PERMIT # CUSE2019-0003

USE PERMIT – APPLICATION

Town of Woodside
2955 Woodside Road
Woodside, California 94062
650 851.6790
www.woodsidetown.org

Property Address: Along Bear Gulch Creek betw 60 Why Worry Lane and 3411 Woodside Rd **APN #:** 072390040 (60 Why Worry) , 072191650 (3411 Woodside Rd)

Property Owner: Town of Woodside
Owner Address: 2955 Woodside Rd, Woodside, CA 94062
Phone Number: (650) 851-6790
Email: srose@woodsidetown.org

Applicant: Town of Woodside
Applicant Address: 2955 Woodside Rd, Woodside, CA 94062
Phone Number: (650) 851-6790
Email: srose@woodsidetown.org

FINDINGS FOR USE PERMITS

(Section 153.927)

(A) After a public hearing, the Planning Commission may authorize a conditional use in any zoning district in which such use is permitted by the provisions of this chapter provided the facts presented at the public hearing allow the Planning Commission to make all of the following findings:

(1) Explain why the proposed use at such location is necessary or desirable to provide a facility or service which will contribute to the general well being of the neighborhood or community or which needs to be located where proposed due to the operating requirements of a public utility or service:

In winter 2017, the Town of Woodside's Center Trail for equestrians was closed due to creek bank erosion just south of 3411 Woodside Road (see Attached Location Map). The Center Trail is an important link in the Town's equestrian trail network. There is no practical alternate route around the closure. Anecdotally, from discussions with equestrians and observations of the trail, use of the trail has declined significantly since the closure.

The project was reviewed and approved by Town Council on 5/28/19.

See attached Council Report, Project Photographs/Description, and Vicinity Map.

(2) Explain why the proposed use at the particular location will be consistent with the intent, purpose, and objectives of this chapter and the General Plan:

The project will install a prefabricated equestrian bridge over the creek connecting two existing Town equestrian easements. The bridge will enable the equestrian trail to be reopened.

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JUN 25 2019
WOODSIDE TOWN HALL

(3) Explain why the proposed use in such location will not be detrimental to the health, safety, or general welfare of persons residing or working in the vicinity of such use or be injurious to property or improvements in the vicinity:

The bridge is on private property within the Town's equestrian easements in a remote location at the back of 60 Why Worry Lane and 3411 Woodside Road. The Town Engineer has met with both property owners and they are supportive of the bridge.

(4) Provide specific information to show that the site for the proposed use is adequate in size, shape and topography to accommodate the proposed use:

See attached photographs. The bridge will be set on top of top of bank and set back from the creek banks. Therefore, no work or structures of any kind during or after construction will occur or exist as part of this project.

The bridge location is staked in the field. The approximate location of the bridge and foundations is shown in the Attached.

On both sides of the bridge, the existing equestrian trail will need to be realigned.

(5) Provide specific information to show that the site for the proposed use can be served by roads of adequate width and design to accommodate the quantity and type of traffic generated by such use:

No traffic will be generated by the bridge. The site is not near any roads.

(6) Provide specific information to show that adequate utilities and other services required for such use exists or can be provided:

No utilities are present or required for the bridge.

I, _____, hereby certify that I have read and understand the provisions of Section 153.920 of the Woodside Municipal Code, pertaining to Conditional Uses as it relates to the property herein under consideration and that the foregoing is true and correct to the best of my knowledge.

Owner's Signature: _____ **Date:** _____

(B) If the facts do not establish that the proposed use meets the findings and qualifications set forth in this section, the Planning Commission shall deny the application for a conditional use.

CONDITIONS REQUIRED (Section 153.928):

(A) When authorizing any use permit, the Planning Commission shall prescribe such conditions, in addition to those specifically required by this chapter, as are, in the opinion of the Planning Commission, necessary to secure the objectives of this chapter and the General Plan. Special conditions which may be required shall include, but not be limited to, the provision of special yards and open spaces, the provision of landscaping and fencing, the surfacing of parking areas, the dedication of easements, and the regulation of signs, noise, odors, hours of operation, and other appropriate elements.

(B) The Planning Commission may also require the applicant or the property owner to provide such guarantees as the Planning Commission deems necessary to ensure compliance with the conditions imposed.

(C) The Planning Commission may also impose a time limitation and/or periodic review requirement for any use permit.

LAPSE OF APPROVAL (Section 153.917):

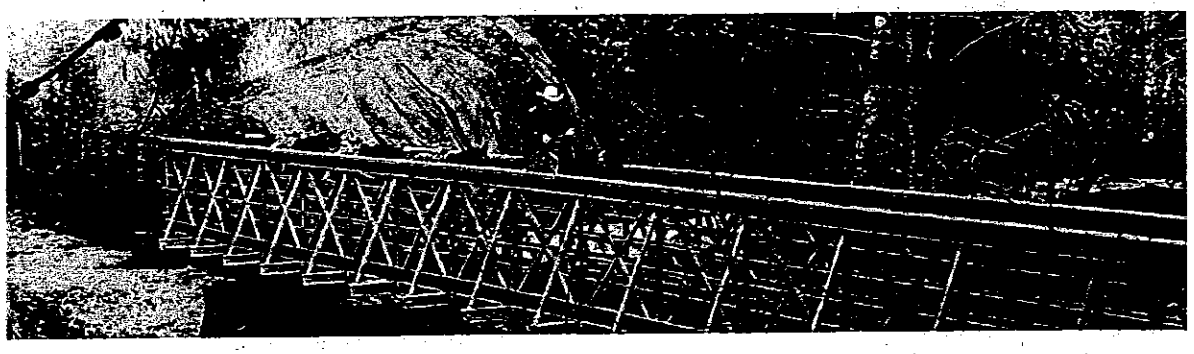
(A) Any approval by the Planning Director, Architectural and Site Review Administrator, or Planning Commission, given pursuant to the provisions of this Chapter 153 shall lapse and shall become null and void two years following the date on which the approval became effective, unless, prior to the expiration of two years, the approval has been acted upon (i.e., a Building Permit has been issued or the use has commenced). Approvals may be extended for an additional period of one year provided that, prior to the expiration of the initial two year approval period, an application for the renewal of the approval is filed with the Planning Director. The Planning Director may grant an extension for a period not exceeding one year where no change in conditions or requirements has occurred, but an application involving a change deemed to be significant by the Planning Director shall be treated as a new application, subject to all the provisions of this chapter.

(B) Exception. A use permit (excluding those issued under § 153.444) shall lapse and become null and void one year following the date on which the use permit became effective, unless, prior to the expiration of one year, the use has commenced; a Building Permit has been issued; a certificate of occupancy has been issued; or the use permit has been renewed for as additional period not to exceed one year by the Planning Commission upon the filing of a written request by the applicant.

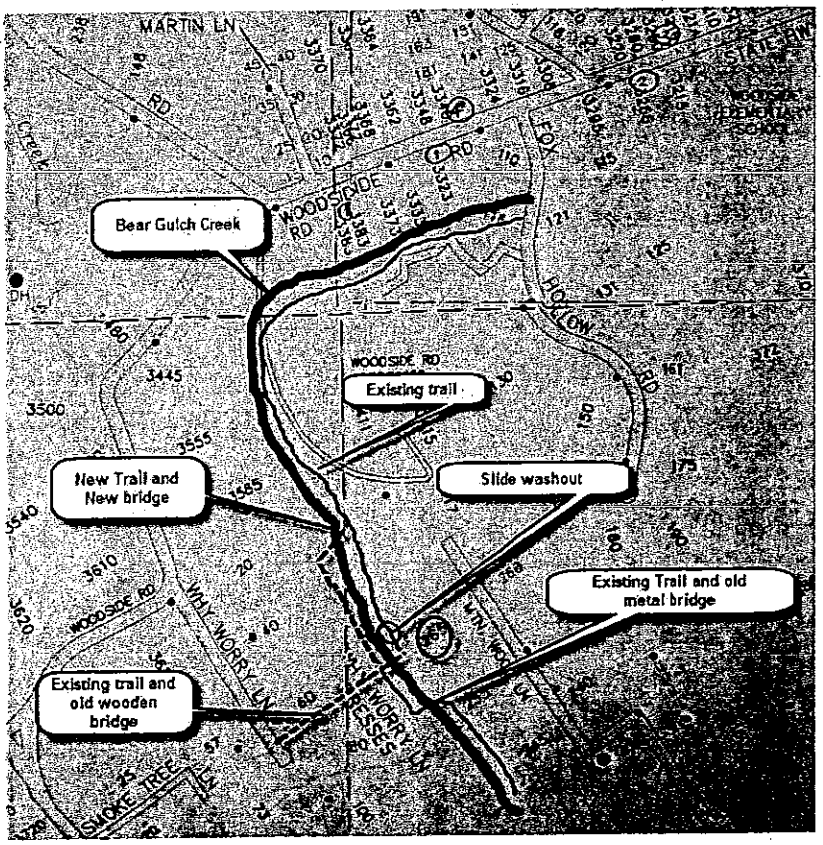
10 A - New Center Trail Bridge
Project Description
Attachment

Several years ago, there was a washout/slide on Bear Gulch Creek that closed the Center Trail. This is one of the most important trails in Woodside, and it is critical to get it reopened. Equestrians have been riding this trail for nearly 100 years. The Woodside Trails Committee reviewed the washout on the Center Trail and has proposed extending the trail and adding a new bridge across the creek. This project was approved by the Woodside Town Council May 28, 2019.

The proposed location goes from Town easement to Town easement. The new bridge would require no work in the creek. All work will be conducted from the trails adjacent to the bridge crossing, above the top of the bank. No water diversion or dewatering for the site will be necessary. There will be no impacts to the flow, bed or channel of the stream. Below is a picture of a similar bridge in Redwood National Park



Property lot and trail map showing existing trail and new bridge and trail extension



Extend the trail and add a new bridge

For nearly 100 years, equestrians have been riding the Center Trail, which runs from north Woodside at Woodside Road to south Woodside at Portola Road. It followed an old logging road that had been cut along the steep Eastern bank of Bear Gulch Creek many, many years ago. About 20 years ago a section of this bank was eroded, which closed a portion of this trail. In response to this washout, a bridge ("old metal bridge") was constructed across the Bear Gulch Creek, upstream from the current problem area, to reopen the trail. The current washout, also on the steep Eastern bank, is several hundred feet downstream from the "old metal bridge". Upon completion of this bridge and trail extension, all the section of the old logging road trail along the steep Eastern bank of Bear Gulch Creek will be abandoned and the trail will be on the flat Western side of the creek

There is a 50 foot wide conservation and equestrian easement on the West side of the Bear Gulch Creek for all properties in the Why Worry subdivision. This plan is to extend the trail along this easement, behind the property at 60 Why Worry Lane. It would be necessary to remove 3 trees, that are leaning very badly or dead for the trail. A small section of the fencing on 60 Why Worry Lane will need to be moved back some 5-10 feet. This fencing is in the conservation easement, and can be relocated by the Town.

A new bridge will be installed over the creek, It will go from the equestrian trail easement on 60 Why Worry Lane, and extend to the trail easement on 3411 Woodside Road. The bridge would be 50 feet long and 6 feet wide. The footings would be setback from the creek bank edges 8 feet to eliminate any issues with the creek. The top of the footings would be 1-foot by 6-feet made of concrete. The trail will be graded to smooth the transition between the new bridge and the trail.

The creek appears to be fairly straight and not much erosion on the banks at this location. The creek / gully is fairly square and narrow as shown below.

All work will be conducted from the trails adjacent to the bridge crossing, above the top of the bank. No water diversion or dewatering for the site will be necessary. There will be no impacts to the flow, bed or channel of the stream. All construction, digging and footings would be done setback from the creek banks. Workers can use the "old wooden bridge" to access across the creek, and walk along the narrow portion above the slide. This "old wooden bridge" and slide area will be abandoned and when this crossing is replaced by the new bridge.

New Bridge – Design Details

The new bridge will be manufactured from FRP. High strength Fiberglass Reinforced Polymer (FRP) is strong enough to satisfy demanding load-carrying requirements, yet light enough to easily transport into difficult-to-reach locations. The heaviest component of the bridge spans is approximately 90 lbs., to be person-portable by one or two individuals.

Construction plan

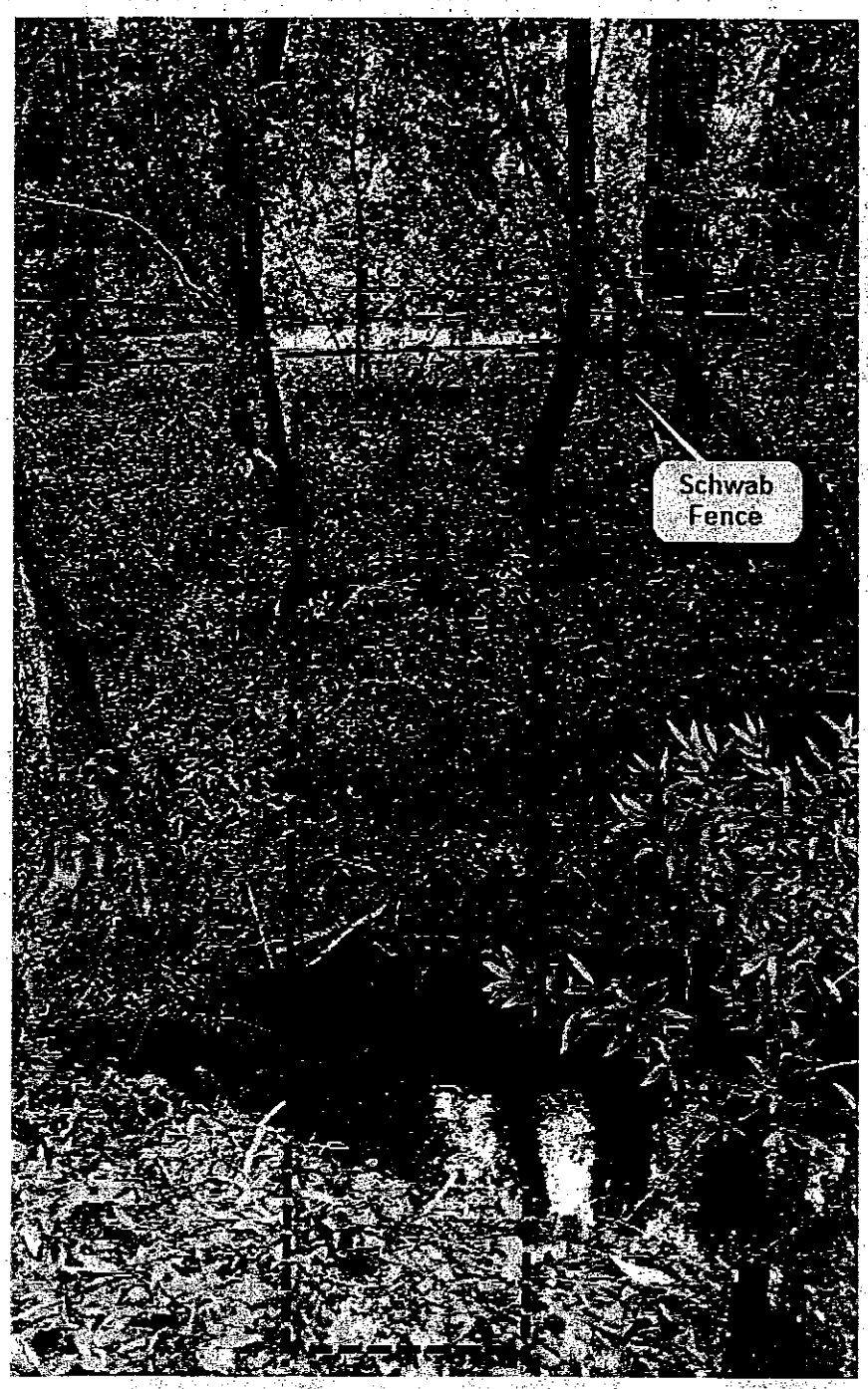
1- Dig and build footings for new bridge
2- Assemble one truss for the new bridge, and install across the creek.
3- Assemble the second truss for the new bridge, and install across the creek.
4- Assemble the remainder of the cross components and members on the trusses.
5- Install decking.
6- Clean up the site. Close the old trail.

View looking West, from easement on 3411 Woodside Road towards 60 Why Worry Lane Easement

The fence railing in the foreground is the fence on 3411 Woodside Road property. In the background is the fence on 60 Why Worry Lane, which will be relocated further back.

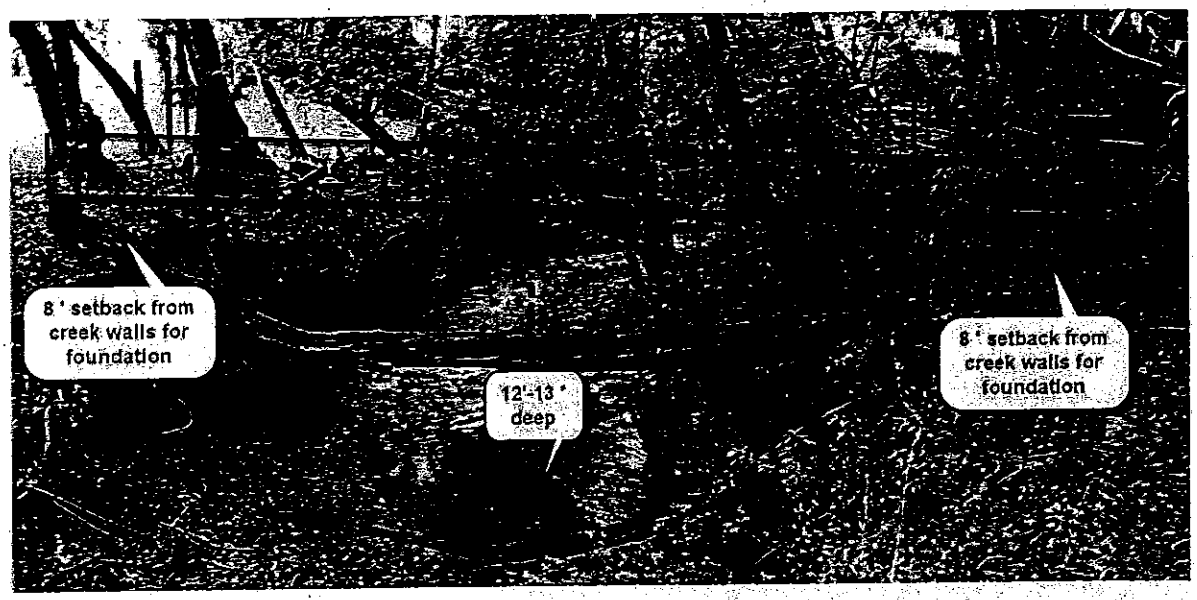
View looking East from 60 Why Worry Lane easement, towards 3411 Woodside Road easement (with fence railing)

At the very bottom of this picture is the property at 60 Why Worry Lane. The split rail fence in the top is on the 3411 Woodside Road easement. There is a very wide flat area further behind this fence on 3411 Woodside road property that could be used for bridge assembly.



