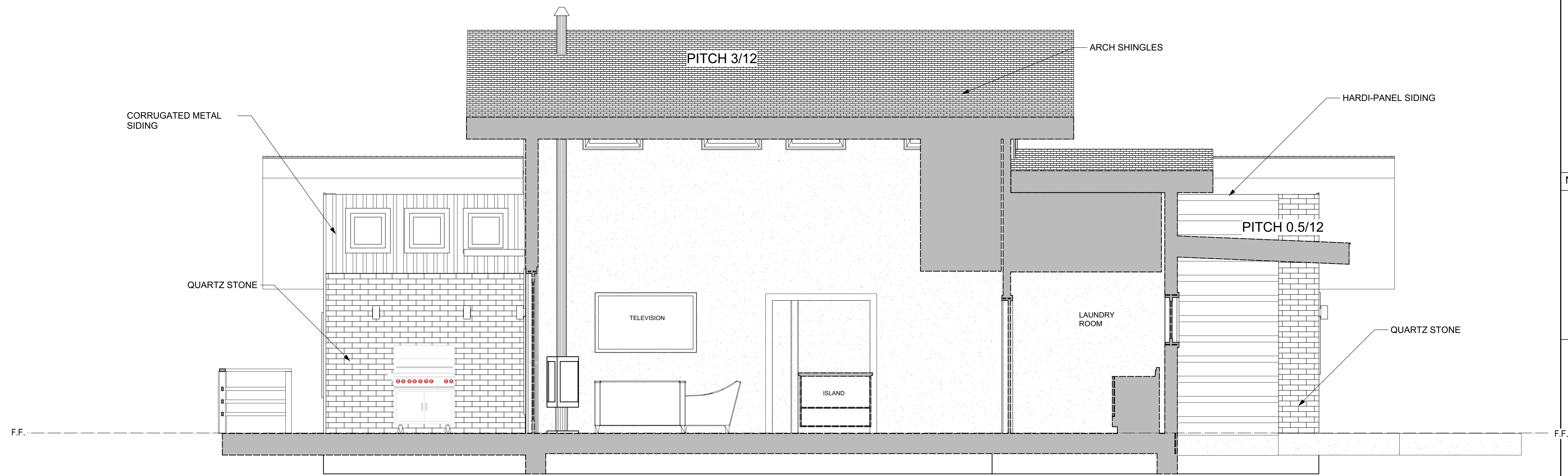
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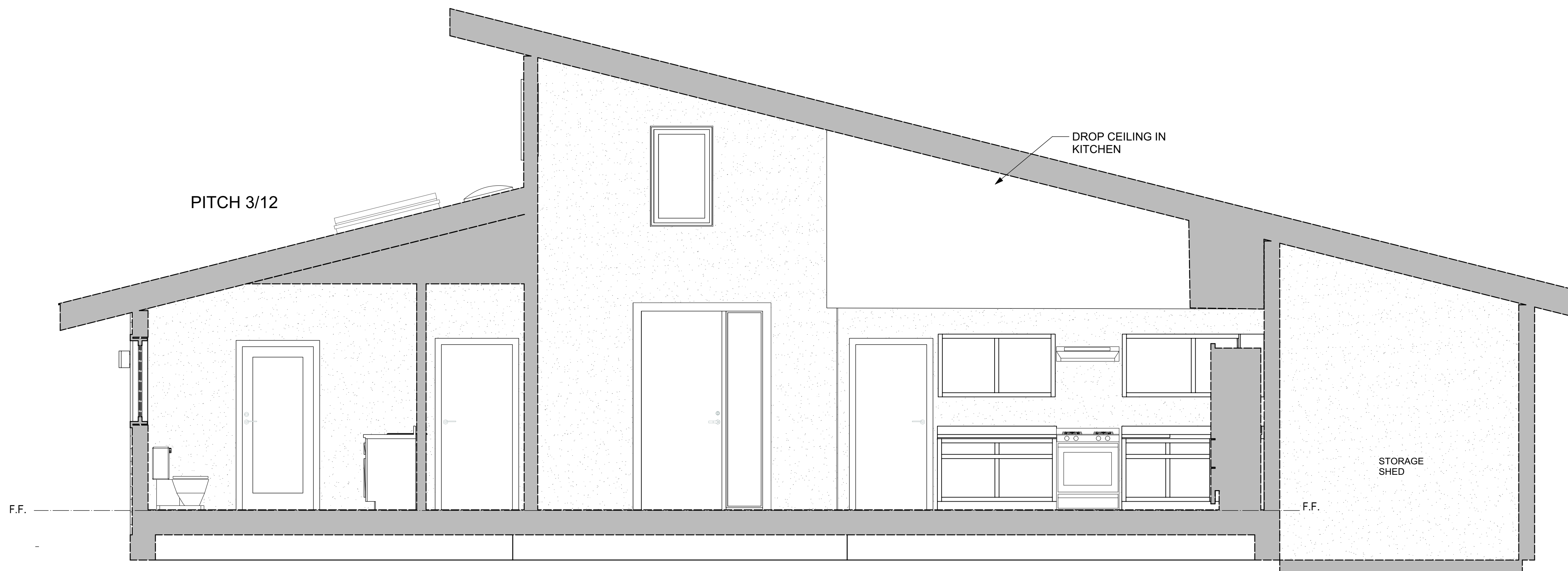
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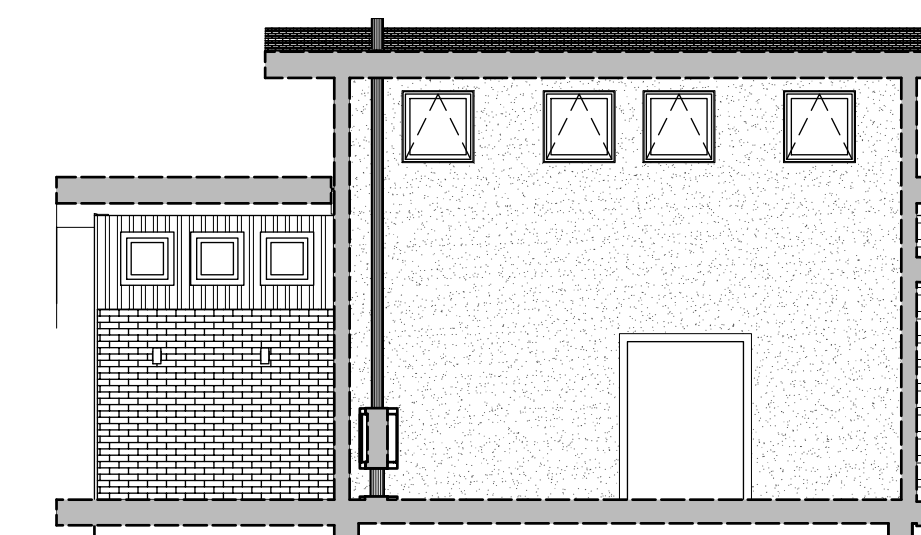
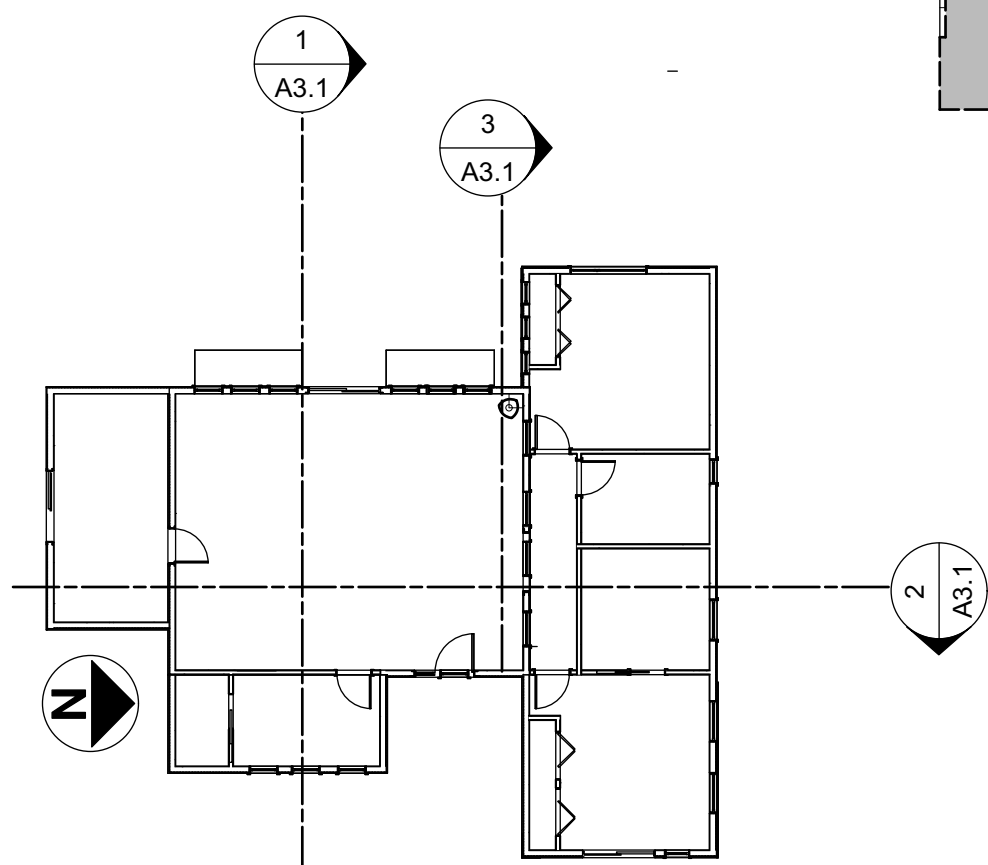
Total Sheets