New Bridge Design Details

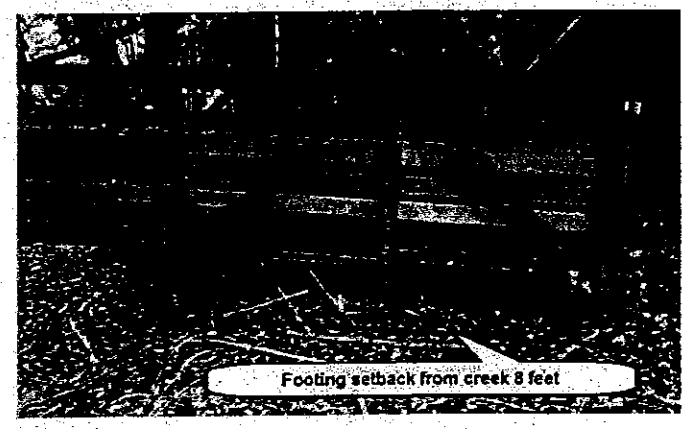
The new bridge would be 50 feet long, 6 feet wide and made from Fiberglass Reinforced Polymer (FRP). The footings/abutments would be setback from the creek walls 8 feet, to allow for erosion. There would be no need to do any work in the creek.



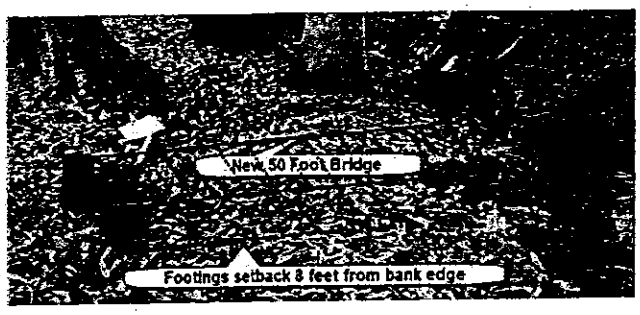
Detail pictures of the footing/abutment setbacks

Footing on old metal bridge. 8 foot setback

The old metal bridge mentioned above, was installed over 20 years ago. The footings are setback 8 feet from the banks and have been working well for these years. A similar setback is recommended for the new bridge



New West side footing - 8 foot setback



New East side footings 8 foot setback

Bridge Details

A new 50 foot FRP bridge that could be assembled on site is being proposed. High strength Fiberglass Reinforced Polymer (FRP) is strong enough to satisfy demanding load-carrying requirements, yet light enough to easily transport into difficult-to-reach locations. The heaviest component of our bridge spans is approximately 90 lbs., to be person-portable by one or two individuals. Details of a proposed FRP bridge from ettechtronics are below.

Steel bridges will ultimately require some type of maintenance due to corrosion. The FRP bridges do not require any maintenance and are totally corrosion resistant. If the bridge site is remote, a steel bridge will need to be installed with a crane and this would be difficult. Typically, the installation costs for our bridges are much less than a steel bridge, so there will be cost savings to apply to our bridge.

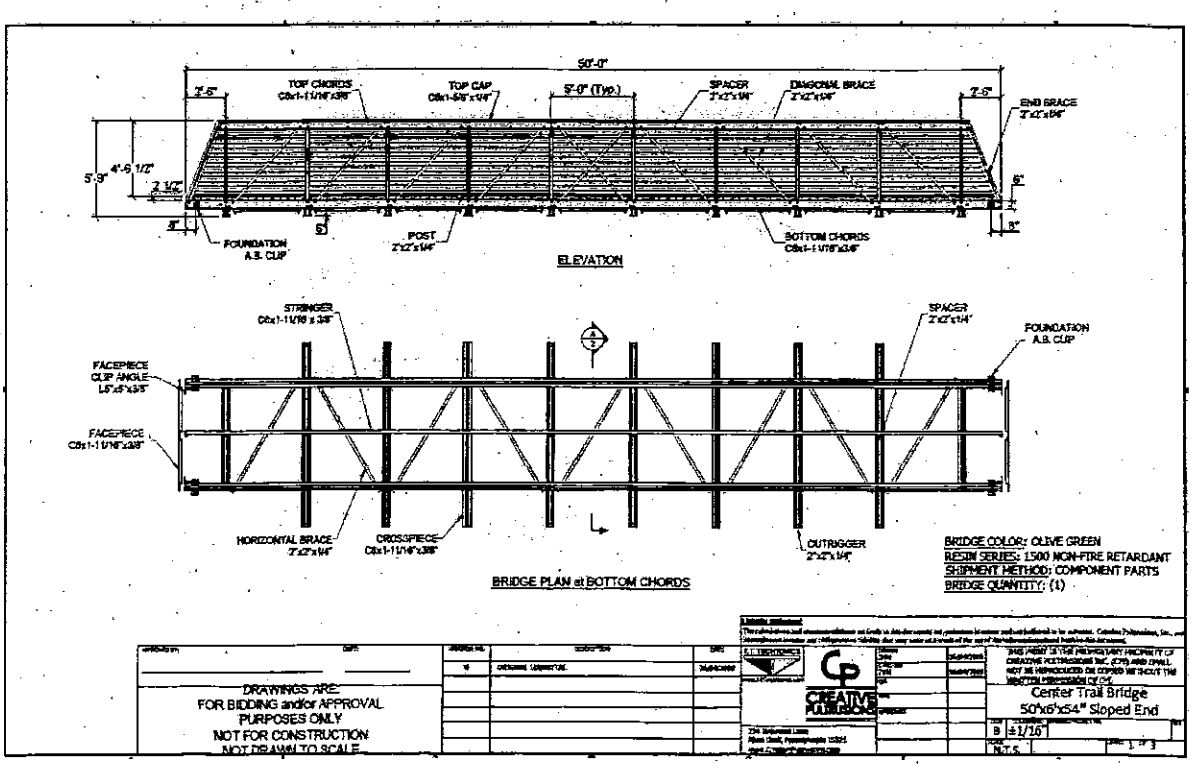
More information on the website

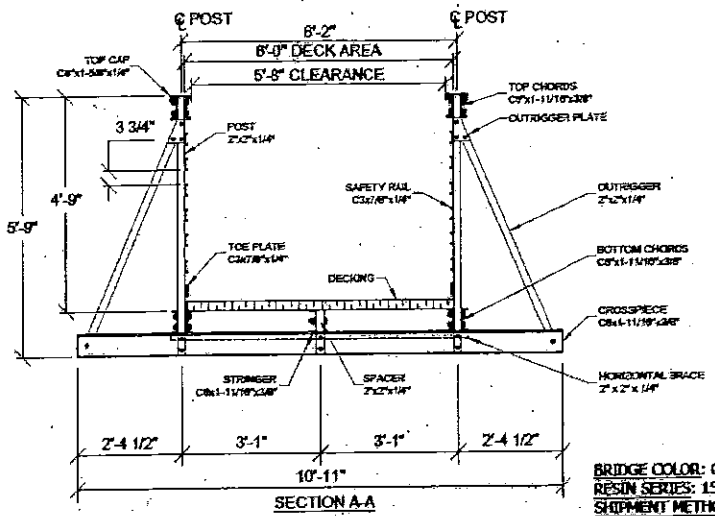
https://www.ettechtonics.com/project-gallery/redwoods-national-park/

https://www.ettechtonics.com

CREATIVE PULTRUSIONS, INC.
214 Industrial Lane
Alum Bank, PA 15521
814.839.4186 Ext. 265 Fax: 814.839.4276 Toll free: 888.CPI.PULL
Mobile: 814.289.1476
www.creativepultrusions.com

Bridge Design Details





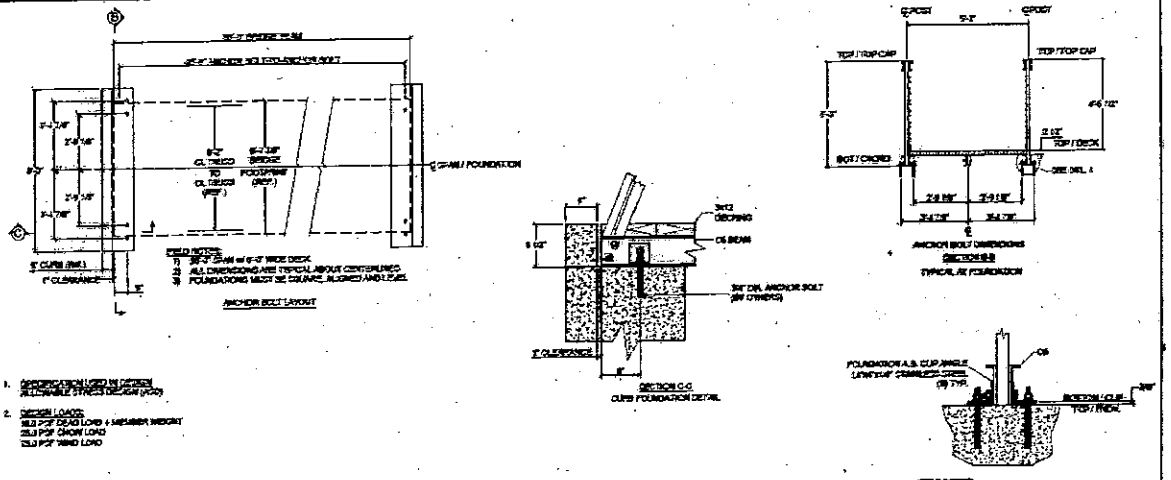
SECTION A-A
TYPICAL TRUSS

BRIDGE COLOR: OLIVE GREEN
RESIN SERIES: 1500 NON-FIRE RETARDANT
SHIPMENT METHOD: COMPONENT PARTS
BRIDGE QUANTITY: (1)

DRAWINGS ARE:
FOR BIDDING and/or APPROVAL PURPOSES ONLY
NOT FOR CONSTRUCTION
NOT DRAWN TO SCALE

CREATIVE PULTRUSIONS

Center Trail Bridge
50"x6'x5'-4" Sloped End



NOTE:
THE FOUNDATION PLAN SHOWN IS A TYPICAL LAYOUT WITH THE SOLE PURPOSE OF SHOWING THE ANCHOR BOLT LOCATIONS.
CREATIVE PULTRUSIONS, INC IS NOT RESPONSIBLE FOR THE FOUNDATION NOR ANCHOR BOLT DESIGN.

DRAWINGS ARE:
FOR BIDDING and/or APPROVAL PURPOSES ONLY
NOT FOR CONSTRUCTION
NOT DRAWN TO SCALE

CREATIVE PULTRUSIONS

Center Trail Bridge
50"x6'x5'-4"

TOWN OF WOODSIDE

Report to Town Council — Agenda Item 1
From: Sean Rose, Town Engineer — May 28, 2019
Approved By: Kevin Bryant, Town Manager

SUBJECT: RESOLUTION ADDING THE CENTER TRAIL EQUESTRIAN BRIDGE PROJECT TO THE TOWN'S CAPITAL IMPROVEMENT PROGRAM

RECOMMENDATION

It is recommended that the Town Council approve the addition of the Center Trail Equestrian Bridge Project to the Town's Capital Improvement Program.

BACKGROUND

In winter 2017, the Town of Woodside's Center Trail for equestrians was closed due to creek bank erosion just south of 3411 Woodside Road (Attachment 1 - Location Map).

The Center Trail is an important and, as the name implies, central link in the Town's equestrian trail network. There is no practical alternate route around the closure. Anecdotally, from discussions with equestrians and observations of the trail, use of the trail has declined significantly since the closure.

DISCUSSION

Since the closure, the Trails Club and the Town Trails Committee have been working with staff to find a way to reopen the trail. Initially the Trails Club explored the possibility of repairing the washout in place; however, that alternative proved to be infeasible.

In March 2019, an alternative was identified that would connect the Town's existing equestrian easement on 60 Why Worry Lane and its equestrian use agreement on 3411 Woodside Road, by installing a prefabricated equestrian bridge across Bear Gulch Creek. The bridge would be similar to another prefabricated equestrian bridge that was installed over Bear Gulch Creek by the Trails Club about fifteen years ago just upstream of the subject location. The bridge would be approximately 6' wide by 50' long. The project would also include new trail segments on each side of the bridge to connect the bridge to the existing trail, and realignment of a portion of the property owners' private fences.

The bridge would be for equestrian use only, in accordance with the language of the existing easement and agreement on both sides of the bridge.

Based on quotes from prefabricated bridge vendors, staff preliminarily estimates the total project cost could range from $145,000 to $200,000. Based on that estimate, the equestrian community has initiated a fundraising campaign in the event the project moves forward. The fundraising target was $115,000 to support the project.

To date, the following organizations have submitted written funding pledges for the project:

- Mounted Patrol Foundation
- Community Horse Advocacy Program for San Mateo County (CHAPS)
- Woodside Community Foundation
- Woodside Horse Owners Association (WHOA)
- Woodside Trails Club

In addition to these, several private residents have made pledges in support of the project. Altogether, the Town has received pledges which match the $115,000 fundraising goal.

The Trails Committee discussed the project at their March, April, and May meetings, and passed a motion requesting that staff present the project to the Town Council for consideration.

The Town occasionally receives unsolicited donations in support of the Town's equestrian trail network. These donations are receipted into the Trails Fiduciary Fund, use of which is guided by the Trails Committee. The Trails Committee supports using these funds for this project.

Each year, the General Fund receives approximately $25,000 from Trail Maintenance Fee revenue paid by holders of Stable Permits. Therefore, staff believes that a $35,000 contribution from the General Fund for this project can be supported.

Based on the above and discussions with the Trails Committee and the pledges received to date, staff is proposing the following funding plan for the project:

Donations from equestrians	$115,000
Trails Fiduciary Fund	$50,000
General Fund	$35,000
Total	$200,000

Staff has met with the owners or representatives of the two properties and they have not objected to the installation of the bridge. If the project is approved, staff would continue to work with the property owners to address any concerns and ensure there is support for the project before moving forward.

It is anticipated the design would commence in June or July 2019 and construction would be completed in fall 2019 or summer 2020, depending primarily on environmental permitting requirements.

CONCLUSION

Addition of the Center Trail Equestrian Bridge Project to the Town's Capital Improvement Program will reestablish an important connection for the Center Trail.

ATTACHMENTS

1. Draft Resolution
2. Capital Improvement Program Page
3. Location Map

RESOLUTION NO. 2019-

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF WOODSIDE ADDING THE CENTER TRAIL EQUESTRIAN BRIDGE PROJECT TO THE TOWN'S CAPITAL IMPROVEMENT PROGRAM

WHEREAS, in winter 2017, the Town of Woodside's Center Trail for equestrians was closed due to creek bank erosion just south of 3411 Woodside Road; and

WHEREAS, the Center Trail is an important and, as the name implies, central link in the Town's equestrian trail network; and

WHEREAS, since the closure, the Trails Club and the Town Trails Committee have been working with staff to find a way to reopen the trail; and

WHEREAS, in March 2019, an alternative was identified that would connect the Town's existing equestrian easement on 60 Why Worry Lane and agreement for equestrian use on 3411 Woodside Road, by installing a prefabricated equestrian bridge across Bear Gulch Creek; and

WHEREAS, the project would also include new trail segments on each side of the bridge to connect the bridge to the existing trail; and realignment of a portion of the property owners' private fences; and

WHEREAS, staff preliminarily estimates the total project cost could range from $145,000 to $200,000; and

WHEREAS, to date the Town has received written funding pledges from a number of equestrian organizations and individuals and the project would be partially funded with $115,000 in equestrian donations; and

WHEREAS, the Town also has funds available in a Trails Donation Fiduciary Fund and the General Fund, supported by Trail Maintenance Fee receipts; and

WHEREAS, it is anticipated the project would commence in June or July 2019 and construction would be completed in fall 2019 or summer 2020.

NOW, THEREFORE, IT IS HEREBY RESOLVED, by the Town Council of the Town of Woodside that:

The Town Council hereby approves the addition of the Center Trail Equestrian Bridge Project to the Town's Capital Improvement Program.

* * * * * * *

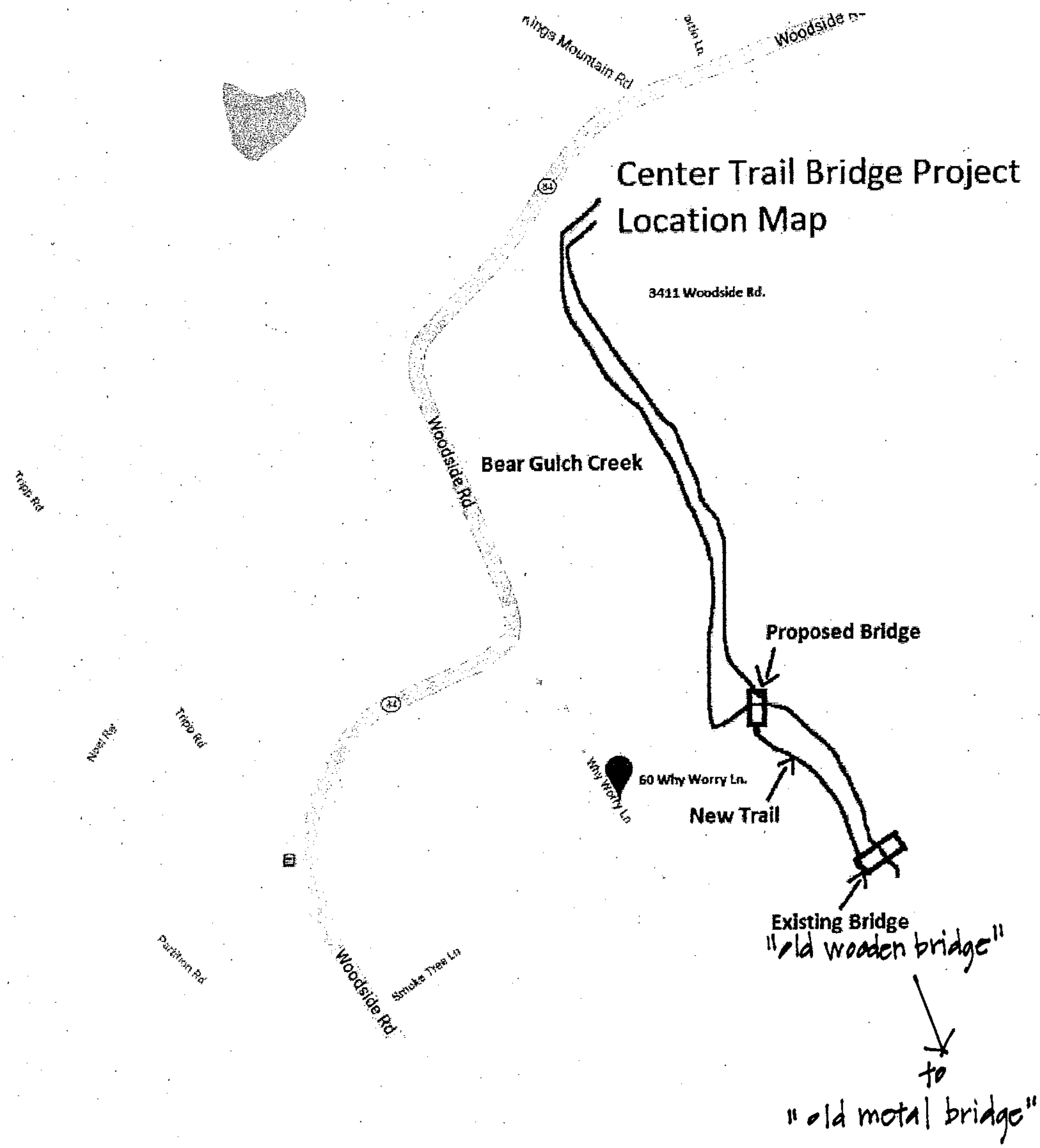
Passed and adopted by the Town Council of the Town of Woodside, California, at a meeting thereof held on the 28th of May, 2019, by the following vote of members thereof:

AYES, and in favor thereof, Councilmembers:
NOES, Councilmembers:
ABSENT, Councilmembers:
ABSTAIN, Councilmembers:

_____
Mayor of the Town of Woodside

ATTEST:

_____
Clerk of the Town of Woodside


Center Trail Bridge Project
Location Map
Kings Mountain Rd
Woodside Rd
3411 Woodside Rd.
Bear Gulch Creek
Woodside Rd
Tripp Rd
Proposed Bridge
84
Tripp Rd
Why Worry Ln
60 Why Worry Ln.
New Trail
Existing Bridge
"old wooden bridge"
to
"old metal bridge"
Partition Rd
Woodside Rd
Smoke Tree Ln

Prefabricated Bridge Specifications
Allowable Stress Design (ASD)

Town of Woodside Equestrian Bridge

1.0 GENERAL

1.1 Scope
These specifications are for a fully engineered clear span bridge of Fiber Reinforced Polymer (FRP) composite construction and shall be regarded as the minimum standards for design and construction. The FRP structure shall be manufactured by Creative Pultrusions, Inc. (CPI), 214 Industrial Lane, Alum Bank, PA, phone 814-839-4186 (Toll-free 888-274-7855), or approved equal.

1.2 Qualified Suppliers
The FRP bridge manufacturer shall be an ISO9001:2015 accredited company for the design and manufacture of FRP structural components and systems. The company shall have been in the business of design and fabrication of bridges for a minimum of ten years. Company shall provide a list of five successful bridge projects, of similar construction, each of which has been in service at least three years. List the location, bridge size, owner and contact reference for each bridge.

2.0 GENERAL FEATURES AND DESIGN

2.1 Span
Bridge span will be 50'-0" (straight line dimension) and shall be measured from each end of the bridge structure.

2.2 Width
Bridge width shall be 6'-0" wide and shall be measured from the inside face of structural elements at deck level.

2.3 Bridge System Type
Bridge must be designed as a FRP Composite Truss Span with SLOPED-ENDS (for equestrian traffic)

2.4 Member Components
All members shall be fabricated from pultruded FRP composite profiles and structural shapes as required.

2.5 Camber
Bridges to be precambered to eliminate initial dead load deflection.

3.0 ENGINEERING

Structural design of the bridge structure(s) shall be performed by or under the direct supervision of a Licensed Professional Engineer and done in accordance with recognized engineering practices and principles.

3.1 Uniform Live Load
All bridge spans to be designed for 85 psf.

3.2 Vehicle Load (as required)
A specified vehicle configuration determined by the Operating Agency may be used for the design vehicle. If an Agency design vehicle is not specified, the loads conforming to a light weight vehicle of 10,000 lbs is used. A 4'x4' wheel base is assumed. Wheel loads are distributed as 4 equal concentrated point loads unless otherwise specified. The maintenance vehicle live load shall not be placed in combination with the pedestrian live load. A vehicle impact allowance is not required.

3.3 Wind Load
All bridges shall be designed for a minimum wind load of 25 psf. The wind is calculated on the entire vertical surface of the bridge as if fully enclosed.

3.4 Seismic Load
Seismic loads shall be determined according to the criteria specified in the standard building codes (IBC, ASCE, or UBC) unless otherwise requested. ***Response Spectrum Analysis*** shall be performed in designs that require seismic investigation. All necessary response spectra information will be provided by the client for evaluation.

3.5 Design Approach
An Allowable Stress Design (ASD) approach is used for the of all structural members. Factors-of-Safety are as follows unless otherwise specified: (Based on the Ultimate Strength of the FRP material)

Tension	2.5
Compression	2.5
Shear	2.5
Bending	2.5
End Bearing	2.5
Connections	3.0

Above information based on 5-year test program funded by the National Science Foundation.

3.6 Serviceability Criteria
Service loads are used for the design of all structural members when addressing deflection and vibration issues. Criteria used by CPI in the design of FRP bridges are as follows:

Deflection:
Live Load (LL) deflection = L/240

Vertical Frequency (fn): = 5.0 Hz

The fundamental frequency of the pedestrian bridge (in the vertical direction) without live load should be greater than 5.0 hertz (Hz) to avoid any issues with the first and second harmonics.

Horizontal Frequency (fn): = 3.0 Hz

The fundamental frequency of the bridge, in the horizontal direction without live load, should be greater than 3.0 hertz (Hz) to avoid any issues due to side to side motion involving the 1st and 2nd harmonics.

3.7 Snow Load
Sustained snow load conditions shall be evaluated for time dependent effects (creep and relaxation) and expected recovery behavior.

4.0 MATERIALS

4.1 FRP Composites
FRP bridges shall be fabricated from high-strength E-glass and isophthalic polyester resin unless otherwise specified. Weathering and ultraviolet light protection shall be provided by addition of a 10 mil polyester veil to the laminate construction. Minimum characteristic design strengths, per ASTM D7290 are as follows:

	CH662	CH860	TQ240	
Tension (LW) (psi)	67,236	59,150	63,968	ASTM D638
Compression (LW) (psi)	71,285	70,888	43,363	ASTM D6641
Shear (In-plane) (psi)	9,954	9,773	9,977	ASTM D5379
Shear (interlaminar) (psi)	4,442	3,969	4,189	ASTM D2344
Young's Modulus (LW) (psi)	4.35E+06	4.41E+06	3.87E+06	ASTM D6641 & D638 (Taken as the mean of the lessor of the two)

The minimum thickness of FRP Composite shapes shall be as follows unless otherwise specified: Square tube members (closed type shape) shall be 0.25 in. Wide-flange beams, channel sections, and angles (open type shapes) shall be a minimum thickness of 0.25 in. Standard plate shall be a minimum thickness of 0.25 in.

4.2 FRP Connections

All FRP bridge connections shall be classified as concentric bolt bearing & contain at least (2) bolts for load transfer. All connections shall be experimentally determined via full section joint component testing.

- Tubes/solids shall be investigated @ 0-deg. with 3/4" A307 bolts
- Channels shall be investigated @ 0,45,90-deg. with 3/4" A307 bolts
- Channels shall be investigated @ 45,90 -deg. with 3/8" plate & 3/4" A325 bolts
- All tube/solid capacities shall utilize a tube with bonded solid plug in the bearing area
- All channel capacities shall utilize (2) channels
- Tests with plates shall use a section of channel as the doubler plate in the bearing area
- All capacities shall be measured utilizing (2) bolts except CH860 0 -deg. (3 bolts)

The FRP bridge manufacturer shall provide test data showing the joint configurations achieve all stipulated characteristic values when analyzed in accordance with ASTM D7290. The minimum allowable characteristic values are as follows:

Component / Orientation	Characteristic Value
TQ240/SQ024 @ 0 -deg. (Compression)	73,433 lbs.
TQ240/SQ024 @ 0 -deg. (Tension)	29,186 lbs.
CH662 @ 0 - deg. (Tension)	33,886 lbs.
CH662 @ 90 - deg. (Tension)	33,253 lbs.
CH662 @ 90 - deg. w/ 3/8" Plate (Tension)	51,094 lbs.
CH662 @ 45 - deg. (Tension & Compression)	36,018 lbs.
CH662 @ 45 - deg. w/ 3/8" Plate (Tension & Compression)	65,810 lbs.
CH860 @ 0 - deg. (Tension)	50,151 lbs.
CH860 @ 90 - deg. (Tension)	30,439 lbs.
CH860 @ 90 - deg. w/ 3/8" Plate (Tension)	53,981 lbs.
CH860 @ 45 - deg. (Tension)	39,247 lbs.
CH860 @ 45 - deg. w/ 3/8" Plate (Tension)	72,439 lbs.
CH860 @ 45 - deg. (Compression)	48,886 lbs.
CH860 @ 45 - deg. w/ 3/8" Plate (Compression)	62,308 lbs.

TQ240 = 2"x2"x1/4" Tube SQ024 = 1.5"x1.5" Solid

CH662 = 6"x1-11/16"x3/8" Channel CH860 = 8"x2-3/16"x3/8" Channel

4.3 Decking

Wood decking is No. 2 Southern Yellow Pine treated according to the American Wood Preservers Bureau. Standard 3 in. x 12 in. (nominal) planks can be provided for equestrian and light vehicle type loading conditions as required.

4.4 Hardware

Bolted connections shall be A307 hot-dipped galvanized steel unless otherwise specified. Mounting devices shall be galvanized or stainless steel.

5.0 MATERIAL CERTIFICATIONS

5.1 Certifications

Manufacturer shall submit the Material Certifications that certify the material properties of each structural component used on the bridge construction. Without exception, each part's material property shall not be less than the minimum properties as specified in the Material Section 4.0.

6.0 SUBMITTALS

6.1 Submittal Drawings

Schematic drawings and diagrams shall be submitted to the client for their review after receipt of order. As required, all drawings shall be signed and sealed by a licensed Professional Engineer.

6.2 Submittal Calculations

As required, structural calculations shall be submitted to the client. All calculations will be signed and sealed by a licensed Professional Engineer.

7.0 FABRICATION

7.1 Tolerances

All cutting and drilling fabrication to be done by experienced fiberglass workers using carbide or diamond-tipped tooling to a tolerance of 1/16" per the Code of Standard Practice, Industry Guidelines for Fabrication and Installation of Pultruded FRP Structures, 2012. No material deviations beyond industry standards are accepted. All cut edges to be cleaned and sealed.

7.2 Profile Tolerances

Pultruded profiles shall be manufactured to the dimensional requirements as set forth in ASTM D3917 and the visual requirements as set forth in ASTM D4385.

8.0 HAND-RAILINGS

8.1 Railings

Railings should be a minimum of 54" above the floor deck for equestrian and light vehicle use.

8.2 Safety Rails

Continuous horizontal safety rails of 3" channel shall be located on the inside of the trusses. Maximum opening between the safety rails shall be available as required; but should not be greater than 4".

8.3 Toeplates (optional)

Continuous horizontal toe plates of 3" channel shall be located on the inside of the trusses near deck level.

9.0 FINISHING

Bridge color shall be determined by the client. No painting is required as the color is added during the manufacturing process. Olive Green is recommended for park and trail bridge applications.

10.0 DELIVERY AND ASSEMBLY

Delivery is made by truck to a location nearest the site accessible by roads. The bridge manufacturer will notify the client in advance of the expected time of arrival at the site. Bridges are usually shipped to the site in component parts or partially assembled depending on site requirements. The spans can then be completely assembled using standard hand tools. Upon request, bridges can also be shipped totally assembled to the site. Unloading, splicing (if required) and placement of the bridge will be the responsibility of the client.

10.1 Assembly Direction

For bridges shipped in component parts or partially assembled, the bridge manufacturer shall provide assembly drawings and a recommended assembly procedure for building the bridge. Temporary supports or rigging equipment, if needed, is the responsibility of the client. For bridges shipped assembled, the bridge manufacturer shall advise the client of the actual lifting weights, attachment points and all necessary information to install the bridge.

10.2 Site Issues and Foundation Design

The client shall procure all necessary information about the site and soil conditions. Soil tests shall be procured by the client. The engineering design and construction of the bridge abutments, piers and/or footing shall be by the client. The bridge manufacturer will provide the necessary information pertaining to the bridge support reactions. The client shall install the anchor bolts in accordance with the bridge manufacturer's anchor bolt spacing dimensions.

11.0 WARRANTY

The bridge manufacturer shall warrant the structural integrity of all FRP materials, design and workmanship for 15 years. This warranty shall not cover defects in the bridge caused by foundation failures, abuse, misuse, overloading, accident, faulty construction or alteration, or other cause not the result of defective materials or workmanship. This warranty shall be limited to the repair or replacement of structural defects and shall not include liability for consequential or incidental damages.

BIOLOGICAL RESOURCES ASSESSMENT

CENTER TRAIL BRIDGE PROJECT
WOODSIDE, SAN MATEO COUNTY, CALIFORNIA

JULY 2019

Prepared for:

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COAST RANGE BIOLOGICAL LLC

EXECUTIVE SUMMARY

At the request of the Town of Woodside, Coast Range Biological LLC and Biosearch Environmental Consulting conducted a Biological Resources Assessment for the Center Trail Bridge Project, located east of Why Worry Lane and south of Woodside Road, along Bear Gulch Creek, in Woodside, San Mateo County, California.

Due to a slide along Bear Gulch Creek, Center Trail has been closed to equestrian use since 2017. The purpose of the Center Trail Bridge Project is to: (1) install a new 50-foot long fiberglass bridge across Bear Gulch Creek, with the bridge footings set back eight feet from the creek top-of-bank and no work proposed below top-of-bank; and (2) re-route ~225-feet of Center Trail on both sides of the creek (~55-feet north of the creek and ~170-feet south of the creek) so the trail aligns with the new bridge. The trail will be approximately four feet wide, occur in existing level, relatively disturbed areas, and will involve minor grubbing and placement of base rock. Three California bay trees (four to six-inch diameter) will be removed along the proposed trail above the creek top-of-bank, and several California bay saplings and branches may need to be trimmed below the creek top-of-bank along the bridge alignment. Project construction is estimated to take two weeks and will occur within the Town's 50-foot wide conservation and equestrian easement along Bear Gulch Creek.

The area evaluated for this report includes: (1) a ~0.03-acre "project site" (encompassing the approximate location of project ground disturbance described above), where biological resource impact determinations are made; and (2) a ~1.25-acre "study area," which includes the project site and adjacent areas extending outward 50-feet from the proposed trail re-route and 100-feet from the proposed bridge, where habitats are mapped and evaluated for the potential presence of special-status biological resources, including special-status plant and wildlife species and sensitive habitats (e.g., riparian vegetation, streams, wetlands, and sensitive vegetation communities). Potential significant impacts that may occur to these resources as a result of the proposed project are identified and mitigation measures suggested to reduce impacts to less-than-significant levels.

No special-status plants were observed on the study area during the June 27, 2019 reconnaissance field visit, but the visit occurred outside the typical blooming period of some plant species. All 33 special-status plant species identified for the region during the background literature search are unlikely to inhabit the project site or surrounding study area due to a lack of suitable habitat and other factors discussed in this report, and therefore no impacts to special-status plants are anticipated from the project.

One special-status wildlife species, oak titmouse (*Baeolophus inornatus*), was observed on the study area during the July 9, 2019 field visit. In addition, steelhead (*Oncorhynchus mykiss irideus*) are known from Bear Gulch Creek, which is federally-designated Critical Habitat, and the species is therefore considered to be present. Eight additional special-status wildlife species have a moderate potential to occur on the study area: California red-legged frog (*Rana draytonii*), Santa Cruz black salamander (*Aneides niger*), California giant salamander (*Dicamptodon ensatus*), western pond turtle (*Emys marmorata*), Allen's hummingbird (*Selasphorus sasin*), Nuttall's woodpecker (*Picoides nuttallii*), pallid bat

(*Antrozous pallidus*), and San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*). In addition, trees, shrubs, and herbaceous vegetation on the study area could provide nesting habitat for non-listed bird species protected under the Migratory Bird Treaty Act and state Fish and Game Code. Despite a low probability to inhabit the study area, the San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) is also discussed due to its Endangered and Fully Protected status and documented occurrences in Woodside. Mitigation measures are included in this report to reduce potential project impacts to special-status wildlife species to less-than-significant levels.

Bear Gulch Creek flows through the study area and falls under the jurisdiction of the California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and Regional Water Quality Control Board. Based on current project plans, the project will take place outside the jurisdiction of the U.S. Army Corps of Engineers and Regional Water Quality Control Board, but could take place within the jurisdiction of the California Department of Fish and Wildlife, and therefore the California Department of Fish and Wildlife should be Notified to determine if a Streambed Alteration Agreement is required for the project. In addition, Bear Gulch Creek falls within the Town of Woodside's jurisdiction as a "stream corridor." Approval from the Town of Woodside for work within the stream corridor will also be required for the project.

The project will not result in any significant adverse impacts to wildlife corridors, but modification of the existing mesh fence west of the project site would improve access for several species of wildlife that may use the Riparian Woodland.

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APPENDICES

1.0 INTRODUCTION

At the request of the Town of Woodside, Coast Range Biological LLC and Biosearch Environmental Consulting conducted a Biological Resources Assessment (BRA) for the Center Trail Bridge Project, located east of Why Worry Lane and south of Woodside Road, along Bear Gulch Creek, in Woodside, San Mateo County, California (Figure 1).

Due to a slide along Bear Gulch Creek, Center Trail has been closed to equestrian use since 2017. The purpose of the Center Trail Bridge Project is to: (1) install a new 50-foot long fiberglass bridge across Bear Gulch Creek, with the bridge footings set back eight feet from the creek top-of-bank and no work proposed below top-of-bank; and (2) re-route ~225-feet of Center Trail on both sides of the creek (~55-feet north of the creek and ~170-feet south of the creek) so the trail aligns with the new bridge. The trail will be approximately four feet wide, occur in existing level, relatively disturbed areas, and will involve minor grubbing and placement of base rock. Three California bay trees (four to six-inch diameter) will be removed along the proposed trail above the creek top-of-bank, and several California bay saplings and branches may need to be trimmed below the creek top-of-bank along the bridge alignment. Project construction is estimated to take two weeks and will occur within the Town's 50-foot wide conservation and equestrian easement along Bear Gulch Creek (Sean Rose, Town Engineer, pers. comm.).