1 E-W SECTION FACING N
Scale: 3/8" = 1'-0"



2 N-S SECTION FACING E
Scale: 3/8" = 1'-0"



3 WALL ELEVATION
Scale: 1/8" = 1'-0"

No.	Date	Issue Notes
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SECTION VIEW

Sheet

Project
Miller/ Sage House
44880 Jack Peters Cr Rd
Mendocino, CA 95460
APN# 020-042-13

Project Manager
Cynthia Sharon

Drawn By
MAS

Scale
1/2" = 1'-0"

Date
12/11/19

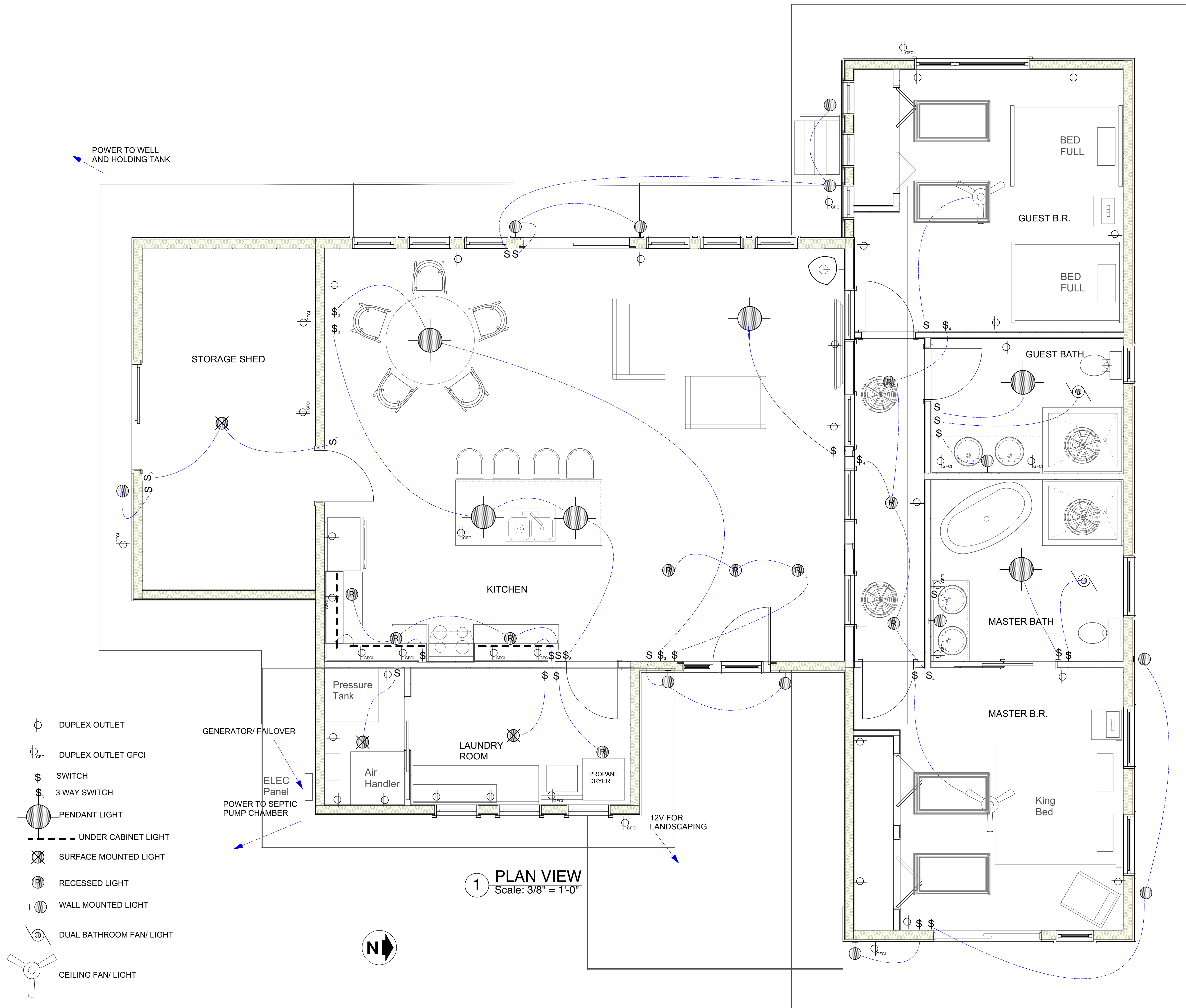
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Drawing No.

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6 of 7

Total Sheets



No.	Date	Issue Notes
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Electrical Plan

Sheet

Project
Miller/ Sage House
44880 Jack Peters Cr Rd
Mendocino, CA 95460
APN# 020-042-13

Project Manager
Cynthia Sharon

Drawn By
MAS

Scale
3/8" = 1'-0"

Date
12/11/19

CAD File Name

Drawing No.

E1

7 of 7

Total Sheets



MEMORANDUM

To: Paul Miller and Carrie Sage
2686 Donner Way
Sacramento, CA 95818

From: Rhiannon Korhummel
WRA, Inc.
korhummel@wra-ca.com

Date: January 8, 2020

Subject: Supplemental ESHA Assessment at 44860 Jack Peters Creek Road for
CDP_2018-0024

This memo serves to provide the results of a Sonoma Tree Vole (*Arborimus pomo*; STV) nest survey, one-parameter wetland assessment, and land cover mapping conducted at 44860 Jack Peters Creek Road (APN 118-340-029)(Study Area), Mendocino on October 11, 2019. This site assessment was conducted to address the items identified in Notice of Incompletion (Notice) from Mendocino County Planning Department dated September 18, 2018, in emails received from Mendocino County Planning Department dated July 26, and September 3, 2019, and personal communication with County planning staff regarding an application for a Coastal Development Permit (CDP_2018-0024).

Background

Several biological resource assessment surveys have been conducted on the property as part of a CDP, with the most recent assessments conducted by WRA in March and October 2019. Each survey assessed the parcel for vegetation types, wetlands, flora, and/or special-status plants. A biological assessment in 2011 determined no special-status plants present within the proposed Project Area and associated 100-foot buffer. Additionally, the assessment indicated no wetland or riparian vegetation within the Project Area or associated 100-foot buffer. While vegetation types and aquatic features identified within the parcel during the 2011 assessment could provide suitable habitat for special-status wildlife species, no wildlife assessments were conducted for the parcel. In the Notice, County planning staff identified the need of a wildlife assessment for red-bellied newt (*Taricha rivularis*), northern red-legged frog (*Rana aurora*) (mis-identified in the Notice as red-legged tree frog), and Sonoma tree vole. A site visit was conducted on March 4 by WRA to assess the parcel for the potential to support the identified wildlife.