The area evaluated for this BRA includes: (1) a ~0.03-acre "project site" (encompassing the approximate location of project ground disturbance described above), where biological resource impact determinations are made; and (2) a ~1.25-acre "study area," which includes the project site and adjacent areas extending outward 50-feet from the proposed trail re-route and 100-feet from the proposed bridge (Figure 2), where habitats are mapped and evaluated for the potential presence of special-status biological resources, including special-status[1] plant and wildlife species and sensitive habitats (e.g., riparian vegetation, streams, wetlands, and sensitive vegetation communities). Potential significant impacts that may occur to these resources as a result of the proposed project are identified and mitigation measures suggested to reduce impacts to less-than-significant levels.

2.0 METHODS

2.1 Literature Review

Prior to conducting field studies, a background literature search was conducted to determine which special-status species and other sensitive biological resources have potential to inhabit the study area region based on documented occurrences and range distribution (Appendix A). The primary sources for this search included the California Natural Diversity Data Base (CNDDB) (CDFW 2019) records for the Woodside and eight surrounding USGS 7.5'

[1] Special-status species are defined here to include: (1) all plants and animals that are listed under the Federal or State Endangered Species Acts as rare, threatened or endangered; (2) all federal and state candidates for listing; (3) California Department of Fish and Wildlife Species of Special Concern; (4) plants that qualify under the definition of "rare" in the California Environmental Quality Act (CEQA), section 15380; and (5) all plants included in Lists 1 and 2 (and Lists 3 and 4 when they meet the definition of "rare") in CNPS (2019).

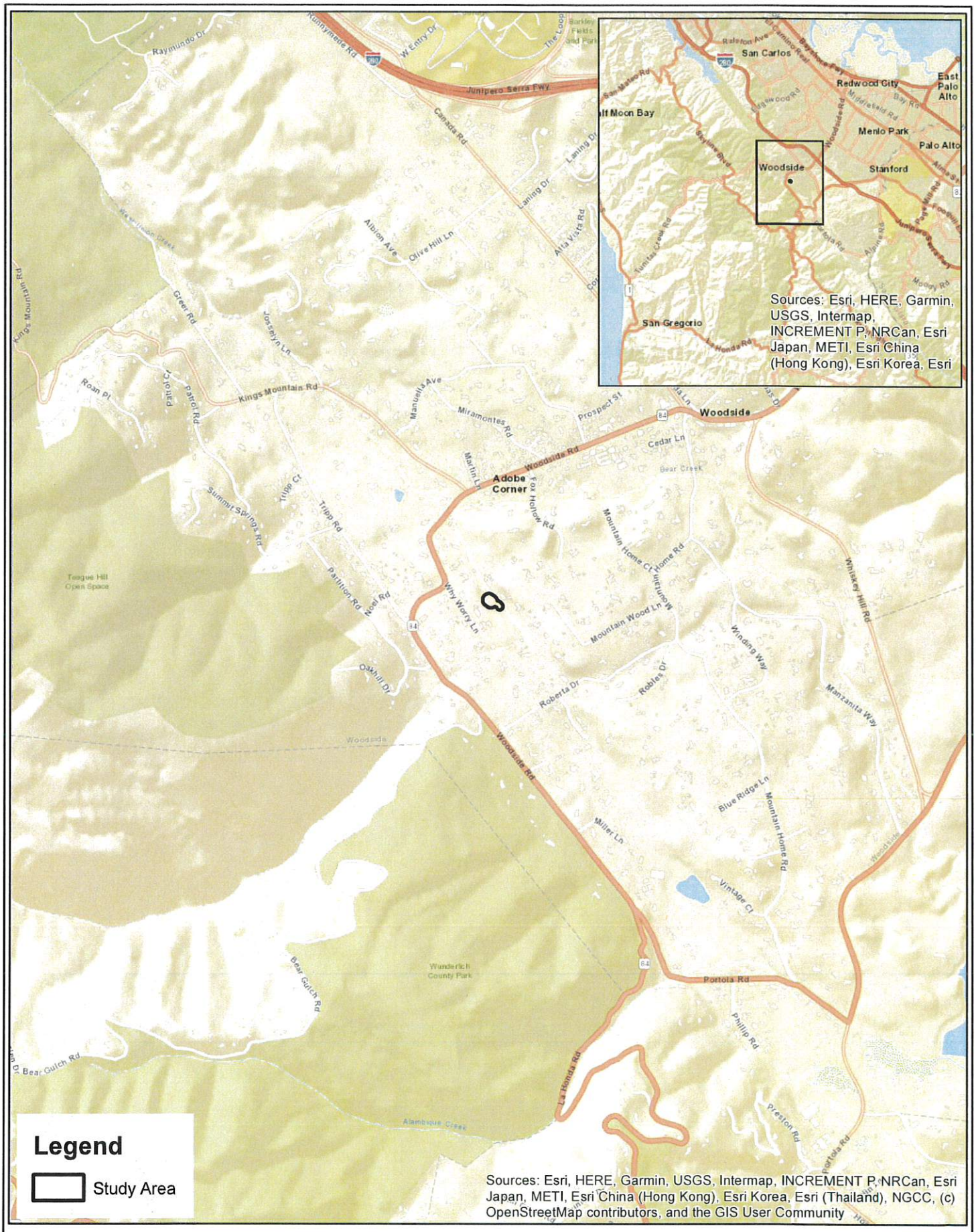

Figure 1. Study area locality map.

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quadrangles, the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2019), and the U.S. Fish and Wildlife Service (USFWS) list of threatened or endangered species (USFWS 2019a)[2]. In addition, other lists and publications were consulted, including the California Department of Fish and Wildlife (CDFW) Special Animals list (CDFW 2018), Zeiner et al. (1988; 1990a; 1990b), eBird (2019), the National Wetlands Inventory (USFWS 2019b), Web Soil Survey (NRCS 2019a), geologic data (California Geological Survey 2010), topographic maps (USGS 1991), and Baldwin et al. (2012).

2.2 Field Studies

Reconnaissance-level field studies were conducted by plant ecologist Tom Mahony on June 27, 2019 and by wildlife biologist Mark Allaback on July 9, 2019. The project site and accessible portions of the study area were traversed on foot to document habitat conditions to determine the potential for occurrence of special-status biotic resources. The potential for occurrence of special-status plant and wildlife species was assessed based on the presence of necessary habitat characteristics, confirmed records from the region, and the biologist's knowledge of the target species. No focused field surveys were conducted. Potential sensitive resources were mapped in the field with a Trimble GPS unit (sub-meter accuracy). Habitats were mapped onto a digital orthophoto (dated August 9, 2018) using ArcGIS mapping software based on variations in texture, color, and structure. The project site was delineated based on areas identified on the ground by Sean Rose, Town Engineer, and is only approximate.

2.2.1 Special-status Species

Potential for occurrence of special-status species was classified as follows: None, Low, Moderate, High, or Present. For species with a potential for occurrence of None or Low, habitat for the species is lacking or is otherwise degraded or unsuitable, and no further recommendations are made since the species is unlikely to inhabit the study area. For species that are present on the study area (based on field observations and/or documentation during the background literature search), or for species with a Moderate or High potential for occurrence (based on the presence of suitable habitat), mitigation measures are recommended to reduce any potential significant impacts to less-than-significant levels (CEQA Guidelines, Appendix G).

2.2.2 Other Sensitive Biotic Resources

Other sensitive biotic resources searched for during the reconnaissance include wetlands, streams, riparian areas, and rare or sensitive vegetation communities known from the region and/or identified in the CNDDB (e.g., those listed with a State rank of S1-S3). Impacts to sensitive vegetation communities could be considered significant under CEQA. Wetlands, streams, and riparian areas could fall under the jurisdiction of state and federal agencies,

[2] The initial raw species list was refined to remove species that are documented in the region but are not expected to occur near the study area due to range limitation or extirpation, or occur in habitats obviously lacking from the study area, such as marine habitats. The remaining species were analyzed for their potential to occur on the study area (Appendix A).

including the CDFW, U.S. Army Corps of Engineers, and Regional Water Quality Control Board, as well as the Town of Woodside. A formal jurisdictional aquatic resource delineation was not conducted, but potential wetlands and other waters of the U.S. and State of California were identified during the reconnaissance.

3.0 PROJECT SITE AND STUDY AREA DESCRIPTION

The project site is located east of Why Worry Lane and south of Woodside Road, along Bear Gulch Creek, in Woodside, San Mateo County (Figures 1 and 2). The project site covers ~0.03-acre and includes the approximate location of project ground disturbance. The study area covers ~1.25-acres and includes the project site and a buffer of 50-feet from the proposed trail re-route and 100-feet from the proposed bridge.

The project site consists primarily of undeveloped areas along the Bear Gulch Creek corridor. Adjacent portions of the study area, outside the project site, consist of low-density residential development and infrastructure, along with undeveloped land. Land uses surrounding the study area consist primarily of low-density residential development and infrastructure, along with undeveloped land along Bear Gulch Creek. Photographs of the project site and study area are included in Appendix B.

3.1 Vegetation

Three vegetation types/habitats are present on the study area: California Bay Forest, Redwood Forest, and Developed/Ruderal (Figure 2). California Bay Forest, which together with Redwood Forest constitute a Riparian Woodland along Bear Gulch Creek, is composed of the *Umbellularia californica* Forest Alliance[3] and covers most of the study area. California Bay Forest is dominated by a canopy of California bay (*Umbellularia californica*[4]), with occasional coast live oak (*Quercus agrifolia*), California buckeye (*Aesculus californica*), white alder (*Alnus rhombifolia*), big-leaf maple (*Acer macrophyllum*), Pacific madrone (*Arbutus menziesii*), red willow (*Salix laevigata*), and walnut (*Juglans* sp.) in the canopy and subcanopy (Appendix B-1). The understory consists of a mixture of native and non-native shrubs and herbaceous species, including poison oak (*Toxicodendron diversilobum*), blue elderberry (*Sambucus nigra*), snowberry (*Symphoricarpos albus*), California blackberry (*Rubus ursinus*), Himalayan blackberry (*Rubus armeniacus*), French broom (*Genista monspessulana*), hedge nettle (*Stachys* sp.), wood fern (*Dryopteris arguta*), sword fern (*Polystichum munitum*), Pacific snakeroot (*Sanicula crassicaulis*), blue wildrye (*Elymus glaucus*), goldback fern (*Pentagramma triangularis*), Italian thistle (*Carduus pycnocephalus*), torilis (*Torilis arvensis*), periwinkle (*Vinca major*), and English ivy (*Hedera helix*). Hydrophytic vegetation (too small to map separately) is present along scattered portions of the creek channel, including small-flower bulrush (*Scirpus microcarpus*), sedge (*Carex* sp.), and horsetail (*Equisetum* sp.). Some areas within California Bay Forest above the creek top-of-bank, particularly on the project site, are disturbed by human activity and the understory is composed of bare ground or ruderal species described below for Developed/Ruderal habitat.

[3] Alliance nomenclature follows Sawyer et al. (2009).
[4] Botanical nomenclature follows Baldwin et al. (2012) and The Jepson Flora Project (2019).

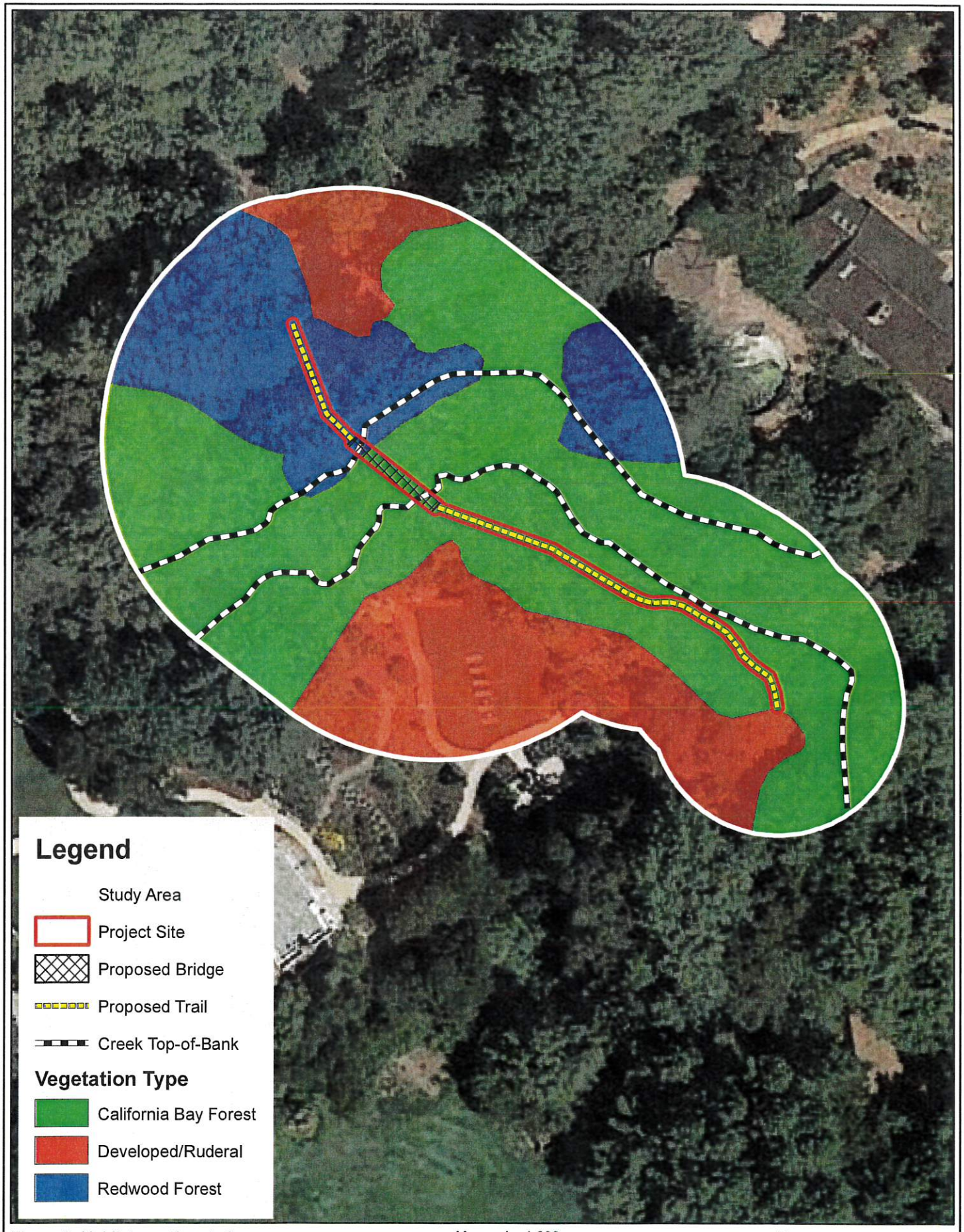

Figure 2. Habitats on the study area.

Orthophoto Date: 8/9/18
Map Date: 6/28/19

Mapscale: 1:600

0 25 50 100 Feet

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Redwood Forest, consisting of the *Sequoia sempervirens* Forest Alliance, occurs in two small stands and is dominated by a canopy of redwood (*Sequoia sempervirens*), with an understory similar to California Bay Forest described above (Appendix B-2). Developed/Ruderal habitat, conforming to no recognized vegetation classification system, consists of developed areas—including residential development, infrastructure, and landscaping—along with ruderal areas dominated by bare ground or non-native species adapted to disturbance, including periwinkle, forget-me-not (*Myosotis latifolia*), ripgut brome (*Bromus diandrus*), sorrel (*Oxalis* sp.), and little robin (*Geranium purpureum*) (Appendix B-3). A list of plant species observed on the study area is included in Appendix C.

3.2 Wildlife

Wildlife expected along the Bear Gulch Creek corridor include a variety of native species common in the Santa Cruz Mountains. Mule deer (*Odocoileus hemionus*) are expected to utilize the Riparian Woodland in areas not inhibited by fencing installed to exclude them from surrounding properties. Gray fox (*Urocyon cinereoargenteus*), striped skunk (*Mephitis mephitis*), and raccoon (*Procyon lotor*) are expected. Sierran tree frog (*Pseudacris sierra*) may pass through the area but will not breed in-stream. Arboreal salamanders (*Aneides lugubris*) are likely to use the study area. Western fence lizard (*Sceloporus occidentalis*) and ring-necked snake (*Diadophis punctatus*) may use areas that receive a mix of sun and shade. Resident birds seen included chestnut-backed chickadee (*Poecile rufescens*), spotted towhee (*Pipilo maculatus*), and red-shouldered hawk (*Buteo lineatus*). A migrant avian species, Pacific-slope flycatcher (*Empidonax difficilis*), was observed feeding young in a nest under the over-hanging bank approximately 20-feet downstream of the proposed bridge. A list of wildlife species observed or detected by sign on the study area is included in Appendix D.

3.3 Geology, Climate, and Soils

The study area is located in the eastern foothills of the Santa Cruz Mountains at ~400 feet elevation (USGS 1991). The study area is underlain by sandstone and conglomerate of Miocene-Pleistocene age (California Geological Survey 2010). Average annual precipitation in the area is 29.59 inches, occurring primarily between October and May (Western Regional Climate Center 2019).

One soil type has been mapped on the study area (NRCS 2019a):

114—Francisquito-Urban land complex, 5 to 15 percent slopes

Francisquito-Urban land complex, 5 to 15 percent slopes, is well drained, derived from alluvium from mixed sources, and is found on terraces. A typical profile of the Francisquito component consists of loam from 0 to 16 inches, clay loam from 16 to 26 inches, and clay and/or clay loam from 26 to 50 inches. The depth to water table and a restrictive feature is >80 inches. This soil is not listed as a hydric soil for San Mateo County (NRCS 2019b).

3.4 Hydrology

The principal hydrologic sources for the study area are direct precipitation, surface and near-surface runoff from surrounding uplands, and drainage through Bear Gulch Creek (Figure 2). Bear Gulch Creek drains into Bear Creek and eventually San Francisquito creek, which discharges into San Francisco Bay (USGS 1991) (Appendix B-4, B-5).

Bear Gulch Creek is mapped as a "blue line" stream in the USGS Woodside 7.5' topographic quadrangle (USGS 1991), and is mapped as an intermittent stream in the National Hydrography Dataset (NHD) (USGS 2019). The reach of Bear Gulch Creek on the study area is mapped as a Freshwater Forested/Shrub Wetland in the National Wetlands Inventory (NWI) (USFWS 2019b). Bear Gulch Creek had ~3 to ~6-inches of flowing water at the time of the June 27, 2019 field visit.

4.0 RESULTS

4.1 Special-status Plants

Thirty-three special-status plant species are documented to occur in the study area region based on the background literature search discussed in Section 2.1. A list of these species, their status, and their typical habitats is presented in Appendix A. A search of the CNDDB GIS database found no documented occurrences[5] of special-status plant species on the study area (except for historic, generalized occurrences for the Woodside area), but numerous occurrences have been documented within three miles of the study area (Figure 3). The study area is not located within designated Critical Habitat for any federally-listed plant species (USFWS 2019c).

No special-status plants were observed on the study area during the June 27, 2019 field visit (Appendix C), but the visit occurred outside the typical blooming period of some plant species. All 33 special-status plant species identified for the region during the background literature search are unlikely to inhabit the study area because it: (1) lacks suitable habitat components (e.g., soil type, micro-habitat, plant community) for special-status plant species known from the region; and/or because (2) a species (e.g., early-summer blooming annuals, shrubs or other perennial species) should have been identifiable during the field visit and was not observed. Therefore, it is unlikely that special-status plant species occur on the study area, no impacts to special-status plants are anticipated from the project, and no mitigation measures for special-status plants are included in this BRA.

4.2 Special-status Wildlife

Thirty-two special-status wildlife species were analyzed for their potential occurrence on the study area because they: (1) occur in habitats present in the general vicinity of the study area, and (2) have ranges that include Woodside (Appendix A). A search of the CNDDB GIS database found no documented occurrences of special-status wildlife species on the study area (except for historic, generalized occurrences for the Woodside area), but numerous

[5] The lack of documented occurrences does not necessarily mean that a species does not occur in an area, only that no occurrences have been reported.

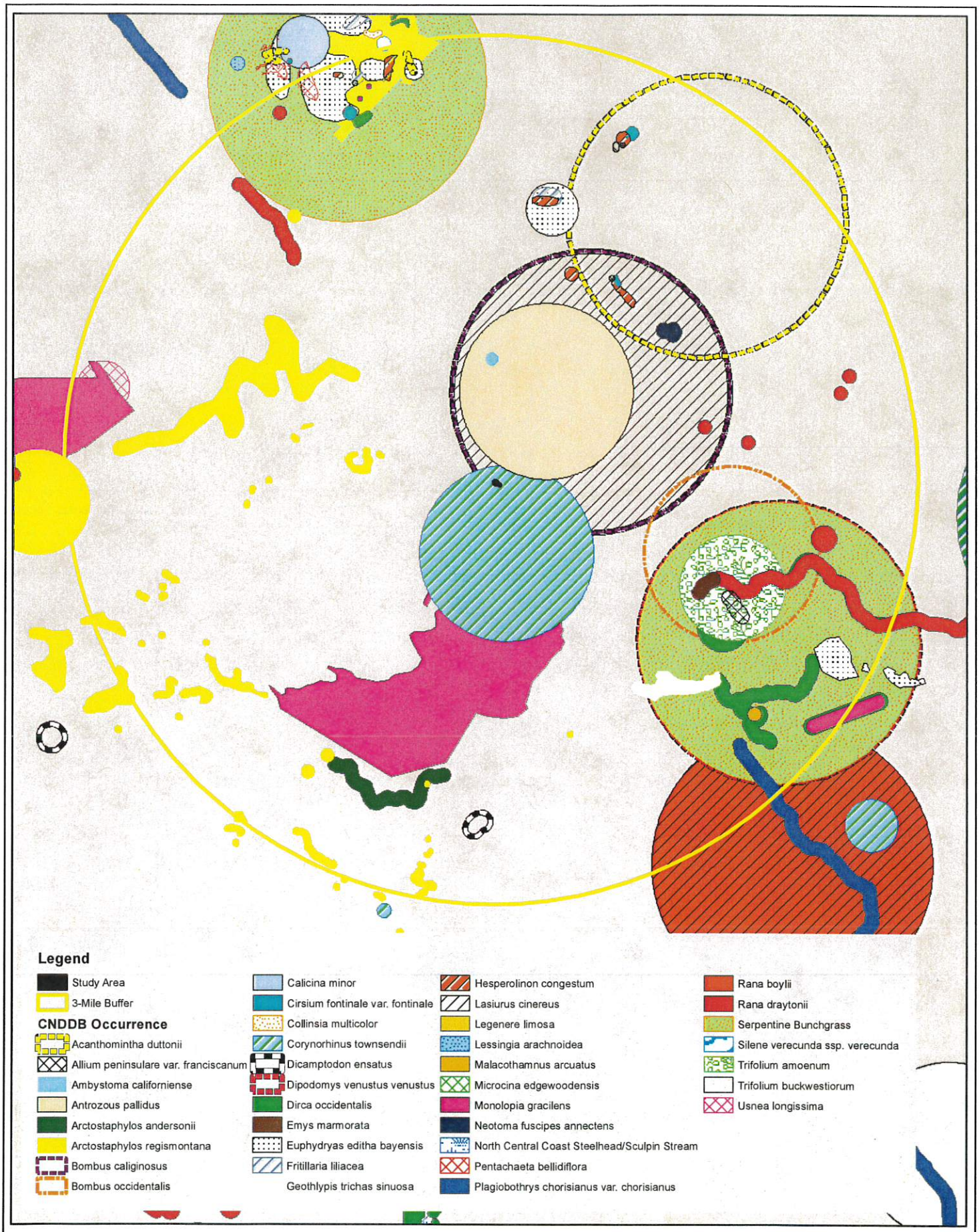

Figure 3. CNDDB map of the study area.

Data Source: CNDDB (CDFW 2019).

Mapscale: 1:55,000

0 0.5 1 2 Miles

N

Coast Range Biological LLC

occurrences have been documented within three-miles (Figure 3). A portion of the study area, along Bear Gulch Creek, is located within designated Critical Habitat for one federally-listed wildlife species: steelhead (*Oncorhynchus mykiss irideus*) (USFWS 2019c).

One special-status wildlife species, oak titmouse (*Baeolophus inornatus*), was observed on the study area during the field visits. In addition, steelhead are known from Bear Gulch Creek (Leidy et al. 2005), which is federally-designated Critical Habitat, and the species is therefore considered to be present on the study area. Eight other special-status wildlife species have a moderate potential to occur on the study area: California red-legged frog (*Rana draytonii*), Santa Cruz black salamander (*Aneides niger*), California giant salamander (*Dicamptodon ensatus*), western pond turtle (*Emys marmorata*), Allen's hummingbird (*Selasphorus sasin*), Nuttall's woodpecker (*Picoides nuttallii*), San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), and pallid bat (*Antrozous pallidus*). In addition, trees, shrubs, and herbaceous vegetation on the study area could provide nesting habitat for non-listed bird species protected under the Migratory Bird Treaty Act (MBTA) and state Fish and Game Code. The San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), though considered to have a low potential to occur on the study area, is also discussed below due to its Endangered and Fully Protected status and documented occurrences in Woodside. Steelhead, California red-legged frog, Santa Cruz black salamander, California giant salamander, San Francisco garter snake, western pond turtle, Allen's hummingbird, Nuttall's woodpecker, oak titmouse, San Francisco dusky-footed woodrat, and pallid bat are discussed below.

The remaining special-status wildlife species analyzed are considered absent or to have a low potential to inhabit the project site or study area, and it is therefore unlikely they would be adversely impacted by the proposed project (Appendix A). These species are not discussed further. In addition, numerous special-status wildlife species documented from the region in the CNDDB and/or USFWS species list were not included in Appendix A because their current range does not include Woodside and/or suitable habitat is clearly absent from the project site and study area, such as marine organisms (e.g., green sea turtle [*Chelonia mydas*], tidewater goby [*Eucyclogobius newberryi*], and Delta Smelt [*Hypomesus transpacificus*]).

Central California Coast Steelhead DPS (*Oncorhynchus mykiss irideus*), Federal Status: Threatened; State Status: None.

Steelhead typically inhabit coastal streams that contain water all year round for spawning and rearing. Both natural and man-made barriers often restrict movements, especially during drought years (Alley 1999). The Central California coast population is recognized as a Distinct Population Segment (DPS) by the National Marine Fisheries Service (NMFS), which regulates the fishery (NMFS 2011; CDFW 2019). In California, juvenile steelhead generally live in fresh water for one to three years before departing for the ocean where they remain for two to three years before returning to the same stream to breed (Moyle et al. 1995). Young fish that have physiologically transformed for ocean life ("smolts") typically migrate to the ocean from March to June (Alley 1999). Spawning typically occurs in the upper reaches of creeks on clean gravel that receives good flow. Rearing habitat appears limited by

availability of food, cover (woody debris, undercut banks, surface turbulence, large rocks that are not embedded), and sufficient pool and riffle depth (Alley 1999).

Steelhead are known from Bear Gulch Creek in the Woodside area (Leidy et al. 2005), and Bear Gulch Creek falls within federally-designated Critical Habitat for the species (USFWS 2019c). The project will take place above top-of-bank of Bear Gulch Creek, and no impacts to steelhead or its habitat are anticipated from the project with the incorporation of Best Management Practices and other measures (discussed in Section 5.0) to ensure no construction personnel, material, or ground disturbance enters the creek.

California Red-legged Frog (*Rana draytonii*), Federal Status: Threatened; State Status: Species of Special Concern

The California red-legged frog (CRLF) is a large (85-138 mm), nocturnal species that historically occupied much of central and southern California. The species requires still or slow-moving water during the breeding season, where it deposits large egg masses, usually attached to submerged or emergent vegetation. Breeding typically occurs between December and April, depending on annual environmental conditions and locality. Eggs require 6 to 12 days before hatching and metamorphosis occurs 3.5 to 7 months after hatching (Stebbins 2003). Following metamorphosis between July and September, juveniles generally do not travel far from aquatic habitats. Movements of individuals generally begin with the first rains of the weather-year, in response to receding water or following the breeding season (Fellers and Kleeman 2007). Radio-telemetry data indicates that individuals generally engage in straight-line movements irrespective of riparian corridors and can move up to two miles (Bulger et al. 2003; Fellers and Kleeman 2007). California red-legged frogs utilize a variety of water sources during the non-breeding season, and females are more likely than males to depart from perennial ponds shortly after depositing eggs (Fellers and Kleeman 2007). They may take refuge in small mammal burrows, leaf litter or other moist areas during periods of inactivity or whenever it is necessary to avoid desiccation (Rathbun et al. 1993; Jennings and Hayes 1994). Occurrence of this frog has shown to be negatively correlated with presence of introduced bullfrogs (Moyle 1973; Hayes and Jennings 1986, 1988), but both species coexist at some locations, particularly along the coast. Genetic studies indicate that the nominal subspecies *draytonii* and *aurora* represent separate lineages and are therefore distinct species (Shaffer et al. 2004).

Eight CRLF occurrences are documented within three miles of the study area in the CNDDB (CDFW 2019) (Figure 3). The nearest documented CRLF occurrence is located ~1.5-miles ENE of the study area (CDFW 2019). Additional CRLF occurrences are located ~1.6-miles southeast, ~1.7-miles east, and ~2.1-miles northwest of the study area. Bear Gluch Creek and adjacent areas could provide foraging and sheltering habitat for CRLF, particularly during the summer months. No breeding habitat for CRLF is present. Due to the presence of suitable habitat along the creek, and the mobility of the species, CRLF could occur on or adjacent to the project site. Mitigation measures to reduce impacts to the species to less-than-significant levels are included in Section 5.0.

Santa Cruz Black Salamander (*Aneides flavipunctatus niger*), Federal Status: None; State Status: Species of Special Concern

The Santa Cruz black salamander subspecies occurs in moist microhabitats in a variety of vegetation communities including deciduous woodlands, coniferous forests, open oak woodlands and meadows. Very little natural history information is known. The subspecies *niger* is isolated and occupies a limited range in Santa Cruz, Santa Clara and San Mateo counties. Recent genetic analysis indicates that four separate lineages are present in California, and that the southern disjunct lineage (*niger*) should be considered a separate species (Rissler and Apodaca 2007). Based on this analysis, the California Wildlife Habitat Relationship System maintained by CDFW now considers the southern disjunct lineage a full species, *Aneides niger*. The Santa Cruz black salamander is also subject to a Special Closure for Santa Cruz, Santa Clara and San Mateo Counties that prohibits take under state Freshwater Sport Fishing Regulations.

The Santa Cruz black salamander has been reported from several locations in western San Mateo County, although its range in the eastern portion of the county is unclear (Thomson et al. 2016). Santa Cruz black salamanders are found in a variety of moist habitats, the study area has numerous shaded areas and an abundance of downed wood, and therefore suitable habitat is present. Project construction could result in impacts to Santa Cruz black salamander habitat along the creek. Mitigation measures to reduce impacts to the species to less-than-significant levels are included in Section 5.0.

California Giant Salamander (*Dicamptodon ensatus*), Federal Status: None; State Status: Species of Special Concern.

The California giant salamander is an endemic species with a limited range restricted to coastal areas north and south of San Francisco Bay from southern Mendocino County to south Santa Cruz County, including San Mateo County (Thomson et al. 2016). Adults are large (17-30.5 cm) with a copper to brown irregular marbled pattern on a tan to brownish background on the dorsum and a thick tail that is laterally compressed; larvae are light brown with bushy, external gills (Petranka 1998; Thomson et al. 2016). It is a terrestrial species that lives in coastal chaparral, oak woodlands and coniferous forest and breeds in perennial and some seasonal streams, often in headwaters (Thomson et al. 2016). In appropriate habitat, larvae can sometimes be detected visually or with dip-nets, particularly since they typically over-winter for about 18 months. Most observations of adults have been in proximity to riparian areas, but very little information is available regarding upland habitat use and one individual was found in a subterranean tunnel on a ridgeline in eastern Santa Cruz County approximately 0.3 miles from the nearest perennial stream (Allaback, pers. obs.). Adults prey on invertebrates and vertebrates including slender salamanders, mice, shrews, and voles.

The California giant salamander inhabits areas east of the crest of the Santa Cruz Mountains and there is one historic record from the vicinity of the Town of Woodside (Thomson et al. 2016; CDFW 2019). Potential upland and aquatic habitat are present within the study area. Mitigation measures to reduce impacts to the species to less-than-significant levels are included in Section 5.0.

San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*), Federal Status: Endangered; State Status: Endangered, Fully Protected

The San Francisco garter snake (SFGS) is found only on the San Francisco peninsula in San Mateo County and the northern portion of Santa Cruz County (Barry 1978; Brode 1990; USFWS 2006). It is an extremely colorful snake with a bright orange-red head, blue belly, greenish-yellow dorsal stripe and red and black stripes along either side. It grows to a length of three to four feet (Stebbins 2003). It occupies freshwater marshes, ponds, sloughs, and associated riparian corridors, especially where dense shoreline vegetation is present. It also uses a variety of upland habitats including grassland, woodland and coastal scrub in proximity to these aquatic habitats. During the fall and winter, it stays relatively inactive underground in rodent burrows, up to at least 150 meters from aquatic habitat (McGinnis et al. 1987). During the spring and summer, it occupies dense vegetation near ponds or marshes and adjacent scrub and open upland habitat for temperature regulation and cover. Females produce between 12 and 24 live young in July or August. Adults feed primarily on larger frogs including red-legged frogs, but may also take fish, salamanders, newts and earthworms. Pacific treefrogs appear to be an important part of the diet of young snakes (Larsen 1994). It is rarely seen but can sometimes be observed near the water's edge, basking on warm days, or when it retreats to water. Much of the range of the SFGS lies within a heavily urbanized area, and alteration and isolation of habitats has been identified as the primary threat to the subspecies (Brode 1990). Agricultural development, overgrazing and illegal collecting have also been implicated in its decline.

The nearest documented occurrence of SFGS is ~1-mile southeast of the study area[6] (CDFW 2019). Bear Gulch Creek and adjacent areas generally lack suitable habitat for the species, and do not provide a suitable prey base. Therefore, no impacts to this species are anticipated from the project and no mitigation measures for SFGS are recommended.

Western Pond Turtle (*Emys marmorata*), Federal Status: None; State Status: Species of Special Concern.

The western pond turtle ranges from western Washington to northern Baja California, mostly west of the Sierra Nevada-Cascade crest (Ernst et al. 1994; Stebbins 2003; Thomsen, *et al.* 2016). It inhabits permanent freshwater ponds, lakes, marshes, streams and rivers (Bury and Holland 1993). Pond turtles favor sites with deep pools and with an abundance of basking sites, such as partially submerged logs or rocks, matted emergent vegetation or exposed shorelines. Undercut banks, root masses and boulder piles provide underwater escape cover (Bury and Holland 1993). Western pond turtles can move across terrestrial habitats in response to fluctuating water level, an apparent adaptation to the variable rainfall and unpredictable flows that occur in many coastal California drainage basins (Rathbun et al. 1992). In addition, they can over-winter on land or in water or remain active in the winter, depending on environmental conditions (Rathbun et al. 1993; Jennings and Hayes 1994; Bury et al. 2012). Females travel from aquatic sites into open, grassy areas to lay eggs in a shallow nest (Holland 1992; Rathbun et al. 1992). Nests have been reported from up to 500 meters from water bodies (Jenning and Hayes 1994; Bury et al. 2012). During dispersal,

[6] SFGS records are suppressed in the CNDDB and are not included on Figure 3.

pond turtles can move up to at least two kilometers in search of suitable habitat (Jennings and Hayes 1994).

The nearest documented western pond turtle occurrence is located ~1.6-miles southeast of the study area (CDFW 2019) (Figure 3). No nesting habitat is present on or near the study area, but western pond turtles could use Bear Gulch Creek as a movement corridor. Since the project will take place above the top-of-bank of Bear Gulch Creek, no impacts to western pond turtle are anticipated from the project and no mitigation measures are recommended.

Allen's Hummingbird (*Selasphorus sasin*), Federal Status: Bird of Conservation Concern; State Status: None.

Allen's hummingbird breeds in a narrow band along the coast of California and southern Oregon and winters from Central California south through Baja and Central Mexico. Nesting habitat in the San Francisco Bay region includes mixed evergreen forest, redwood forests, riparian woodland, nonnative eucalyptus and cypress groves, and occasionally live oak woodlands and coastal scrub with scattered trees (Mitchell 2000). In addition to nectar, insects are taken, especially spiders. Allen's hummingbird is an extremely early migrant and arrives on nesting grounds in January and February (Mitchell 2000). Males engage in a distinct J-shaped flight pattern when courting females. Nests are often clustered and semi-colonial. Females typically produce two broods.

Suitable nesting habitat for Allen's hummingbird is present on the study area in California Bay Forest and Redwood Forest. Allen's hummingbird is a regular and common breeder in San Mateo County (Sequoia Audubon Society 2001; Metropulos 2006; eBird 2019). Mitigation measures to reduce impacts to Allen's hummingbird to less-than-significant levels are included in Section 5.0.

Nuttall's Woodpecker (*Picoides nuttallii*), Federal Status: Bird of Conservation Concern, State Status: None.

Nuttall's woodpecker ranges from extreme northern Baja to northern California west of the deserts and the Sierra Nevada divide. It is typically associated with oak woodlands, but will also occur in riparian woodlands and chaparral areas (Lowther 2000). It feeds primarily on insects it gleans from the underside of leaves in trees and on the ground, and also eats some vegetation. It often nests in snags along riparian areas. Males perform most of the incubation. Pairs remain on territories all year round. The species was recently added to the federal Birds of Conservation Concern primarily due to its restricted breeding range.