During the March site visit, remnants of STV nesting material was observed on the ground under a small grove of Douglas fir (*Pseudotsuga menziesii*) within the Project Area. The October site visit was conducted to determine presence/absence of STV nests within the tree.

The 2011 assessment also reported that a mapped hydric soil type, Shinglemill-Gibney, is identified as occurring within the parcel, based on the U.S. Dept. of Agriculture (USDA) *Soil Survey Mendocino County*, which may potentially contain a one-parameter wetland. This was identified in the Notice as an item to be addressed for a completed CDP. While this item was assessed during the March site visit, County Planning staff requested further information. Therefore, additional information regarding the potential one-parameter wetland (mapped hydric soils) is provided within this memo.

Several trees are proposed for removal as part of the proposed Project. An inventory of trees planned for removal was conducted during the March 4 site visit.

As land cover types were not identified and discussed during previous assessments or special-status plant surveys, the results of the special-status plant surveys were determined incomplete; however no special-status plants were observed during the 2011 assessment or an additional survey conducted in 2018 (Maslach 2018¹). Additionally, the location and extent of riparian vegetation were not mapped during previous surveys.

Results of the March site visit are presented in a memo drafted by WRA dated April 18, 2019. The results of the October site visit are presented in this memo. This memo provides assessment results of an additional STV survey, one-parameter wetlands within areas mapped as hydric soils, and the land cover type assessment and mapping.

Methods

Sonoma Tree Vole Nest Survey

As there is no official nest survey protocol for STV, the methods for the STV nest survey are based on *Survey Protocol for the Red Tree Vole* drafted by the USDA Forest Service (Huff et. al. 2012²). The methods used for the nest survey were provided to California Department of Fish and Wildlife (CDFW) staff for recommendations and approval prior to conducting the survey to ensure the methods and results are sufficient to meet CDFW approval.

Survey Method

The survey was conducted by a qualified biologist and an arborist who has worked on the Mendocino Coast for more than a decade and has familiarity with STV. Prior to the survey, each person reviewed the *Field Guide to Red Tree Vole Nests* drafted by U.S. Forest Service staff (Lesmeister et. al. 2017³) to become familiar with what the STV nests may look like and what nests of other arboreal mammals look like. Each person was lifted up along the tree while within a bucket using a bucket truck. Climbing of the tree, which was the option provided to CDFW, was deemed not feasible as the arborist was injured and unable to climb. The biologist used binoculars to scan the canopy of the tree which the nest material was found under and additional Douglas fir adjacent to that tree as the canopies highly overlapped. The entire canopy was scanned looking for evidence of STV nests. If a nest was observed, it would be categorized by the following features:

¹ Maslach, William. 2018. Botanical Survey Update for Weisbrich Parcel 44860 Jack Peters Creek Road. June

² Huff, R., K. Van Norma, C. Hughes, R. Davis and K. Mellen-Mclean. 2012. Survey Protocol for the Red Tree Vole, Version 3.0. Portland, OR. U.S. Dept. of the Interior, Bureau of Land Management, Oregon/Washington, and U.S. Dept. of Agriculture, Forest Service Regions 5.

³ Lesmeister, D., Swingle, J. 2017. Field Guide to Red Tree Vole Nests. Interagency Special Status and Sensitive Species Program. USDA Forest Service, Pacific Northwest Region and USDI Bureau of Land Management, Oregon/Washington Portland Oregon.

Active Nest:

- Bright green fecal pellets on top or inside nests or on limbs below the nest;
- Fresh, bright green resin ducts in the nest, sloughing off the edge of the nest or on the ground, trunk or limbs below the nest;
- Fresh twig cuttings typically 5 to 20 cm in length and 2-3 mm diameter; ends cut off at an angle ("chisel-cut");
- Twigs with bark removed (debarked);
- Many small white twigs with bark removed that look like pieces of toothpicks.

Inactive Nest:

- Nest is compacted or falling apart
- Fecal pellets are dark brown to black
- No green resin ducts
- No green twig cuttings
- Nest material comprised primarily of composted layer of compressed fecal pellets, orange, tan, or brown resin ducts, often with layer of debris that has fallen into the nest

If an active nest(s) is found, based on observation of one or more criteria listed above, ESHA will be considered present. If no or inactive nest(s) are found, based on observation of criteria listed above, no ESHA present.

Photographs of the tree crown and canopy were taken. If any nesting material observed, photographs were taken along with photos of any additional evidence to support the nest categorization.

Land Cover Mapping

The Study Area was also evaluated for the presence of other ESHAs defined in California Coastal Commission (CCC) regulations and the Mendocino County Local Coastal Program (LCP) and sensitive natural communities designated in the California Natural Diversity Database (CNDDB) (CDFW 2019a⁴).

Terrestrial Land Cover Types

WRA biologist evaluated the Study Area's terrestrial land cover types (e.g., natural communities, built environment). In most instances, cover types are delineated based on distinct shifts in plant assemblage (vegetation), and follow the *California Natural Community List* (CDFW 2018b⁵), *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986⁶), and *A Manual of California Vegetation, Online Edition* (CNPS 2019b⁷). Terrestrial land cover types were evaluated to determine if they would be considered sensitive. Vegetation alliances (natural communities) with a CDFW Rank of 1 through 3 (globally critically imperiled (S1/G1), imperiled

⁴ California Natural Diversity Database. 2019a. California Dept. of Fish and Wildlife. Available online at:

⁵ CDFW. California Natural Community List. Vegetation Classification and Mapping Program, California Department of Fish and Game, Sacramento, CA. October 15.

⁶ Holland, R. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Game, Sacramento, CA. 156 pp.

⁷ California Native Plant Society. 2019b. A Manual of California Vegetation Online. Available at: <http://vegetation.cnps.org/>. Accessed November 2019.

(S2/G2), or vulnerable (S3/G3), on the *List of Vegetation Alliances*, were considered as part of this evaluation. Additionally, any sensitive natural communities as described in the Mendocino County LCP were evaluated.

Aquatic Resources

Aquatic resources include Waters of the U.S., Waters of the State, and Streams, Lakes, and Riparian Habitat as defined in the Clean Water Act (CWA), Porter-Cologne Act, and California Fish and Game Code (CFGC), respectively. Mendocino County LCP mandates setbacks from these aquatic resources, and therefore requires mapping of the outward extent of such features.

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 ordinary high water mark would be used to determine the extent of potential Section 404 jurisdiction, while the top-of-bank would be used to determine the extent of CFGC Section 1602 and 401. Streams with associated woody vegetation were assessed to determine if these areas would be considered riparian habitat by the CDFW following *A Field Guide to Lake and Streambed Alteration Agreements, Section 1600-1607, California Fish and Game Code* (CDFG 1994⁸).

One-parameter Wetlands

To address the mapped hydric soils comment by the County and to map land cover types, the parcel was traversed to determine the presence of potential CCC/LCP wetlands (one-parameter). The CCC uses a broad wetland definition in which the presence of any one of the wetland parameters (hydrophytic vegetation, hydric soils, hydrology) may indicate presence of a wetland and presumes that the area is a wetland, if one of the wetland parameters is present. However, there may be exceptions to this presumption if there is strong positive evidence of upland conditions, as opposed to negative evidence of wetland conditions. For example, hydric soils can occur in upland areas especially in areas where historic disturbances may have exposed the substratum or in densely vegetated grasslands.

County comments specifically mentioned an area of the parcel mapped as a hydric soil type, Shinglemill-Glbney (USDA 1993⁹). Several sample pits were dug in this area to explore the soils in order to determine the presence of hydric soils, following the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987¹⁰) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains Valley and Coast* (WMVC) (Corps 2010¹¹). Specific indicators that can be used to determine whether a soil is hydric for the purposes of wetland delineation are provided in the NRCS *Field Indicators of Hydric Soils in the U.S.* (USDA 2016¹²). Additionally, the WMVC Supplement provides a list of hydric soil indicators

⁸ California Department of Fish and Game (CDFG). 1994. *A Field Guide to Lake and Streambed Alteration Agreements*, Sections 1600-1607. Environmental Service Division, California Department of Fish and Game, Sacramento, CA.