Suitable nesting habitat for Nuttall's woodpecker is present on the study area in the Riparian Woodland. The species is a common breeder in San Mateo County (Sequoia Audubon Society 2001; Bousman 2007; eBird 2018). Mitigation measures to reduce impacts to Nuttall's woodpecker to less-than-significant levels are included in Section 5.0.

Oak Titmouse (*Baeolophus inornatus*), Federal Status: Bird of Conservation Concern, State Status: None.

The oak titmouse ranges from extreme northern Baja California through California (Coast, Transverse, and Peninsular Ranges and western foothills of the Sierra Nevada) into southwest Oregon (Cicero 2000). It inhabits open woodland habitats, including oak woodland, oak-pine woodlands, and pinyon-juniper woodlands (Cicero 2000). It feeds primarily on seeds and terrestrial invertebrates, while plant material makes up most of its diet in the fall and winter. Oak titmouse is not migratory and remains territorial all year round. It nests in woodpecker or natural cavities and will use artificial nest boxes. Mates typically remain together from year to year. The species was recently added to the federal Birds of Conservation Concern primarily due to its restricted breeding range.

Oak titmouse was observed during the site visit. Suitable nesting habitat is present on the study area. Oak titmouse is a common breeder in San Mateo County (Sequoia Audubon Society 2001; Bousman 2007; eBird 2018). Mitigation measures to reduce impacts to oak titmouse to less-than-significant levels are included in Section 5.0.

Other Nesting Bird Species

Suitable nesting habitat for other, non-listed bird species protected under the MBTA and Fish and Game Code occurs in trees, shrubs, and herbaceous vegetation on the study area. The MBTA regulates or prohibits taking, killing, and possession of migratory bird species and their nests as listed in Title 50 Code of Federal Regulation (CFR) Section 10.13. Bird species and their nests are also protected under Sections 3515 and 3503 of the state Fish and Game Code. Vegetation removal during the nesting season, or noise and other disturbance during project implementation, could adversely impact nesting bird species on the study area, should they be present, potentially resulting in nest destruction, abandonment, or failure. A Pacific-slope flycatcher nest was observed under the over-hanging bank approximately 20-feet downstream of the proposed bridge, which could be directly or indirectly impacted by the project. Mitigation measures to address potential significant impacts to nesting bird species are included in Section 5.0.

San Francisco Dusky-footed Woodrat (*Neotoma fuscipes annectens*), Federal Status: None; State Status: Species of Special Concern.

The San Francisco dusky-footed woodrat (SFDW) occurs from San Francisco Bay south through the Santa Cruz Mountains to Elkhorn Slough and inland to the Diablo Range (Hall 1981). The species is most common in riparian, oak woodland and scrub habitats (Carraway and Verts 1991; Slowik 2015). It typically constructs houses, which are often referred to as nests or middens, out of sticks and other debris. They are constructed on the ground, in trees, and rocky outcrops, and are often found in concentrations along riparian corridors. The species can also live in hollows in logs or trees and colonize man-made structures that provide appropriate protection from predators. Houses are often reused by successive generations and some can grow to be six feet or more in height, while others are well-hidden and easily overlooked. Houses are used for rearing young, protection from predators, resting, food storage, thermal protection and social interaction (Carraway and Verts 1991). Cranford

(1977) reported that an adult averaged 1.8 houses per home range but Innes et al. (2009) revealed use of between 2-11 houses during radio-telemetry studies.

Suitable habitat is present for SFDW in California Bay Forest and along the Redwood Forest ecotone in areas with suitable cover. No SFDW houses were observed on the study area during the field visits, though they could be present in un-surveyed areas along the Bear Gulch Creek Corridor, particularly under the over-hanging banks and where California bay root-balls are exposed. Woodrats could colonize additional areas in proximity to or within the project disturbance envelope, and ground disturbance associated with the project could adversely impact SFDW houses by crushing or removal. Mitigation measures to address potential significant impacts to SFDW are included in Section 5.0.

Pallid Bat (*Antrozous pallidus*), Federal Status: None, State Status: Species of Special Concern, Western Bat Working Group.

The pallid bat inhabits a variety of arid habitats including grassland, scrub and woodlands (Hermanson and O'Shea 1983). It is a year-round resident in central California, where it is usually associated with oak woodland. Daytime roosts are generally in trees but also occur in rock outcrops and mines. Nocturnal roosts are often under bridges and in rock outcrops. One or two young are born in May or June. Maternal colonies generally number less than 100 individuals. Pallid bats feed on insects and arachnids, which are often taken on the ground. The species is very sensitive to disturbance of roost sites. Pallid bats are not known to migrate, and winter hibernaclea are often close to summer roosts.

Pallid bats have been documented historically in Woodside, including in the vicinity of the study area. Potential suitable habitat for pallid bat is present in mature trees with cavities in California Bay Forest and Redwood Forest. Trees proposed for removal are small and do not support roosting habitat for pallid bat, project ground disturbance is relatively minor and of short duration, and therefore no impacts to pallid bats are anticipated form the project and no mitigation measures are recommended.

4.3 Sensitive Habitats

4.3.1 Potential Jurisdictional Waters, Riparian Woodland, and Woodside Stream Corridor

Bear Gulch Creek flows through the study area, and the proposed project would take place above the bed and banks of the creek (Figure 2)[7]. The creek is deeply incised, with a bed, bank, and Ordinary High Water Mark (OHWM), and generally lacks vegetation below the OHWM. Due to the presence of a bed, bank, and OHWM, and < 5 percent cover of vegetation, Bear Gulch Creek would qualify as a potential jurisdictional "other waters" by

[7] The creek centerline and top-of-bank in relation to the project site shown in Figure 2 are approximate and for general planning purposes only. To determine the precise boundaries of project impacts in relation to the OHWM and top-of-bank, these features would need to be flagged on the ground and surveyed by a licensed surveyor and incorporated into the project site plan. In addition, the regulatory agencies make the final determination on the precise location and extent of their jurisdiction based on the results of an aquatic resource delineation and subsequent verification by the applicable agencies.

the U.S. Army Corps of Engineers (ACOE) under Section 404 of the federal Clean Water Act (CWA). "Other waters" are seasonal or perennial water bodies, such as lakes, stream channels (including intermittent or ephemeral streams), drainages, ponds, and other surface water features that exhibit an OHWM but lack positive indicators of one or more of the three wetland parameters (hydrophytic vegetation, wetland hydrology, hydric soils) (Federal Register 1986). In non-tidal streams lacking wetlands, ACOE jurisdiction extends to the OHWM. Work, such as placement of fill material, occurring within ACOE jurisdiction normally requires a permit under Section 404 of the CWA.

In addition, the ACOE, under Section 401 of the federal CWA, is required to meet state water quality regulations prior to granting a Section 404 permit. This is accomplished by application to the local Regional Water Quality Control Board (RWQCB) for Section 401 certification that requirements have been met. At the state level, the CDFW has jurisdiction over streams to the top-of-bank or riparian dripline, whichever is greater. Work within CDFW jurisdiction normally requires a Streambed Alteration Agreement. The jurisdiction of CDFW on the study area extends to the top-of-bank of the creek or dripline of riparian vegetation (which would include most of the California Bay Forest and Redwood Forest on the study area), whichever is greater.

Therefore, Bear Gulch Creek falls under the jurisdiction of the ACOE up to the OHWM, RWQCB below the top-of-bank of the creek, and CDFW to the top-of-bank of the creek or riparian dripline, whichever is greater. Based on current project plans (assuming no work or any material associated with construction enters below the top-of-bank of Bear Gulch Creek), work will take place outside the jurisdiction of the ACOE and RWQCB, and therefore permits from these agencies would not typically be required for the project.

For the CDFW, the project will be located above top-of-bank of the creek (Figure 2; Appendix B-6, B-7). However work will take place within the California Bay Forest dripline (which, together with Redwood Forest, forms a Riparian Woodland which would be considered a sensitive habitat under CEQA) and three California bay trees (located above the top-of-bank but within the California Bay Forest) are proposed for removal. Other minor vegetation disturbance will take place within this area for the trail alignment and bridge footings, though these project elements will occur primarily in existing disturbed areas within the California Bay Forest dripline (Appendix B-6, B-7, B-8) and seeding of native species in disturbed areas is recommended in Section 5.0. In addition, several California bay saplings and branches may need to be trimmed below the creek top-of-bank along the bridge alignment. Therefore, a Streambed Alteration Agreement could be required for the project, and a Notification should be sent to the CDFW.

In addition, Bear Gulch Creek falls within the Town of Woodside's jurisdiction as a "stream corridor." Stream corridors are defined in Section 153.442 of the Woodside Municipal Code as: *"(A) stream or creek bank is defined as the point at which the break in slope occurs, and a stream corridor is defined as a horizontal distance of 50 feet, measured from each side of the center line of the stream, or a horizontal distance of 25 feet, measured from the top of the stream or creek bank, whichever is greater. The Planning Commission may establish greater horizontal measurements for specific stream corridors."*

The location of the stream corridor is included in Figure 4. Approval from the Town of Woodside for work within the stream corridor will also be required for the project. Mitigation measures to address potential significant impacts to Bear Gulch Creek are discussed in Section 5.0.

4.3.2 Wildlife Corridors

Projects that "interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites" could result in significant impacts under CEQA. The Bear Gulch Creek corridor is used as a movement corridor for some native wildlife, as discussed in Section 3.2.

Although the project is located above the creek top-of-bank, a portion of the adjacent property owner's mesh fence, which inhibits the movements of deer and other wildlife, will be relocated as part of the project. While the relocated fencing will not result in significant adverse impacts to wildlife movement or require mitigation because the fencing will be relocated further from the creek than the current configuration, the existing wildlife corridor would be improved if the mesh fence was replaced, modified with openings, or elevated ~4-inches above grade to allow a greater diversity of wildlife access along the Riparian Woodland.

4.3.3 Woodside Tree Ordinance

Based on current project plans (which are only conceptual and consist of a Draft Concept Plan, dated April 25, 2019), three California bay trees that are in the proposed trail alignment will need to be removed.

According to Section 153.170 of the Woodside Municipal Code:

It is intended that this subchapter be administered with the foregoing purposes in mind and specifically so as to: (1) Ensure, insofar as practical in permitting development of land and minimizing fire hazard, the maximum retention of natural vegetation to aid in protection against erosion of top soil, preservation of natural scenic qualities and healthy ecosystems of the Town through good conservation practices, protection from flooding or landslides, noise absorption, and in providing habitat, shade and color; and (2) Protect mature trees and significant stands of trees in order to retain as many as possible consistent with the purposes set forth herein and also consistent with reasonable economic enjoyment of private property. In this context, privately owned trees have an impact on the quality of life for the entire community.

The three California bay trees proposed for removal are relatively small (four to six-inch diameter), located in a dense stand of much larger and mature California bay trees, and presumably do not qualify as "*mature trees and significant stands of trees*" described in the Woodside Tree Ordinance, nor would the removal of these trees (due to their small size, remnant root system, and dense surrounding vegetation) result in significant erosion or impacts described in the Woodside Tree Ordinance. Any habitat impacts associated with the

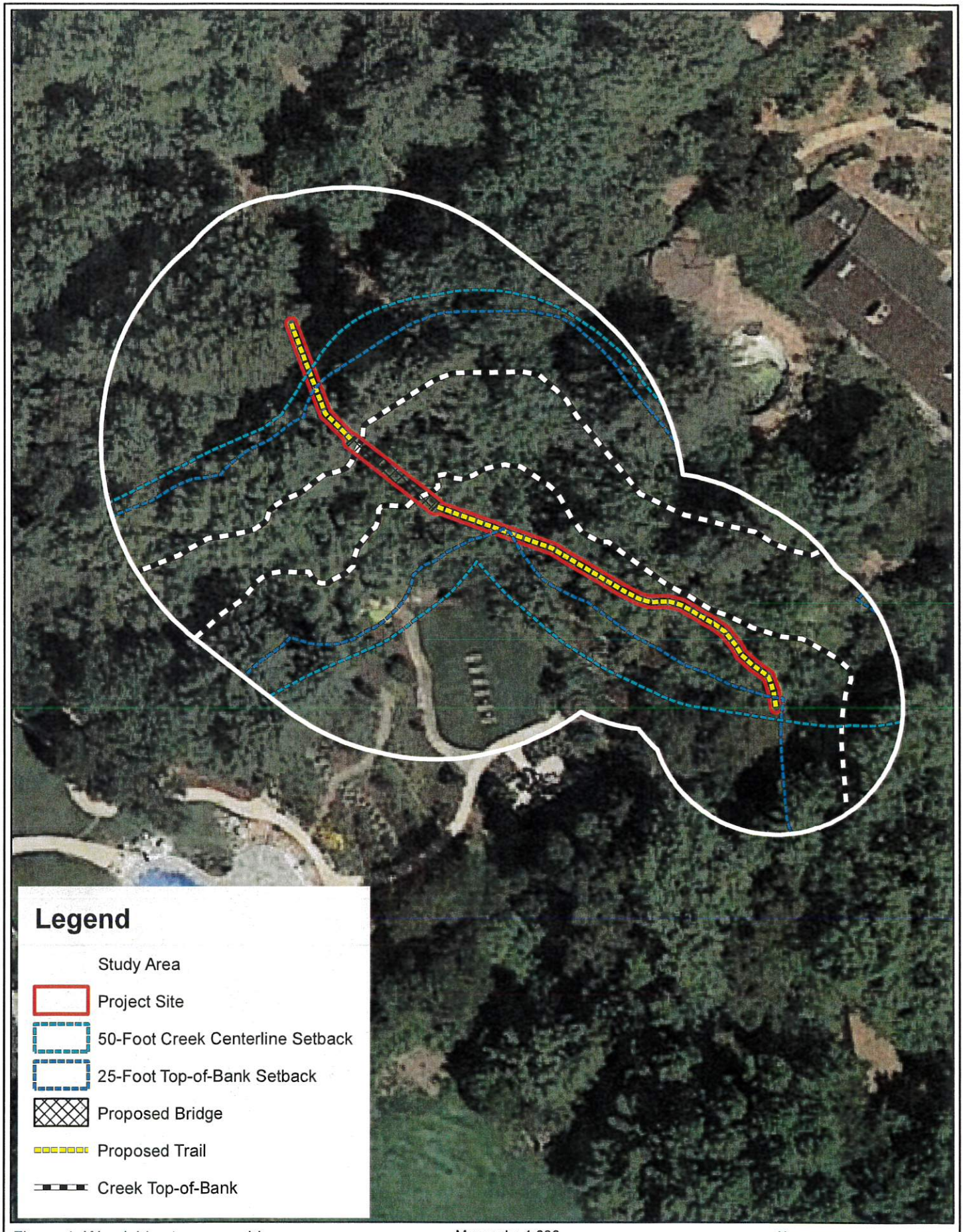

Figure 4. Woodside stream corridor.

Orthophoto Date: 8/9/18
Map Date: 6/28/19

Mapscale: 1:600

0 25 50 100 Feet

N

Coast Range Biological LLC

removal of these trees can be addressed as part of a Streambed Alteration Agreement with CDFW, if required. The removal of these trees would therefore not violate the Woodside Tree Ordinance, but the Town would need to concur with this finding.

5.0 POTENTIAL BIOLOGICAL IMPACTS AND PROPOSED MITIGATION MEASURES

Due to a slide along Bear Gulch Creek, Center Trail has been closed to equestrian use since 2017. The purpose of the Center Trail Bridge Project is to: (1) install a new 50-foot long fiberglass bridge across Bear Gulch Creek, with the bridge footings set back eight feet from the creek top-of-bank and no work proposed below top-of-bank; and (2) re-route ~225-feet of Center Trail on both sides of the creek (~55-feet north of the creek and ~170-feet south of the creek) so the trail aligns with the new bridge. The trail will be approximately four feet wide, occur in existing level, disturbed areas, and will involve minor grubbing and placement of base rock. Three California bay trees (four to six-inch diameter) will be removed along the proposed trail above the creek top-of-bank, and several California bay saplings and branches may need to be trimmed below the creek top-of-bank along the bridge alignment. Project construction is estimated to take two weeks and will occur within the Town's 50-foot wide conservation and equestrian easement along Bear Gulch Creek (Sean Rose, Town Engineer, pers. comm.).

Potential significant impacts to special-status biological resources that could result from the proposed project, along with corresponding mitigation measures to reduce impacts to less-than-significant levels, are discussed below.

Potential Significant Impact 1: Bear Gulch Creek is located in Critical Habitat for steelhead, and steelhead have been documented to occur in the creek. According to current project plans, work will take place above the top-of-bank of the creek. However, indirect impacts to steelhead habitat are possible without the incorporation of mitigation measures. If a CDFW Streambed Alteration Agreement is required for the project, CDFW may modify or add to the measures discussed below.

Mitigation Measure 1a: Prior to project construction, the boundaries of the work area shall be clearly delineated using orange-colored plastic construction fencing combined with existing fencing, to prevent workers or equipment from inadvertently straying from the work area. All construction personnel, equipment, and vehicle movement shall be confined to designated construction and staging areas. Staging areas are restricted to those delineated on the project plans and encompassed by the fencing. All orange-colored construction fencing shall be removed when surface-disturbing actions are completed.

Mitigation Measure 1b: Prior to the start of construction, a worker education program shall be presented at the project site by a qualified biologist. Associated written material shall be distributed. It shall be the onsite foreman's responsibility to ensure that all construction personnel and subcontractors receive a copy of the education program. The education program shall include a description of steelhead (along with CRLF as described below) and their habitat, the general provisions of the Endangered Species Act, the necessity of adhering

to the Act to avoid penalty, and measures implemented to avoid affecting steelhead and CRLF specific to the project associated work boundaries. The qualified biologist will designate an individual that will be onsite daily during project construction to inspect the work area for special-status species before work begins. If special-status species are observed at any time prior to or during construction, a qualified biologist and the Town of Woodside will be contacted for guidance.

Mitigation Measure 1c: Best Management Practices shall be implemented during all phases of project ground disturbance to reduce impacts to Bear Gulch Creek and steelhead habitat. All permit requirements by the regulatory agencies shall be followed. These measures shall include, but are not limited, to the following:

1. To the maximum extent practicable, ground disturbing work shall be conducted during the dry season (typically May 1 to October 15). If work must be conducted during the rainy season, excavation and grading shall be avoided during wet weather and immediately preceding expected wet weather.

2. Erosion control measures, such as silt-fencing and straw wattles, shall be installed above the creek top-of-bank as necessary prior to ground disturbance and maintained throughout the duration of construction to prevent erosion and subsequent sedimentation into Bear Gulch Creek. Exposed soils shall be covered. No debris, soil, silt, sand, bark, slash, sawdust, cement, concrete, washings, petroleum products or other organic or earthen material shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into water of the U.S./State or aquatic habitat.