⁹ U.S. Department of Agriculture (USDA), Soil Conservation Service (SCS). 1993. *Soil Survey of Mendocino County, Western Portion, California*. In cooperation with the University of California Agricultural Experiment Station.

¹⁰ Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Department of the Army, Waterways Experiment Station, Vicksburg, Mississippi 39180-0631.

¹¹ U.S. Army Corps of Engineers (Corps). 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valley and Coasts Region* (Version 2.0). U.S. Army Corps of Engineers, Engineer Research and Development Center, Vicksburg, MS. May 2010.

¹² USDA Natural Resources Conservation Service. 2016. *Field Indicators of Hydric Soils in the United States. A guide for Identifying and Delineating Hydric Soils, Version 8.0*.

which are known to occur in the coast region. Soil samples were observed and described according to the methodology provided in the NRCS Hydric Soils and WMVC Supplement. Soil chroma and values were determined by utilizing a standard Munsell soil color chart.

Hydric soils were determined to be present if any of the soil samples met one or more of the hydric soil indicators described in the WMVC Supplement.

Results

Attachment 1 contains figures showing the land cover types, ESHA and associated buffers in relation to the Project Area, and soils of the parcel with locations where soils pits were located. Attachment 2 contains photos of the land cover types and the STV survey. Attachment 3 contains a list of observed plant species of the parcel seen in March and October.

Sonoma Tree Vole Nest Survey

Sonoma tree vole (*Arborimus pomo*). CDFW Species of Special Concern. Sonoma tree vole is a CDFW Species of Special Concern. It is distributed along the northern California coast from Sonoma County to the Oregon border. STV occurs in old-growth and other forest, mainly Douglas fir, redwood, and montane hardwood-conifer habitats. This species breeds year-round, but most often from February through September. Nests are constructed preferentially in tall trees and may be situated on a whorl of limbs against the trunk, or at the outer limits of branches. Males nest most frequently in a tree nest constructed of needles, or less frequently in shallow burrows at the base of the tree, beneath litter. Females tend to spend most of their lives in trees, constructing large, domed nursery nests of needles, from 2 to 45 meters (6 to 150 feet) above the ground (Howell 1926¹³). In young second-growth Douglas-fir, STV frequently constructs nests on the broken tops of trees (Maser et al. 1981), although old-growth Douglas fir stands likely provide the optimal structural components for nest-building (BLM 2002¹⁴).

The STV is a coniferous needle specialist, feeding on the needles of Douglas-fir and grand fir, and in the case of the Sonoma area, Bishop pine. Needles and twigs are gathered primarily during the night, and may be consumed where found or brought to the nest. Needle resin ducts are removed. The remaining part is eaten, and the resin ducts may be used to line the nest cup. This unique nest lining is an identifying characteristic of STV nests.

There are two documented occurrences of STV within 4 miles of the property, both from 1996. Within the Study Area, evidence of STV was observed in two locations during the March site visit. One location was located on the north slope, greater than 100-feet outside of the Project Area. Evidence observed at this location included a potential nest located approximately 30-feet in the crotch of two apical trunks of a grand fir. No needle litter was observed below the tree. The second location was located within a grove of Douglas fir within Project Area. At this location, needle litter indicative of STV was observed on the ground in two locations beneath a large Douglas fir; some of the litter contained feces. The feces was black and hard, while the litter observed was brown, which indicates decadence; additionally, some of the litter was grown over by native blackberry, which indicates a long duration of time has passed since the litter has fallen.

¹³ Howell, A. B. 1926. Voles of the genus *Phenacomys*. II. Life history of the red tree mouse *Phenacomys longicaudus*. USDA, North Am. Fauna Ser. No. 48:39-64.

¹⁴ Bureau of Land Management (BLM). 2002. Survey protocol for the Red Tree Vole *Arborimus longicaudus* (= *Phenacomys longicaudus* in the Record of Decision of the Northwest Forest Plan), Version 2.1, Revision, October 2002.

A canopy survey was conducted during the October site visit to determine if a nest was present within the trees under which the STV nesting material was observed. Using binoculars while in a lifted bucket, a qualified biologist and arborist with previous experience in observing STV, scanned the canopy of the trees to find evidence of an STV nest or STV feeding (ends of short branches missing). No evidence of a nest or feeding was observed and STV is determined to be absent from the trees and the Project Area as no additional indication of presence has been observed.

Land Cover Types

The parcel contains six land cover types. Non-sensitive cover types include developed, Douglas fir forest, and red alder forest. Sensitive land cover types (ESHA) include riparian, intermittent stream and perennial stream. Figure 3 in Attachment 1 depicts location and extent of each land cover type.

Non-sensitive

Developed. No CDFW Rank. The developed portion of the Study Area includes Jack Peters Creek Road, located along the southeastern portion of the Study Area.

Douglas Fir Forest (*Pseudotsuga menziesii* Forest Alliance). CDFW Rank: G5 S4. Douglas fir forests typically occur on all topographic positions and aspects on various substrates throughout northern and central California. Areas mapped as Douglas fir forest have more than 50 percent relative cover of Douglas fir in the tree canopy (CNPS 2019b).

Within the Study Area Douglas fir forest is the dominant land cover type. The canopy is approximately 80 percent Douglas fir with grand fir (*Abies grandis*), tan oak (*Notholithocarpus densiflorus*), Bishop pine (*Pinus muricata*), and red alder (*Alnus rubra*) as characteristic species. While Bishop pine is present in the canopy, individuals are not evenly spaced in the canopy and has a relative canopy cover of less than 15 percent; therefore no portions of the Study Area meets the described criteria of Bishop pine forest (CNPS 2019b).

There are open patches within the forest which are dominated by sword fern (*Polystichum munitum*) with scattered cascara (*Frangula purshiana*) and tanoak. The understory of the Douglas fir forest understory is dominated by sword fern (approximately 90 percent cover), with English ivy (*Hedera helix*), California blackberry (*Rubus ursinus*), salal (*Gaultheria shallon*), poison oak (*Toxicodendron diversilobum*), and honeysuckle (*Lonicera hispidula*) scattered throughout. There are also open grassland patches within the Douglas fir forest, located in the graded landing and roadway of the Project Area as well as adjacent to Jack Peters Creek Road. These areas are dominated by non-native grasses including wallaby grass (*Rytidosperma penicillatum*), smooth cat's ear (*Hypochaeris glabra*), plantain (*Plantago lanceolata*), rattlesnake grass (*Briza maxima*), sweet vernal grass (*Anthoxanthum odoratum*), and featherweed (*Gamochaeta ustulata*).

Red Alder Forest (*Alnus rubra* Forest Alliance). CDFW Rank: G5 S4. Red alder forests can occur as both riparian and upland forests near the coast (CNPS 2019b). Throughout California, these forests typically occur on stream and river backwaters, stream banks, stream bottoms, flood plains, stream mouths, and stream terraces on slopes of all aspects. Areas mapped as red alder forest have more than 50 percent relative cover of red alder in the tree canopy (CNPS 2019b).

Within the Study Area, red alder forest occurs as uplands/non-riparian on the slopes in the eastern portion as well as along Jack Peters Creek as riparian vegetation. In the upland/non-riparian portions of red alder forest, the understory is similar to Douglas fir, and is dominated by sword fern (nearly 95 percent cover) with scattered native and non-native vines and shrubs including thimble berry (*Rubus parviflorus*), California blackberry, Himalayan blackberry, cascara, coast manroot (*Marah oregana*), and red elderberry (*Sambucus racemosa*). These portions of red alder forest do not meet a one-parameter wetland as the vegetation does not meet hydric criteria and there are no indicators of hydrology or hydric soils.

The riparian ESHA portions of red alder forest occur along and within the top of bank (TOB) of Jack Peters Creek, where the tree canopy covers the stream. The understory within the riparian areas includes red elderberry, lady fern (*Athyrium filix-femina*), burning bush (*Euonymus occidentalis*), stink current (*Ribes bracteosum*), salmon berry (*Rubus spectabilis*), thimbleberry, horsetail (*Equisetum* sp.), and stinging nettle (*Urtica dioica*).

Sensitive (ESHA)

Riparian Forest—various vegetation alliances. CDFW Rank: various. CFGC Section 1602; CCA ESHA; Mendocino County LCP. Riparian habitat present occurs within and immediately adjacent to bed and bank of the intermittent stream and perennial stream in the Study Area. The vegetation is dominated by characteristically riparian species (e.g., red alder, lady fern, horsetail) and appears reliant on the surface and near-surface waters that collect in these areas. The riparian vegetation is similar to the red alder forest and Douglas fir forest described above; however, an obvious shift in understory from wetland species to upland species is present and is the edge of riparian. The edge of riparian vegetation is more than 100-feet from the Project Area. Riparian vegetation is considered sensitive as it is within the jurisdiction of CDFW under Section 1602 of the CFGC, is a California Coastal Act and a Mendocino County LCP ESHA.

Intermittent Stream—no vegetation alliance. CFGC Section 1602; CCA ESHA; Mendocino County LCP; Section 404/401 of Clean Water Act. One intermittent stream is located in the southwestern portion of the Study Area, more than 100-feet from the Project Area, and is a tributary to Jack Peters Creek. The banks are steep and deep composed of gravel and soil. The channel is rocky with fine sediment deposition covering the rocky bottom. The TOB is approximately 6-feet wide; scattered shrubs are within the TOB and the vegetation on the banks are Douglas fir forest as described above. The grade of the stream is very steep to the point it meets Jack Peters Creek. The intermittent stream is considered sensitive as it is within jurisdiction of CDFW under Section 1602 of the CFGC, is a California Coastal Act and a Mendocino County LCP ESHA, and within jurisdiction of the Army Corps of Engineers (Corps) and Regional Water Quality Control Board (RWQCB) under Section 404 and 401 of the CWA.

Perennial Stream-no vegetation alliance. CFGC Section 1602; CCA ESHA; Mendocino County LCP; Section 404/401 of the Clean Water Act. The perennial stream is Jack Peters Creek, a USGS blue-line stream, which is located along the northern boundary of the Study Area. Water was flowing within the channel at the time of the October site visit and likely flows all year. The banks of the stream are steep and deep, with a flat area located in the western portion of the Study Area. The channel is rocky and sandy, with some sandy beaches present. Vegetation within the TOB is sparse and consists of riparian vegetation as described above. Vegetation along the TOB also consists of riparian vegetation as described above but has a continuous canopy. The TOB of the stream is more than 100-feet from the Project Area. The perennial stream is considered sensitive as it is within jurisdiction of CDFW under Section 1602 of the CFGC, is a California Coastal Act and a Mendocino County LCP ESHA, and within jurisdiction of the Army Corps of Engineers (Corps) and RWQCB under Section 404 and 401 of the CWA.

One-parameter Wetlands

Based on the USDA Soil Survey, a portion of the parcel, which includes the Project Area, is mapped as Shinglemill-Gibney, a soil mapping unit is rated as a Hydric Soil by USDA. While soil survey mapping is widely known to map broadly and not always accurately, this area could potentially contain hydric soils. The Hydric Soil list contains soils which have a probability of being hydric; however a hydric soil is a soil that meets the hydric soil definition by having the presence of one (or more) Hydric Soil Indicators when observed in the profile in the field (USDA 2019 Hydric Soils Technical Note 1¹⁵).

Three soil pits were dug in the region of the Project Area mapped as the hydric soil type (Figure 2 Attachment 1). The locations of the soil pits were determined based on distribution across the mapping unit and low topographic positions which would be most likely to have hydric soils, if present. The soil colors for each soil pit are listed in Table 1 below.

Table 1. Soil Pit Soil Colors

Soil Pit #1						
Depth	Matrix Color	Percent	Redox Color	Percent	Type/Location	Texture
0-9"	10YR 3/4	100	none	-	-	clay loam

Soil Pit #2						
Depth	Matrix Color	Percent	Redox Color	Percent	Type/Location	Texture
0-9"	10YR 3/4	100	none	-	-	clay loam

Soil Pit #3						
Depth	Matrix Color	Percent	Redox Color	Percent	Type/Location	Texture
0-4.5"	10YR 5/6	100	none	-	-	sandy clay loam
4.5-9"	10YR 4/6	20	none	-	-	sandy loam

¹⁵ USDA Hydric Soils Technical Note 1. Available online at:
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/use/hydric/?cid=nrcs142p2_053974

Soil Pit #3						
Depth	Matrix Color	Percent	Redox Color	Percent	Type/Location	Texture
"	10YR 5/6	60	-	-	-	sandy loam
"	7.5YR 3/4	18	-	-	-	sandy loam
"	7.5YR 8/2	2	-	-	-	sandy loam

Soil pit #1 is located in the grasslands near Jack Peters Creek Road. The soils are dark yellowish brown (10YR 3/4) throughout the profile to 9 inches below the surface; no hydric soils indicators were observed, no hydric soils are present. Soil pit #2 is located in a topographic swale south of the existing driveway. Soils are also dark yellowish brown throughout the profile; no hydric soils indicators were observed, no hydric soils are present. Soil pit #3 is located on the graded landing where the proposed residence will be developed. The soil is yellowish brown from the surface to 4.5 inches below the surface. From 4.5 inches to 9 inches, the profile is a mix of colors typical of the Shinglemill-Gibney soil complex. However, the colors observed do not meet any hydric soil indicators as described in the WMVC Regional Supplement, therefore no hydric soils indicators are met.

Project Description

The proposed Project is the development of a single-family residence and associated infrastructure, including septic and a driveway. The residence will be located on a previously graded landing and the driveway is to be located on a previously graded access road. These previously graded areas are the only disturbed areas within the parcel; the remainder of the parcel contains forest and riparian habitat which will not be disturbed. Therefore, the location of the development is located within the least damaging area of the parcel. Project activities includes the removal of several trees for safety and access purposes. No ESHA are within 100-feet of the Project Area (Figure 4, Attachment 1)

Avoidance Measures

Wildlife

Mammals

Based on the results of the STV nest survey, no STV is present within the Project Area and no avoidance measures are necessary. The location of the additional suitable STV habitat is greater than 100-feet from the Project Area. Additionally, due to the confirmation that STV is absent, trees identified as potential STV trees in Attachment 3 of the April memo are no longer considered to be potential STV habitat.

Nesting Birds

The Project proposes the removal of several trees for safety and access reasons. Tree removal/shrub clearing work should be conducted from August 16 through January 31 to the extent practical to avoid breeding bird season. If work is to be conducted within February through August 15, breeding bird surveys will be necessary. The surveys should be conducted within two weeks of initiation of vegetation removal and include areas 500-feet from the Project Area for


passerines and a quarter mile for raptors. If active bird nests are observed, a no-disturb buffer around the nest should be observed until the birds have fledged or the nest deemed inactive, by a qualified biologist. The distance of the buffer will be determined by a qualified biologist, based on species. A qualified biologist should conduct the surveys and conduct regular surveys if nests are observed to determine when birds have fledged.

Summary

The Study Area contains three sensitive land cover types. However, no sensitive land cover types are present within the Project Area and associated 100-foot buffer. Avoidance measures described above and in the April memo will allow for avoidance of impacts to wildlife. Soil pit sample observations indicate that no hydric soils are present within mapped hydric soil. The Project Area is located outside any ESHA and associated 100-foot buffer.

If you have questions or comments, please do not hesitate to contact me at korhummel@wra-ca.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'R Korhummel', with a stylized, cursive script.