3. Machinery shall be refueled at least 60 feet from any aquatic habitat, and a spill prevention and response plan will be implemented. All vehicles shall be inspected for leaks daily. If any leakage of material occurs into the creek bed, work shall cease immediately and cleanup initiated.

4. After work is complete, all disturbed areas shall be restored to their previous condition. Prior to the onset of the rainy season, all bare soil areas shall be seeded with a native seed mix consisting of plant species native to Woodside and adapted to California Bay Forest and/or Redwood Forest habitats.

Potential Significant Impact 2: Suitable foraging and sheltering habitat for CRLF is present along Bear Gulch Creek. Ground disturbance during project construction could result in CRLF mortality (such as by crushing with equipment), if the species is present. The following measures for CRLF are recommended. As part of a Streambed Alteration Agreement, CDFW may modify or add to the measures discussed below.

Mitigation Measure 2a: Within seven days prior to ground disturbance, a qualified biologist shall conduct a preconstruction survey instream for CRLF. Either a day or night survey may be conducted, depending on the judgment of the biologist. If a CRLF is observed during the preconstruction survey or at any time during project construction, work shall cease within 50-

feet and a qualified biologist contacted. If the CRLF can't be avoided, the USFWS and CDFW shall be contacted for guidance.

Mitigation Measure 2b: A qualified biologist shall monitor initial grading and vegetation removal. Depending on the results of the preconstruction survey and initial monitoring and agency permit requirements, additional biological monitoring may be required (such as limited to inspecting all suitable areas for CRLF prior to work each day). Permit conditions related to CRLF in the work area for the project (from CDFW as part of a Streambed Alteration Agreement, if necessary), shall be followed.

Potential Significant Impact 3: The study area provides habitat for the Santa Cruz black salamander and California giant salamander. Ground disturbance during project construction along the Bear Gulch Creek corridor could result in Santa Cruz black salamander and/or California giant salamander mortality (such as by crushing with equipment), if one or both species are present.

Mitigation Measure 3: Within seven days prior to ground disturbance, a qualified biologist shall conduct a daytime preconstruction survey for Santa Cruz black salamanders and California giant salamanders. Methods shall include carefully searching under woody debris, moveable rocks, and rock piles. Assuming the biologist is appropriately permitted, dip netting may be used to sample for California giant salamander larva. Permit conditions related to Santa Cruz black salamanders and California giant salamanders in the work area (if required by CDFW as part of a Streambed Alteration Agreement) shall be followed. This may include relocating Santa Cruz black salamanders and/or California giant salamander larva to the nearest appropriate habitat either up or downstream based on the judgment of the qualified biologist.

Potential Significant Impact 4: Suitable habitat for the oak titmouse, Nuttall's woodpecker, Allen's hummingbird, and other native nesting bird species protected under the MBTA and CDFW Code is present in trees, shrubs, and herbaceous vegetation on the study area. In addition, an active Pacific-slope flycatcher nest was observed under an over-hanging bank approximately 20-feet downstream of the proposed bridge location. Vegetation removal, or noise and disturbance during construction, could result in direct or indirect disturbance to nesting bird species, if present, potentially resulting in nest destruction or abandonment.

Mitigation Measure 4: If feasible, tree removal and ground disturbance shall take place outside of the February 1 to August 31 breeding bird season. If the project is conducted during the breeding bird season, a qualified biologist shall conduct a preconstruction breeding bird survey throughout areas of suitable habitat up to 300 feet from the project site within 15 days prior to the onset of any construction activity. If bird nests are observed, buffer zones shall be established around all active nests to protect nesting adults and their young from construction disturbance. Buffer zone distances, which depend to some degree on the species and shall be established in consultation with CDFW, are typically 25 to 50-feet around native passerines, 100-feet around special-status passerines, and 300 to 1,000-feet or more around raptors, depending on the species. Work within the buffer zone shall be postponed until all the young are fledged, as determined by a qualified biologist.

Potential Significant Impact 5: Although no SFDW houses were observed on the study area, potential habitat is present, including under the over-hanging banks and exposed root-balls of the mature bay trees. Woodrats could colonize additional areas in proximity to or within the project disturbance envelope, and ground disturbance associated with the project could adversely impact SFDW houses by crushing or removal.

Mitigation Measure 5: Within 30 days prior to project construction, a qualified biologist shall inspect the project disturbance envelope and adjacent areas within 50-feet for SFDW houses. An exclusion zone shall be erected around SFDW houses occurring within 25-feet of the project disturbance envelope, using flagging or a temporary fence that does not inhibit the natural movements of wildlife (such as steel T-posts and a single strand of yellow rope or similar materials). Efforts will be made to avoid impacting SFDW houses, even if avoidance is by only a few feet. If SFDW houses can't be avoided, CDFW shall be contacted for approval to relocate individuals by live-trapping and building a nearby artificial structure as a release site. Approval to relocate must be acquired from CDFW.

Potential Significant Impact 6: Bear Gulch Creek falls under the jurisdiction of the ACOE up to the OHWM, RWQCB below the top-of-bank of the creek, and CDFW to the top-of-bank of the creek or riparian dripline, whichever is greater. It also falls within the Town of Woodside's jurisdiction as a "stream corridor." Work within the jurisdiction of these agencies typically requires permits. Based on current project plans (and assuming all work takes place above the top-of-bank of Bear Gulch Creek), the project will take place outside ACOE and RWQCB jurisdiction.

The project could require a Streambed Alteration Agreement from CDFW, depending on the precise nature of the work. The project will take place within the Woodside "stream corridor."

Mitigation Measure 6: The CDFW shall be Notified to determine if a Streambed Alteration Agreement is required for the project. If CDFW requires a Streambed Alteration Agreement, all conditions of the Agreement shall be followed. Approval shall be obtained from the Town of Woodside for work within the stream corridor.

6.0 LIMITATIONS

The results of this report are based on conditions observed at the time of the field visit and the biologist's interpretation of those conditions and represents a preliminary characterization of biological resources on the study area. No focused or protocol-level surveys were conducted. Regulatory agencies make the final determination (subject to judicial review) regarding the location of their jurisdiction and biological resource issues on the study area. This report does not constitute authorization to conduct the project, and all necessary permits and approvals should be obtained from regulatory agencies prior to project implementation.

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Appendix A. Special-status species with potential to inhabit the study area region

List compiled from searches of the CNDDB (CDFW 2019), CNPS Inventory of Rare and Endangered Plants (CNPS 2019), and USFWS (2019a) records for the Woodside and surrounding 7.5' USGS quadrangles, CDFW Special Animals List (2018), and other publications (Zeiner et al. 1988, 1990a, 1990b). This list has not been reviewed by the regulatory agencies.

Species	Status	Typical Habitat	Potential for Occurrence on Study Area
Plants			
Acanthomintha duttonii San Mateo thorn-mint	FE, SE, 1B.1	Chaparral, valley and foothill grassland (serpentinite), 50-300 m. Blooms April-June.	**None.** No suitable habitat on the study area.
Allium peninsulare var. *franciscanum* Franciscan onion	1B.2	Cismontane woodland, valley and foothill grassland (clay, often on serpentine), dry hillsides, 100-300 m. Blooms May-June.	**None.** No suitable habitat on the study area.
Amsinckia lunaris bent-flowered fiddleneck	1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland, 3-500 m. Blooms March-June.	**None.** No suitable habitat on the study area.
Arctostaphylos andersonii Santa Cruz manzanita	1B.2	Broadleafed upland forest, chaparral, North Coast coniferous forest (openings, edges), 60-730 m. Blooms November-April.	**None.** No *Arctostaphylos* observed.
Arctostaphylos regismontana Kings Mountain manzanita	1B.2	Broadleafed upland forest, chaparral, North Coast coniferous forest, 305-730 m. Blooms January-April.	**None.** No *Arctostaphylos* observed.
Astragalus pycnostachyus var. *pycnostachyus* coastal marsh milk-vetch	1B.2	Coastal dunes (mesic), coastal scrub, marshes and swamps (coastal salt, streamsides), 0-30 m. Blooms April-October.	**None.** No suitable habitat on the study area.
California macrophylla round-leaved filaree	1B.2	Cismontane woodland, valley and foothill grassland, 15-1,200 m. Blooms March-May.	**None.** No suitable habitat on the study area.
Centromadia parryi subsp. *congdonii* Congdon't tarplant	1B.1	Valley and foothill grassland (alkaline), 1-230 m. Blooms May-October.	**None.** No suitable habitat on the study area.
Chloropyron maritimum ssp. *palustre* Point Reyes salty bird's-beak	1B.2	Marshes and swamps (coastal salt), 0-10 m. Blooms June-October.	**None.** No suitable habitat on the study area.
Cirsium fontinale var. *fontinale* fountain thistle	FE, SE, 1B.1	Chaparral (openings), valley and foothill grassland (serpentinite seeps), 90-175 m. Blooms June-October.	**None.** No suitable habitat on the study area.
Clarkia concinna subsp. *automixa* Santa Clara red ribbons	4.3	Chaparral, cismontane woodland, 90-1,500 m. Blooms April-June.	**Low.** Suitable habitat generally lacking from the study area.
Collinsia multicolor San Francisco collinsia	1B.2	Closed-cone coniferous forest, coastal scrub (sometimes serpentinite), 30-250 m. Blooms March-May.	**None.** No suitable habitat on the study area.

Species	Status	Typical Habitat	Potential for Occurrence on Study Area
Dirca occidentalis western leatherwood	1B.2	Broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, North Coast coniferous forest, riparian forest and woodland. Usually on brushy slopes, mesic sites in mixed evergreen and foothill woodland communities, 30-550 m. Deciduous shrub, blooms January-April.	**None.** Suitable habitat present on the study area in California Bay Forest, but species should have been identifiable during June 27, 2019 field visit and was not observed.
Eriophyllum latilobum San Mateo wooly sunflower	FE, SE, 1B.1	Cismontane woodland (serpentine, often on roadcuts), 45-150 m. Blooms May-June.	**None.** No suitable habitat on the study area. No *Eriophyllum* observed.
Eryngium aristulatum var. *hooveri* Hoover's button-celery	1B.1	Vernal pools, 3-45 m. Blooms in July.	**None.** No suitable habitat on the study area.
Eryngium jepsonii Jepson's coyote-thistle	1B.2	Valley and foothill grassland, vernal pools (clay), 3-300 m. Blooms April-August.	**None.** No suitable habitat on the study area.
Fissidens pauperculus minute pocket moss	1B.2	North Coast coniferous forest (damp coastal soil), 10-1,024 m.	**None.** No suitable habitat on the study area.
Fritillaria liliacea fragrant fritillary	1B.2	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland (often serpentinite), 3-410 m. Blooms February-April.	**None.** No suitable habitat on the study area.
Hesperolinon congestum Marin western flax	FT, ST, 1B.1	Chaparral, valley and foothill grassland (serpentinite), 5-370 m. Blooms April-June.	**None.** No suitable habitat on the study area.
Legenere limosa legenere	1B.1	Vernal pools, 1-880 m. Blooms April-June.	**None.** No suitable habitat on the study area.
Lessingia arachnoidea Crystal Springs lessingia	1B.2	Cismontane woodland, coastal scrub, valley and foothill grassland (serpentinite), 60-200 m. Blooms July-October.	**None.** No suitable habitat on the study area.
Malacothamnus arcuatus arcuate bush mallow	1B.2	Chaparral, 15-355 m. Blooms April-September.	**None.** No suitable habitat on the study area. No *Malacothamnus* observed.
Monolopia gracilens woodland woollythreads	1B.2	Broadleafed upland forest and chaparral openings, cismontane woodland, North Coast coniferous forest openings, valley and foothill grassland (serpentine), 100-1,200 m. Blooms March-July.	**None.** No suitable habitat on the study area.
Pedicularis dudleyi Dudley's lousewort	1B.2, SR	Chaparral (maritime), cismontane woodland, North Coast coniferous forest, valley and foothill grassland, 60 to 900 m. Blooms April-June.	**None.** Marginal suitable habitat on the study area, but species should have been identifiable during June 27, 2019 field visit and was not observed.
Pentachaeta bellidiflora white-rayed pentachaeta	FE, SE, 1B.1	Valley and foothill grassland. Open dry rocky slopes and grassy areas, often on soils derived from serpentine bedrock, 35-620 m. Blooms March-May.	**None.** No suitable habitat on the study area.
Piperia candida white-flowered rein orchid	1B.2	Broadleafed upland forest, lower montane coniferous forest, North Coast coniferous forest (sometimes serpentinite), 30-	**None.** Marginal suitable habitat on the study area, but species should have been identifiable

Species	Status	Typical Habitat	Potential for Occurrence on Study Area
		1,310 m. Blooms May-September.	during June 27, 2019 field visit and was not observed.
Plagiobothrys chorisianus var. *chorisianus* Choris's popcorn-flower	1B.2	Chaparral, coastal prairie, coastal scrub (mesic), 15-100 m. Blooms March-June.	**None.** No suitable habitat on the study area.
Senecio aphanactis chaparral ragwort	2B.2	Chaparral, cismontane woodland, coastal scrub (sometimes alkaline), 15-800 m. Blooms January-May.	**None.** No suitable habitat on the study area.
Silene verecunda subsp. *verecunda* San Francisco campion	1B.2	Coastal bluff scrub, chaparral, coastal prairie, coastal scrub, valley and foothill grassland (sandy), 30-645 m. Blooms March-June (sometimes into August).	**None.** No suitable habitat on the study area.
Stuckenia filiformis subsp. *alpina* slender-leaved pondweed	2B.2	Marshes and swamps (assorted shallow freshwater), 300-2,150 m. Blooms May-July.	**None.** No suitable habitat on the study area.
Trifolium amoenum showy rancheria clover	FE, 1B.1	Coastal bluff scrub, valley and foothill grassland (sometimes serpentinite), 5-415 m. Blooms April-June.	**None.** No suitable habitat on the study area.
Trifolium hydrophilum saline clover	1B.2	Marshes and swamps, valley and foothill grassland (mesic/alkaline), vernal pools, 0-300 m. Blooms April-June.	**None.** No suitable habitat on the study area.
Triphysaria floribunda San Francisco owl's-clover	1B.2	Coastal prairie, coastal scrub, valley and foothill grassland (usually serpentinite), 10-160 m. Blooms April-June.	**None.** No suitable habitat on the study area.
Wildlife			
Invertebrates			
Callophrys mossii bayensis San Bruno elfin butterfly	FE	Coastal, mountainous areas with grassy ground cover, mainly in the vicinity of San Bruno Mountain, San Mateo County. Colonies are located on steep, north-facing slopes with the fog belt. Larval host plant is *Sedum spathulifolium*.	**None.** No suitable habitat or host plants observed on the study area.
Euphydryas editha bayensis Bay checkerspot butterfly	FT	Restricted to native grasslands on outcrops of serpentine soil near SF Bay. *Plantago erecta* primary host plant, with *Orthocarpus densiflorus* and *O. purpurscens* secondary.	**None.** No suitable soil or host plants observed on the study area.
Fish			
Oncorhynchus mykiss irideus steelhead – central California coast DPS	FT	From Russian River south to Soquel Creek and to, but not including, the Pajaro River. Also includes San Francisco and San Pablo Bay Basins.	**Present.** Species documented in Bear Gulch Creek and the creek is federally-designated Critical Habitat.
Amphibians			
Ambystoma californiense California tiger salamander	SSC, FT	Need underground refugia, especially ground squirrel and gopher burrows to over-summer; prefers vernal pools or other seasonal water sources for breeding but will use perennial ponds without fish.	**None.** No suitable habitat on the study area and outside current range.
Aneides niger Santa Cruz black salamander	SSC	Mixed deciduous and coniferous woodlands and coastal grasslands in San Mateo, Santa Cruz, and Santa Clara	**Moderate.** Suitable habitat present.

Species	Status	Typical Habitat	Potential for Occurrence on Study Area
		Counties. Adults found under rocks, talus, and damp woody debris.	
Dicamptodon ensatus California giant salamander	SSC	Known from coastal forests and chaparral near streams and seeps from southern Mendocino County inland to Solano County and south thru Santa Cruz and west Santa Clara Counties. Larvae found in cold, clear streams, often near headwaters. Adults rarely found, but sometimes on surface in wet conditions or under rocks, logs and other woody debris in a variety of habitats.	**Moderate.** Potential breeding habitat available in Bear Creek Gulch; low quality upland in proximity due to residential habitat conversion.
Rana boylii foothill yellow-legged frog	CT, SSC	Breeds in perennial streams with cobble-sized substrate; highly aquatic species.	**None.** Stream too shaded; outside extant range.
Rana draytonii California red-legged frog	FT, SSC	Breeds in semi-permanent and perennial water sources often with dense, shrubby or emergent riparian vegetation including stock ponds and marshes; uses a variety of wetland habitats including streams during the summer months.	**Moderate.** No breeding habitat present but Bear Creek Gulch provides suitable foraging and sheltering habitat if CRLF breed in the area.
Reptiles			
Emys marmorata western pond turtle	SSC	Inhabits permanent or nearly permanent bodies of water in many habitat types below 6000 ft. elevation. Nests in grassy, open habitats typically within 0.25-mile of aquatic habitat.	**Low.** Potential movement corridor along Bear Gulch Creek, but creek is narrow, shaded, and no nesting habitat nearby.
Thamnophis sirtalis tetrataenia San Francisco garter snake	FE, SE, FP	Vicinity of freshwater marshes, ponds, and slow moving streams in San Mateo and extreme northern Santa Cruz Counties. Prefers dense wetland cover that supports ranid frog prey and adjacent uplands with open scrub areas.	**Low.** Bear Gulch Creek could facilitate dispersal and movements but not expected to support resident individuals due to lack of a consistent prey-base under mostly closed-canopy. Adjacent residential disturbance further reduces upland habitat quality.
Birds			
Asio otus Long-eared owl	SSC	Nests in open woodland and coniferous forests, often near riparian areas.	**Low.** Unlikely to nest due to human use of area; last reported in region in 1986.
Athene cunicularia (nesting and wintering) burrowing owl	SSC BCC	Nests and winters in grasslands and open scrub with suitable burrows.	**None.** No suitable habitat on the study area.
Haliaeetus leucocephalus bald eagle	SE, FP	Uses ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within one mile of water. Nests in large, old-growth or dominant live tree with open branches, especially ponderosa pines. Roosts communally in winter.	**None.** No suitable open water habitat in the vicinity.
Brachyramphus marmoratus marbled murrelet	FT, SE	Nests in coastal forests from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old growth	**None.** Designated Critical Habitat present for the species ~1.3-miles NW in Huddart Park,

Species	Status	Typical Habitat	Potential for Occurrence on Study Area
		redwood-dominated forests, often in Douglas-fir, up to six miles inland.	but no suitable old-growth forest on or adjacent to the study area.
Circus cyaneus (nesting) northern harrier	SSC	Nests on ground in grassy vegetation, usually in proximity to a marsh or other water body.	**None.** No suitable habitat on the study area.
Elanus leucurus (nesting) White-tailed kite	FP	Open grassland, meadows, or marshes, for foraging, close to isolated, dense-topped trees for nesting and perching.	**Low.** Human disturbance in the area reduces likelihood of nesting.
Selasphorus sasin Allen's hummingbird	BCC	Nests in narrow coastal belt in woodland and scrub habitats.	**Moderate.** Suitable nesting habitat present in Riparian Woodland.
Picoides nuttallii Nuttall's woodpecker	BCC	Nests in oak woodland and along riparian corridors.	**Moderate.** Suitable nesting habitat present in Riparian Woodland and Coast Live Oak Woodland.
Contopus cooperi Olive-sided flycatcher	BCC, SSC	Nests primarily in coniferous forests with open canopy; also uses Eucalyptus forest along coast.	**Low.** Study area lacks preferred breeding habitat; no nearby breeding records.
Lanius ludovicianus Loggerhead shrike	BCC, SSC	Nest in isolated trees and shrubs; forages in open habitats.	**None.** No suitable nesting habitat present on the study area.
Geothlypis trichas sinuosa Saltmarsh (= San Francisco) common yellowthroat	BCC, SSC	Fresh and saltwater marshes. Requires thick, continuous cover down to water surface for foraging; nests in tall grasses, tule patches, and willows.	**Low.** No suitable nesting habitat present on the study area.
Carduelis lawrencei Lawrence's goldfinch	BCC	Prefers open woodlands in proximity to open water for nesting.	**Low.** No nearby records; canopy considered too closed to support nesting.
Baeolophus inornatus oak titmouse	BCC	Nests in oak, oak-pine and pinyon-juniper woodland.	**Present.** Observed on the study area during July 9, 2019 field visit.
Rallus longirostris obsoletus California clapper rail	FE, SE	Saltwater and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	**None.** No tidal marsh on or adjacent to the study area.
Sternula antillarum browni California least tern	FE, SE	Nests along coast from San Francisco Bay to Baja California. Colonial breeder on bare or sparsely vegetated flat substrates, such as sandy beaches, alkali flats, landfills, or paved areas.	**None.** No suitable habitat on the study area.
Mammals			
Antrozous pallidus pallid bat	SSC, WBWG	Roosts in caves, trees and buildings; forages in variety of habitats.	**Moderate.** Suitable roosting habitat present in mature trees with cavities in California Bay Forest and Redwood Forest.
Corynorhinus townsendii Townsend's big-eared bat	SSC, WBWG	Located throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	**Low.** Historic occurrences in the area but not expected to roost in area due to regular human activity.