Rhiannon Korhummel

Attachment 1: Figures

Attachment 2: Photographs

Attachment 3: Observed Plant Species List

Attachment 1
Figures



Figure 1. Study Area Regional Location Map

44860 Jack Peters Creek Road
Mendocino, California

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Miles



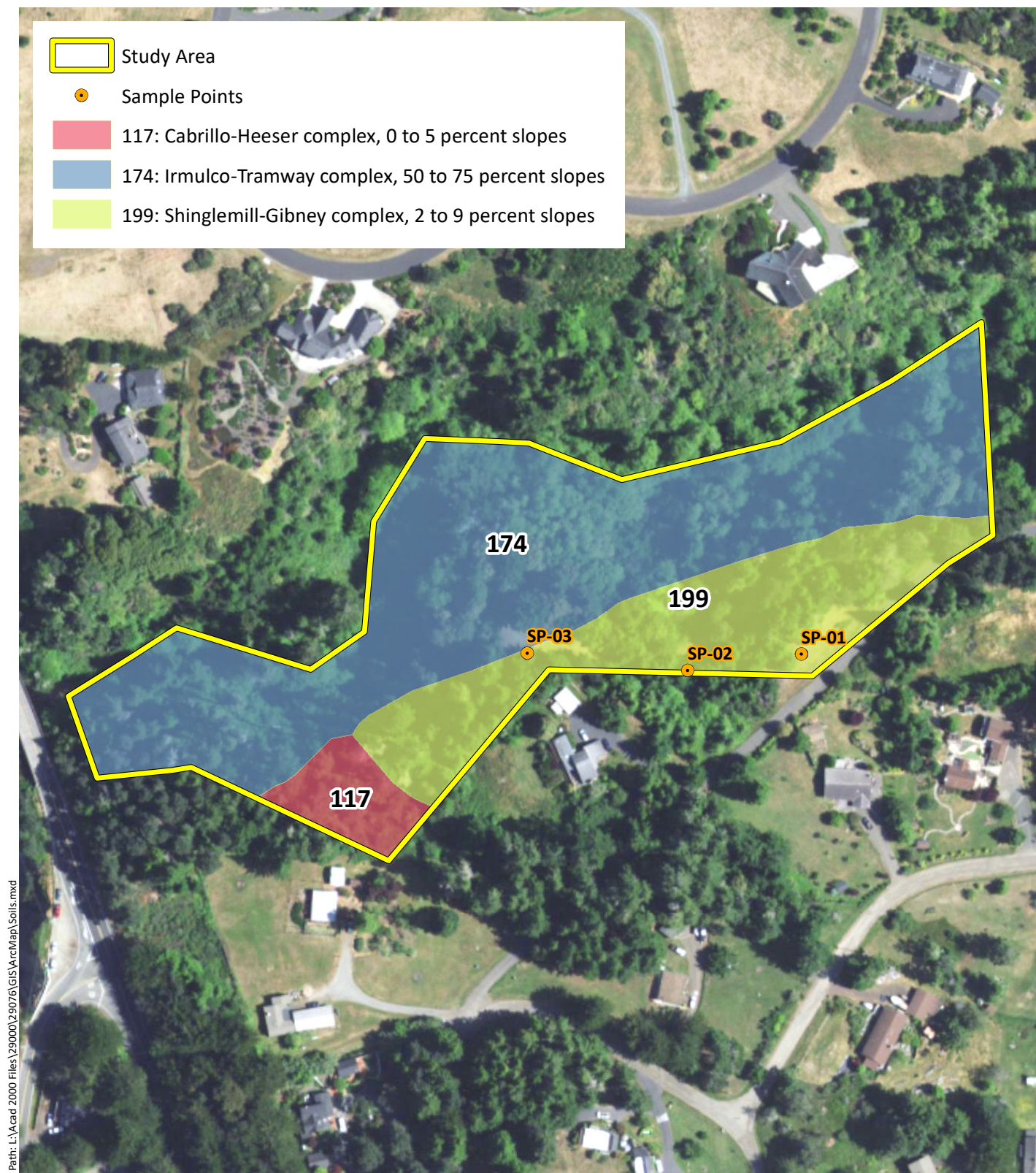


Figure 2. Soils Map

44860 Jack Peters Creek Road
Mendocino, California

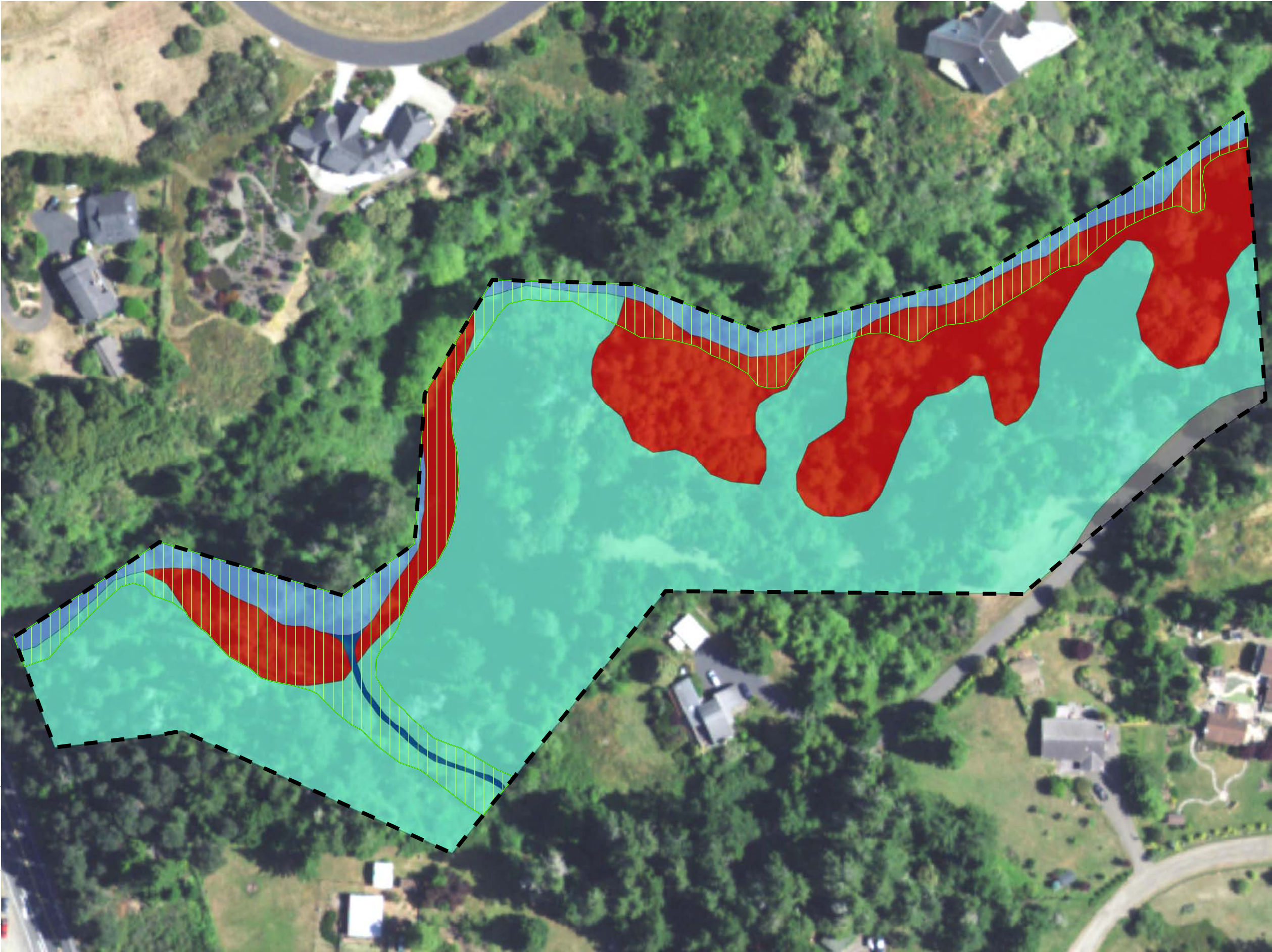
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Feet



Figure 3.
Landcover Types

44860 Jack Peters Creek Road
Mendocino, California



Study Area - 7.71 ac.

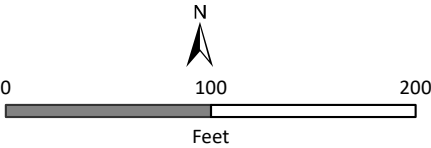
Non-Sensitive Landcover Types

- Developed - 0.10 ac.
- Douglas-Fir Forest - 5.05 ac.
- Red Alder Forest - 1.96 ac.

Sensitive Landcover Types

- Intermittent Stream - 0.03 ac. & 226 LF
- Perennial Stream - 0.57 ac. & 1,347 LF
- Riparian Forest - 1.57 ac.*

* acreage overlaps with other landcover types



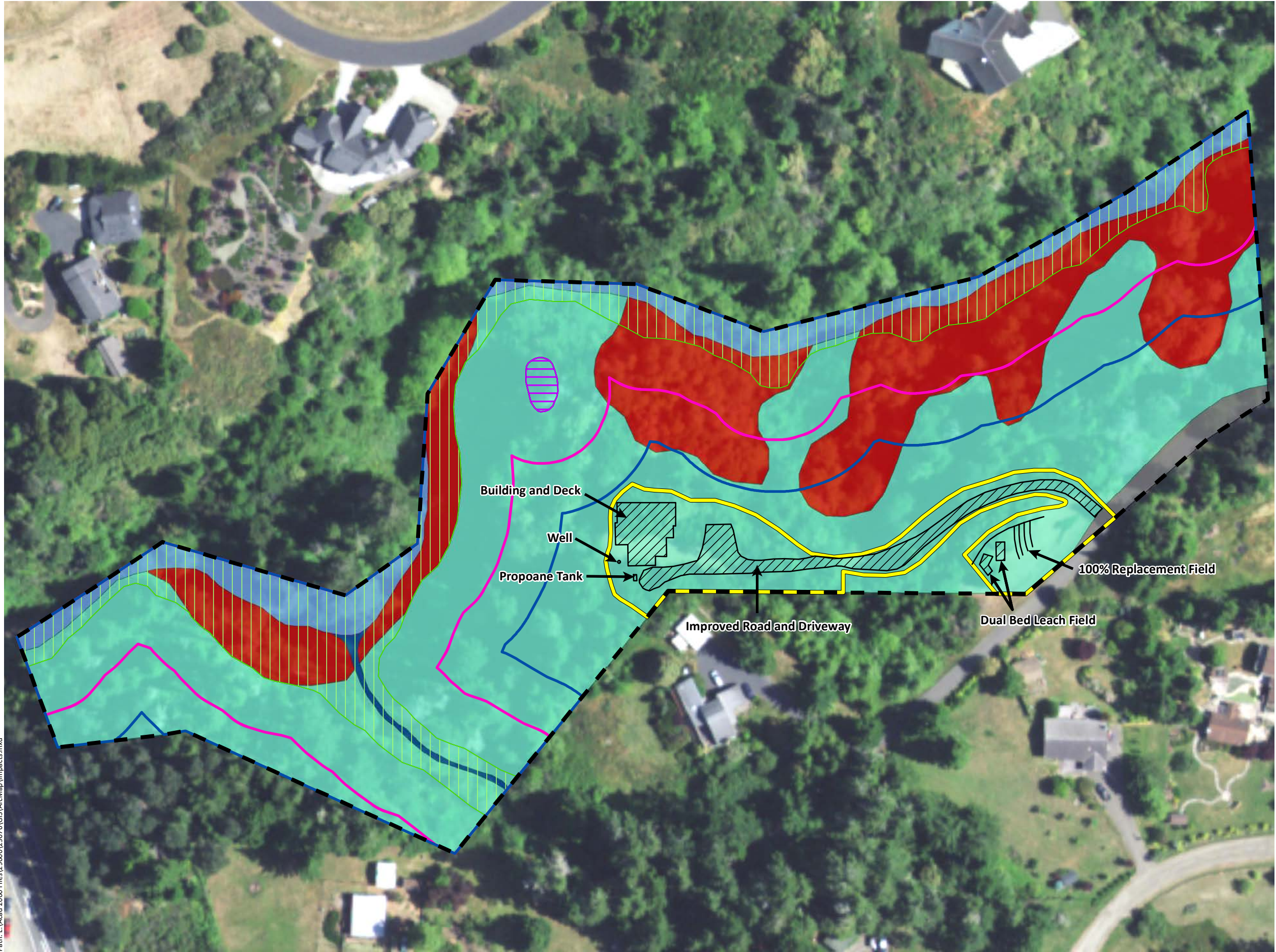
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Sources: NAD 2016 Aerial, WRA | Prepared By: mrochelle, 12/16/2019

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Figure 4.
Impacts

44860 Jack Peters Creek Road
Mendocino, California



- Study Area - 7.71 ac.
- Project Area - 0.72 ac.
- Project Components - 0.23 ac.

Non-Sensitive Landcover Types

- Developed - 0.10 ac.
- Douglas-Fir Forest - 5.05 ac.
- Red Alder Forest - 1.96 ac.

Sensitive Landcover Types

- Intermittent Stream - 0.03 ac. & 226 LF
- Perennial Stream - 0.57 ac. & 1,347 LF
- Riparian Forest - 1.57 ac.*

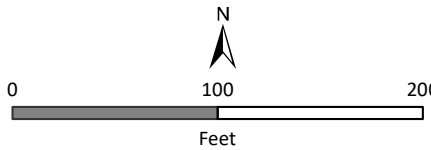
Sensitive Habitat Areas

- Potential STV Habitat

ESHA Buffers

- 50'
- 100'

* acreage overlaps with other landcover types



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Sources: NAD 2016 Aerial, WRA | Prepared By: mrochelle, 12/17/2019

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Attachment 2
Photographs



Photo 1. Riparian vegetation in the western portion of the Study Area.



Photo 2. Jack Peters Creek.



Photo 3. Upland red alder forest along the northern slopes.



Photo 4. Douglas-fir forest along the northern slopes, near the Project Area.



Photo 5. Non-native grassland patch within the Douglas-fir forest. Also the location of the proposed residence.



Photo 6. Douglas-fir forest within Project Area.



Photo 7. Existing access road to be used as driveway for proposed residence.



Photo 8. Soil profile at soil pit #3.

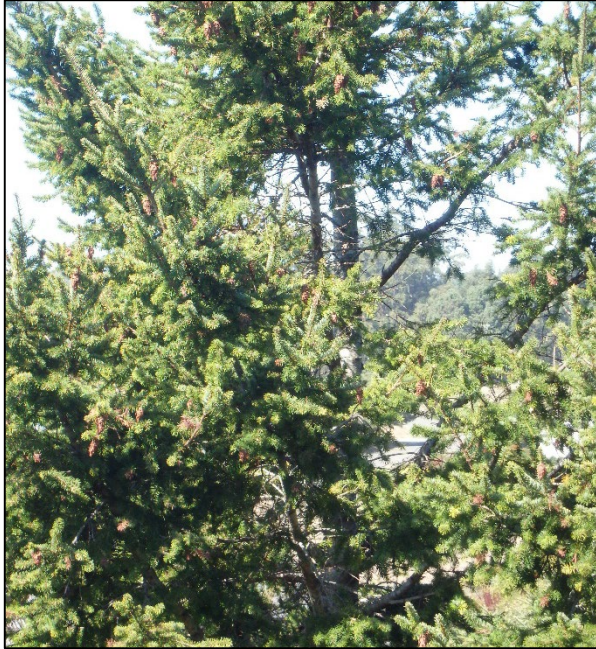


Photo 9. Photo of top of canopy of Douglas-fir tree which evidence of STV was underneath in March.



Photo 10. Close-up of canopy.



Photo 11. Canopies of Douglas-fir trees.



Photo 12. Close up of Douglas-fir branches. No tips observed to be missing, which would indicate presence of STV.

Attachment 3
Observed Plant Species

Attachment 3. Plant species observed in the Study Area March 4 and October 11, 2019