Species	Status	Typical Habitat	Potential for Occurrence on Study Area
Lasiurus borealis western red bat	SSC	Roosts in foliage of trees and shrubs in riparian habitats.	**Low.** Few records from region but this may be due to lack of surveys; potential winter habitat but not expected during the breeding season.
Dipodomys venustus venustus Santa Cruz kangaroo rat	None: local rare species	Occurs in silverleaf manzanita mixed chaparral in the Zayante Sand Hills ecosystem of the Santa Cruz Mountains and range may extend into other portions of the Santa Cruz Mountains and Coast Range; needs well-drained sandy soils;	**None.** No suitable habitat present. Reported nearby on appropriate habitat within Jasper Reserve but genetic analysis is required to analyze the taxonomy of the species complex.
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	SSC	Forest habitats of moderate canopy and moderate to dense understory. Also in chaparral habitats. Constructs houses of shredded grass, leaves, and other material.	**Moderate.** Suitable habitat present along the Bear Gulch Creek corridor where dense ground cover present and under over-hanging banks above typical high water mark, but no SFDW houses observed.
Reithrodontomys raviventris salt-marsh harvest mouse	FE, SE	Found only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat, but may occur in other marsh vegetation types and in adjacent upland areas. Does not burrow. Builds loosely organized nests. Requires higher areas for flood escape.	**None.** No suitable habitat on the study area.
Taxidea taxus American badger	CSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats. Preys on burrowing rodents; digs burrows for dens and during foraging activities.	**None.** No suitable habitat on the study area.

Key to Status:	
BCC	Federal Bird of Conservation Concern
FE	Federal Endangered
FT	Federal Threatened
SE	State Endangered
ST	State Threatened
CT	State Candidate for listing
SSC	California Department of Fish and Game Species of Special Concern
FP	California Department of Fish and Game Fully Protected Species
WBWG	Western Bat Working Group: High Priority Species
1B	CNPS Rare Plant Rank of plants rare, threatened, or endangered in California and elsewhere
2	CNPS Rare Plant Rank of plants rare, threatened, or endangered in California but more common elsewhere
4	CNPS Rare Plant Rank of plants of limited distribution: a watch list
.1/.2/.3	Seriously endangered in California/Fairly endangered in California/ Not very endangered in California

Appendix B. Study Area Photographs.

Appendix B-1. California Bay Forest, forming a Riparian Woodland along Bear Gulch Creek.

Appendix B-2. Redwood Forest, forming a Riparian Woodland with California Bay Forest along Bear Gulch Creek.

Appendix B-3. Developed/Ruderal habitat on the study area near proposed bridge and trail.

Appendix B-4. Bear Gulch Creek at location of proposed bridge, looking upstream.

Appendix B-5. Bear Gulch Creek at location of proposed bridge, looking downstream.

Appendix B-6. Location of proposed bridge footing, above south top-of-bank of Bear Gulch Creek, looking upstream.

Appendix B-7. Location of proposed bridge footing, above north top-of-bank of Bear Gulch Creek, looking downstream.

Appendix B-8. Location of proposed trail along south side of Bear Gulch Creek, looking upstream.

Appendix C. Plant species observed on the study area, June 27, 2019.

Scientific Name	Common Name
Acer macrophyllum	big-leaf maple
Adiantum aleuticum	five-finger fern
Adiantum jordanii	California maidenhair
Aesculus californica	California buckeye
Alnus rhombifolia	white alder
Arbutus menziesii	Pacific madrone
Bromus carinatus	California brome
*Bromus diandrus**	ripgut brome
Bromus vulgaris	common brome
*Carduus pycnocephalus**	Italian thistle
Carex sp.	sedge
*Cirsium vulgare**	bull thistle
*Conium maculatum**	poison hemlock
*Cynosurus echinatus**	hedgehog dogtail
Cyperus eragrostis	tall flatsedge
Diplacus aurantiacus	sticky monkeyflower
Dryopteris arguta	wood fern
Elymus glaucus	blue wildrye
*Epipactis helleborine**	broad-leaved helleborine
Equisetum sp.	horsetail
*Euphorbia peplus**	petty spurge
Galium aparine	goose grass
*Genista monspessulana**	French broom
*Geranium purpureum**	little robin
*Hedera helix**	English ivy
Iris sp.	iris
Juglans sp.*	walnut
Juncus patens	spreading rush
Marah fabacea	California man-root
*Myosotis latifolia**	forget-me-not
Osmorhiza berteroi	sweet cicely
Oxalis sp.*	sorrel
Pentagramma triangularis	goldback fern
Polypodium sp.	polypody
Polystichum munitum	swordfern
Quercus agrifolia	coast live oak
*Rubus armeniacus**	Himalayan blackberry
Rubus ursinus	California blackberry
Salix laevigata	red willow
Sambucus nigra	blue elderberry
Sanicula crassicaulis	Pacific snakeroot
Scirpus microcarpus	small-flowered bulrush
Scrophularia californica	California figwort
Sequoia sempervirens	coast redwood
Solanum sp.	nightshade
Sonchus asper subsp. *asper**	prickly sow thistle

Scientific Name	Common Name
Stachys sp.	hedge nettle
Symphoricarpos albus	snowberry
Symphoricarpos mollis	creeping snowberry
*Torilis arvensis**	field hedge-parsley
Toxicodendron diversilobum	poison oak
Umbellularia californica	California bay
Urtica dioica	stinging nettle
*Vinca major**	periwinkle
Woodwardia fimbriata	giant chain fern
* = non-native species	

Appendix D. Wildlife species observed or detected by sign on the study area, July 9, 2019.

Scientific Name	Common Name
Buteo lineatus	Red-shouldered hawk
Calypte anna	Anna's hummingbird
Empidonax difficilis	Pacific-slope flycatcher
Sayornis nigricans	Black phoebe
Hirundo rustica	Barn swallow
Poecile rufescens	Chestnut-backed chickadee
Baeolophus inornatus	Oak titmouse
Certhia americana	Brown creeper
Turdus migratorius	American robin
Pipilo maculatus	Spotted towhee
Pipilo crissalis	California towhee
Junco hyemalis	Dark-eyed junco
Carpodacus mexicanus	House finch

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

ALAMEDA
COLUSA
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HUMBOLDT
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MARIN
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NAPA
SAN BENITO
SAN FRANCISCO
SAN MATEO
SANTA CLATA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
http://www.sonoma.edu/nwic

July 10, 2019

NWIC File No.: 19-0038

Jackie C. Young
The Town of Woodside
P.O. Box 620005
Woodside, CA 94062

Re: Record search results for the proposed Center Trail Bridge Project, Woodside

Dear Jackie Young:

Per your request received by our office on July 5, 2019, and updated to a rapid response on July 10, 2019, a rapid response records search was conducted for the above referenced project by reviewing pertinent Northwest Information Center (NWIC) base maps that reference cultural resources records and reports, historic-period maps, and literature for San Mateo County. Please note that use of the term cultural resources includes both archaeological resources and historical buildings and/or structures.

Review of this information indicates that there has been one cultural resource study that covers approximately 50% of the Center Trail Bridge project area (Jones 2006: S-31608). This project area contains no recorded archaeological resources, please note however, the author noted burned rocks in close proximity to the project area. The State Office of Historic Preservation Historic Property Directory (OHP HPD) (which includes listings of the California Register of Historical Resources, California State Historical Landmarks, California State Points of Historical Interest, and the National Register of Historic Places) lists no recorded buildings or structures within or adjacent to the proposed project area. In addition to these inventories, the NWIC base maps show no recorded buildings or structures within the proposed project area.

At the time of Euroamerican contact the Native Americans that lived in the area were speakers of the Ramaytush language, part of the Costanoan language family (Levy 1978:485). There are no Native American resources in or adjacent to the proposed project area referenced in the ethnographic literature.

Based on an evaluation of the environmental setting and features associated with known sites, Native American resources in this part of San Mateo County have been found in areas adjacent to intermittent and perennial watercourses, and on ridges, midslope benches, in valleys, and near ecotones. The Center Trail Bridge project area contains valley lands on both sides of Bear Gulch Creek. Given the similarity of one or more of these environmental factors and the noted burned rock in close proximity to the project area, there is a high potential for unrecorded Native American resources in the proposed Center Trail Bridge project area.

Review of historical literature and maps indicated the possibility of historic-period activity within the Center Trail Bridge project area. The 1894 San Mateo County Map indicated the project area was within and near lands of Vlopd, Winkler and Lane (Bromfield map). With this in mind, there is a moderate potential for unrecorded historic-period archaeological resources in the proposed Center Trail Bridge project area.

The 1961 Half Moon Bay USGS 15-minute topographic quadrangle fails to depict any buildings or structures within the Center Trail Bridge project area; therefore, there is a low possibility of identifying any buildings or structures 45 years or older within the project area.

RECOMMENDATIONS:

1) Our office has record of one previous survey that covered approximately 50% of the proposed project area (Jones 2006: S-31608). Jones noted burned rocks in close proximity to the project area (2006: 2, 4). The recommendations from Jones' report suggest that the current project area is located within a low to moderate sensitivity area. Any light construction (including garden buildings or features, tree planting, lighting, irrigation, etc) that should not create significant impact, should be monitored by a qualified archaeologist (2006: 3). Please refer to the list of consultants who meet the Secretary of Interior's Standards at http://www.chrisinfo.org.

2) There is a high potential of identifying Native American archaeological resources and a moderate potential of identifying historic-period archaeological resources in the unsurveyed portion of the project area. We recommend a qualified archaeologist conduct further archival and field study of the unsurveyed portion of the project area to identify cultural resources. Field study may include, but is not limited to, pedestrian survey, hand auger sampling, shovel test units, or geoarchaeological analyses as well as other common methods used to identify the presence of archaeological resources. Please refer to the list of consultants who meet the Secretary of Interior's Standards at http://www.chrisinfo.org.

3) We recommend the lead agency contact the local Native American tribe(s) regarding traditional, cultural, and religious heritage values. For a complete listing of tribes in the vicinity of the project, please contact the Native American Heritage Commission at 916/373-3710.

4) If the proposed project area contains buildings or structures that meet the minimum age requirement, prior to commencement of project activities, it is recommended that this resource be assessed by a professional familiar with the architecture and history of San Mateo County. Please refer to the list of consultants who meet the Secretary of Interior's Standards at http://www.chrisinfo.org.

5) Review for possible historic-period buildings or structures has included only those sources listed in the attached bibliography and should not be considered comprehensive.

6) If archaeological resources are encountered **during construction,** work should be temporarily halted in the vicinity of the discovered materials and workers should avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations. Project personnel should not collect cultural resources. Native American resources include chert or obsidian flakes, projectile points, mortars, and pestles; and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic-period resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies.

7) It is recommended that any identified cultural resources be recorded on DPR 523 historic resource recordation forms, available online from the Office of Historic Preservation's website: http://ohp.parks.ca.gov/default.asp?page_id=1069

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and

the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

Thank you for using our services. Please contact this office if you have any questions, (707) 588-8455.

Sincerely,

Jillian Guldenbrein

Jillian Guldenbrein
Researcher

LITERATURE REVIEWED

In addition to archaeological maps and site records on file at the Northwest Information Center of the Historical Resources Information System, the following literature was reviewed:

Brabb, Earl E., Fred A. Taylor, and George P. Miller
1982 *Geologic, Scenic, and Historic Points of Interest in San Mateo County, California.* Miscellaneous Investigations Series, Map I-1257-B, 1:62,500. Department of the Interior, United States Geological Survey, Washington, D.C.

Bromfield, Davenport
1894 Official Map of San Mateo County, California

Heizer, Robert F., editor
1974 *Local History Studies*, Vol. 18., "The Costanoan Indians." California History Center, DeAnza College, Cupertino, CA.

Helley, E.J., K.R. Lajoie, W.E. Spangle, and M.L. Blair
1979 *Flatland Deposits of the San Francisco Bay Region - Their Geology and Engineering Properties, and Their Importance to Comprehensive Planning.* Geological Survey Professional Paper 943. United States Geological Survey and Department of Housing and Urban Development.

Hoover, Mildred Brooke, Hero Eugene Rensch, and Ethel Rensch, revised by William N. Abeloe
1966 *Historic Spots in California.* Third Edition. Stanford University Press, Stanford, CA.

Hoover, Mildred Brooke, Hero Eugene Rensch, and Ethel Rensch, William N. Abeloe, revised by Douglas E. Kyle
1990 *Historic Spots in California.* Fourth Edition. Stanford University Press, Stanford, CA.

Jones, Laura (Stanford University)
2006 *Preliminary Archaeological Assessment for a Property at 3411-17 Woodside Road, Woodside, California (letter report).* **NWIC Report S-031608**

Kroeber, A.L.
1925 *Handbook of the Indians of California.* Bureau of American Ethnology, Bulletin 78, Smithsonian Institution, Washington, D.C. (Reprint by Dover Publications, Inc., New York, 1976)

Levy, Richard
1978 Costanoan. In *California*, edited by Robert F. Heizer, pp. 485-495. Handbook of North American Indians, vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Milliken, Randall
1995 *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1769-1810.* Ballena Press Anthropological Papers No. 43, Menlo Park, CA.

San Mateo County Historic Resources Advisory Board
1984 San Mateo County: Its History and Heritage. Second Edition. Division of Planning and Development Department of Environmental Management.

San Mateo County Planning and Development Department
n.d. "Historical and Archaeological Resources, Section 5" from the *San Mateo CountyGeneral Plan*.

State of California Department of Parks and Recreation
1976 *California Inventory of Historic Resources*. State of California Department of Parks and Recreation, Sacramento.

State of California Department of Parks and Recreation and Office of Historic Preservation
1988 *Five Views: An Ethnic Sites Survey for California*. State of California Department of Parks and Recreation and Office of Historic Preservation, Sacramento.

State of California Office of Historic Preservation **
2012 *Historic Properties Directory*. Listing by City (through April 2012). State of California Office of Historic Preservation, Sacramento.

Works Progress Administration
1984 *The WPA Guide to California*. Reprint by Pantheon Books, New York. (Originally published as California: A Guide to the Golden State in 1939 by Books, Inc., distributed by Hastings House Publishers, New York.)

**Note that the Office of Historic Preservation's *Historic Properties Directory* includes National Register, State Registered Landmarks, California Points of Historical Interest, and the California Register of Historical Resources as well as Certified Local Government surveys that have undergone Section 106 review.

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691 Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov

July 8, 2019

Sage Schaan, Principal Planner
Town of Woodside

VIA Email to: sschaan@woodsidetown.org

RE: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, **Center Trail Bridge Project**, Town of Woodside; Woodside USGS Quadrangle, San Mateo County, California

Dear Ms. Schaan:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

> Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

   - A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;

   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;

   - Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and

   - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measures.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton

Gayle Totton, B.S., M.A., Ph. D
Associate Governmental Program Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Mateo County
7/8/2019

Amah MutsunTribal Band
Valentin Lopez, Chairperson
P.O. Box 5272
Galt, CA, 95632
Phone: (916) 743 - 5833
vlopez@amahmutsun.org

Costanoan
Northern Valley
Yokut

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road
Woodside, CA, 94062
Phone: (650) 851 - 7489
Fax: (650) 332-1526
amahmutsuntribal@gmail.com

Costanoan

Costanoan Rumsen Carmel Tribe
Tony Cerda, Chairperson
244 E. 1st Street
Pomona, CA, 91766
Phone: (909) 629 - 6081
Fax: (909) 524-8041
rumsen@aol.com

Costanoan

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA, 95024
Phone: (831) 637 - 4238
ams@indiancanyon.org

Costanoan

Muwekma Ohlone Indian Tribe of the SF Bay Area
Charlene Nijmeh, Chairperson
20885 Redwood Road, Suite 232
Castro Valley, CA, 94546
Phone: (408) 464 - 2892
cnijmeh@muwekma.org

Costanoan

The Ohlone Indian Tribe
Andrew Galvan,
P.O. Box 3388
Fremont, CA, 94539
Phone: (510) 882 - 0527
Fax: (510) 687-9393
chochenyo@AOL.com

Bay Miwok
Ohlone
Patwin
Plains Miwok

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Center Trail Bridge Project, San Mateo County.