Scientific Name	Common Name	Origin	Form	Rarity Status ¹	CAL-IPC Status ²	Wetland Status (WMVC 2016 ³)
<i>Abies grandis</i>	Grand fir	native	tree	-	-	FACU
<i>Alnus rubra</i>	Red alder	native	tree, shrub	-	-	FAC
<i>Anaphalis margaritacea</i>	Pearly everlasting	native	perennial herb	-	-	FACU
<i>Anisocarpus madioides</i>	Woodland madia	native	perennial herb	-	-	-
<i>Anthoxanthum occidentale</i>	California sweet grass	native	perennial grass	-	-	-
<i>Anthoxanthum odoratum</i>	Sweet vernal grass	non-native (invasive)	annual, perennial grass	-	Moderate	FACU
<i>Aquilegia formosa</i>	Columbine	native	perennial herb	-	-	FAC
<i>Asyneuma prenanthoides</i>	California harebell	native	perennial herb	-	-	-
<i>Athyrium filix-femina</i> var. <i>cyclosum</i>	Western lady fern	native	fern	-	-	FAC
<i>Baccharis pilularis</i>	Coyote brush	native	shrub	-	-	-
<i>Briza maxima</i>	Rattlesnake grass	non-native (invasive)	annual grass	-	Limited	-
<i>Bromus carinatus</i>	California brome	native	perennial grass	-	-	-
<i>Bromus laevipes</i>	Narrow flowered brome	native	annual, perennial grass	-	-	-
<i>Calystegia purpurata</i> ssp. <i>purpurata</i>	Smooth western morning glory	native	perennial herb	-	-	-
<i>Ceanothus thyrsiflorus</i>	Blueblossom	native	tree, shrub	-	-	-
<i>Chrysolepis chrysophylla</i>	Golden chinquapin	native	tree, shrub	-	-	-
<i>Cirsium vulgare</i>	Bullthistle	non-native (invasive)	perennial herb	-	Moderate	FACU
<i>Cortaderia jubata</i>	Andean pampas grass	non-native (invasive)	perennial grass	-	High	FACU
<i>Corylus cornuta</i> ssp. <i>californica</i>	Beaked hazelnut	native	shrub	-	-	FACU
<i>Cytisus scoparius</i>	Scotch broom	non-native (invasive)	shrub	-	High	-
<i>Digitalis purpurea</i>	Foxglove	non-native (invasive)	perennial herb	-	Limited	FACU
<i>Dryopteris arguta</i>	Wood fern	native	fern	-	-	-
<i>Equisetum telmateia</i> ssp. <i>braunii</i>	Giant horsetail	native	fern	-	-	FACW
<i>Erigeron canadensis</i>	Canada horseweed	native	annual herb	-	-	FACU
<i>Euonymus occidentalis</i>	Western burning bush	native	tree, shrub	-	-	FAC
<i>Festuca bromoides</i>	Brome fescue	non-native	annual grass	-	-	FAC
<i>Fragaria vesca</i>	Wild strawberry	native	perennial herb	-	-	FACU
<i>Frangula purshiana</i>	Cascara sagrada	native	tree, shrub	-	-	FAC

Scientific Name	Common Name	Origin	Form	Rarity Status ¹	CAL-IPC Status ²	Wetland Status (WMVC 2016 ³)
<i>Galium aparine</i>	Cleavers	native	annual herb	-	-	FACU
<i>Gamochaeta ustulata</i>	Featherweed	native	perennial herb	-	-	-
<i>Garrya elliptica</i>	Coast silk tassel	native	tree, shrub	-	-	-
<i>Gaultheria shallon</i>	Salal	native	shrub	-	-	FACU
<i>Goodyera oblongifolia</i>	Rattlesnake plantain	native	perennial herb	-	-	FACU
<i>Hedera helix</i>	English ivy	non-native (invasive)	vine, shrub	-	High	FACU
<i>Heracleum maximum</i>	Common cowparsnip	native	perennial herb	-	-	FAC
<i>Heuchera micrantha</i>	Alum root	native	perennial herb	-	-	-
<i>Holcus lanatus</i>	Common velvetgrass	non-native (invasive)	perennial grass	-	Moderate	FAC
<i>Hypochaeris glabra</i>	Smooth cats ear	non-native (invasive)	annual herb	-	Limited	-
<i>Hypochaeris radicata</i>	Hairy cats ear	non-native (invasive)	perennial herb	-	Moderate	FACU
<i>Ilex aquifolium</i>	Holly	non-native (invasive)	tree, shrub	-	Moderate	FACU
<i>Iris douglasiana</i>	Douglas iris	native	perennial herb	-	-	-
<i>Juncus patens</i>	Common rush	native	perennial grasslike herb	-	-	FACW
<i>Lathyrus vestitus</i>	Common pacific pea	native	perennial herb	-	-	-
<i>Leontodon saxatilis</i>	Hawkbit	non-native	annual herb	-	-	FACU
<i>Linum bienne</i>	Narrow-leaved flax	non-native	annual herb	-	-	-
<i>Lonicera hispidula</i>	Pink honeysuckle	native	vine, shrub	-	-	FACU
<i>Lysimachia latifolia</i>	Pacific starflower	native	perennial herb	-	-	FACW
<i>Marah oregana</i>	Coast man-root	native	perennial herb, vine	-	-	-
<i>Medicago sp.</i>	burclover	non-native	annual herb	-	-	-
<i>Morella californica</i>	California wax myrtle	native	shrub	-	-	FACW
<i>Myosotis sp.</i>	Forget-me-not	non-native	annual herb	-	-	-
<i>Notholithocarpus densiflorus</i>	Tanoak	native	tree, shrub	-	-	-
<i>Osmorhiza berteroi</i>	Sweetcicely	native	perennial herb	-	-	FACU
<i>Oxalis oregana</i>	Redwood sorrel	native	perennial herb	-	-	FACU
<i>Pinus muricata</i>	Bishop pine	native	tree	-	-	-
<i>Pittosporum sp.</i>	-	-	-	-	-	-
<i>Plantago lanceolata</i>	Ribwort	non-native (invasive)	perennial herb	-	Limited	FACU
<i>Polypodium sp.</i>	Polypodium fern	native	fern	-	-	-

Scientific Name	Common Name	Origin	Form	Rarity Status ¹	CAL-IPC Status ²	Wetland Status (WMVC 2016 ³)
<i>Polystichum munitum</i>	Western sword fern	native	fern	-	-	FACU
<i>Prosartes sp.</i>	Fairy bells	native	perennial herb	-	-	-
<i>Pseudotsuga menziesii</i> var. <i>menziesii</i>	Douglas fir	native	tree	-	-	FACU
<i>Pteridium aquilinum</i> var. <i>pubescens</i>	Western bracken fern	native	fern	-	-	FACU
<i>Ribes bracteosum</i>	Stink currant	native	shrub	-	-	FAC
<i>Ribes sanguineum</i>	Flowering currant	native	shrub	-	-	FACU
<i>Rosa nutkana</i>	Nootka rose	native	shrub	-	-	FAC
<i>Rubus armeniacus</i>	Himalayan blackberry	non-native (invasive)	shrub	-	High	FAC
<i>Rubus parviflorus</i>	Thimbleberry	native	vine, shrub	-	-	FACU
<i>Rubus spectabilis</i>	Salmon berry	native	shrub	-	-	FAC
<i>Rubus ursinus</i>	California blackberry	native	vine, shrub	-	-	FACU
<i>Rumex acetosella</i>	Sheep sorrel	non-native (invasive)	perennial herb	-	Moderate	FACU
<i>Rytidosperma penicillatum</i>	Purple awned wallaby grass	non-native (invasive)	perennial grass	-	Limited	-
<i>Sambucus racemosa</i>	Red elderberry	native	shrub	-	-	FACU
<i>Scrophularia californica</i>	California bee plant	native	perennial herb	-	-	FAC
<i>Stachys rigida</i>	Rough hedgenettle	native	perennial herb	-	-	FACW
<i>Tiarella trifoliata</i>	Sugar scoop	native	perennial herb	-	-	FAC
<i>Toxicodendron diversilobum</i>	Poison oak	native	vine, shrub	-	-	FAC
<i>Urtica dioica</i>	Stinging nettle	native	perennial herb	-	-	FAC
<i>Vaccinium ovatum</i>	Evergreen huckleberry	native	shrub	-	-	FACU
<i>Vaccinium parvifolium</i>	Red huckleberry	native	shrub	-	-	FACU
<i>Viola sempervirens</i>	Redwood violet	native	perennial herb	-	-	-

All species identified using the *Jepson Manual, 2nd Edition* (Baldwin et al. 2012) and *Jepson Flora Project (eFlora 2019)*; nomenclature follows *The Jepson Flora Project (eFlora 2019)* unless otherwise noted

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

Cf.: 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 2019)

FE: Federal Endangered
 FT: Federal Threatened
 SE: State Endangered
 ST: State Threatened
 SR: State Rare

Rank 1A:	Plants presumed extirpated in California and either rare or extinct elsewhere
Rank 1B:	Plants rare, threatened, or endangered in California and elsewhere
Rank 2A:	Plants presumed extirpated in California, but more common elsewhere
Rank 2B:	Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3:	Plants about which we need more information – a review list
Rank 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 (Lichvar et al. 2016)

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 delineati