Appendix B:
Biological Resources Supporting Information

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B.1 - Biological Resources Analysis

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BIOLOGICAL RESOURCES ANALYSIS REPORT

FOR THE

3180 WALNUT BOULEVARD PROPERTY

CONTRA COSTA COUNTY, CALIFORNIA

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SUMMARY

On July 12, 2021, Olberding Environmental, Inc. conducted a field reconnaissance survey of the 3180 Walnut Boulevard Property (Property) for the purpose of identifying sensitive plant and wildlife species, sensitive habitats, and biological constraints potentially occurring on the Property. The Property surveyed is comprised of approximately 2.66 acres located in unincorporated Contra Costa County, California.

Results of the initial reconnaissance survey indicate that the Property contains wetlands/waters that might be considered jurisdictional by the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and/or the California Department of Fish and Wildlife (CDFW). The Property contains one ephemeral drainage feature located at the northern boundary of the Property and flows from the northeast corner to the northwest corner. The drainage ends in a concrete culvert at the northwest boundary of the Property. Scattered valley oak (*Quercus lobata*), coast live oak (*Quercus agrifolia*), and black walnut (*Juglans hindsii*) trees are present along the banks of the drainage. A riparian corridor consisting of valley oak and black walnut trees is present at the northwestern end of the drainage. No water was present in the drainage during the July 2021 survey. If any project related activities are to occur within these features an Army Corps of Engineers jurisdictional delineation would be required.

A query of the California Natural Diversity Database (CNDDB) showed that four special-status plant species have a potential to occur on the Property. Congdon's tarplant (*Centromadia parryi ssp. congdonii*), Diablo helianthella (*Helianthella castanea*), Mount Diablo fairy-lantern (*Calochortus pulchellus*), and bent-flowered fiddleneck (*Amsinckia lunaris*) were identified as having a low potential to occur on the Property based on the presence of suitable habitat for these species and CNDDB occurrences located within the vicinity of the Property. Suitable habitat for these species occurs throughout the Property within the non-native annual grassland and woodland habitats. A rare plant survey of the Property was conducted in April 2022, during the blooming period for three of these species (Diablo helianthella, Mount Diablo fairy-lantern, bent-flowered fiddleneck) and none of these species were observed; thus, they are presumed absent. Although the April 2022 survey was conducted outside of the blooming period for Congdon's tarplant (June – November), remnant plants would have been observed if this species was present. Additionally, the July 2021 reconnaissance survey was conducted during the blooming period for this species, and it was not observed. Thus, Congdon's tarplant is also presumed absent from the Property.

A total of five bird species were identified to have a moderate to high potential to occur on the Property in a nesting or foraging capacity. The red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), and Cooper's hawk (*Accipiter cooperii*) all have a high potential to

occur in a nesting and foraging capacity. The white-tailed kite (*Elanus leucurus*) and American kestrel (*Falco sparverius*) have a moderate potential to occur in a nesting and foraging capacity. If project construction-related activities such as tree and vegetation removal or grading take place during the avian nesting season (February through August), preconstruction surveys for nesting passerine birds and raptors are recommended.

CNDDB listed nine occurrences of California red-legged frog (*Rana draytonii*) in the 5-mile radius of the Property. The Property contained no sources of perennial water suitable for breeding or small mammal burrows required for upland refuge habitat as areas of the grassland habitat had recently been disked. The drainage present on the Property contained no standing water during the July 2021 site visit. The most recent occurrence (#1712) was observed approximately 4.3 miles northeast of the Property. For these reasons CRLF has a low potential to occur on site and is not likely to occur.

CNDDB listed four occurrences of California tiger salamander (*Ambystoma californiense*) within five miles of the Property. However, all of these occurrences are historical, and the species is considered to be extirpated within this area. The Property does not offer suitable breeding or upland refuge habitat. No vernal pools or stock ponds are present onsite and the Property lacks small mammal burrows due to areas of the grassland habitat being recently disked. For these reasons CTS are presumed absent from the Property.

CNDDB listed twenty occurrences of Alameda whipsnake (*Masticophis lateralis euryxanthus*) within the 5-mile radius of the Property. Due to the sensitivity of these species, the exact locations of these occurrences are unknown. The Property does not overlap with USFWS designated critical habitat for Alameda whipsnake. Critical habitat for Alameda whipsnake is located approximately 2 miles east within the Shell Ridge Open Space. The Property contains grassland habitat but it is not suitable for the Alameda whipsnake due to the lack of scrub or rock outcrop habitats which the Alameda whipsnake characteristically prefers. However, the southwestern edge of the Shell Ridge Open Space is located approximately 0.3 miles northeast of the Property. Therefore, Alameda whipsnake could utilize the Property for dispersal. For these reasons, Alameda whipsnake has a low potential to occur on the Property in a dispersal capacity only.

No sign of bat use was observed on the Property during the February 2021 survey; however, based on habitat suitability and the presence of the existing residential structure which appears to be undisturbed, it was determined that certain bats have a moderate potential to utilize the site in a roosting and foraging capacity. These bat species include: hoary bat (*Lasiurus cinereus),* pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendi*), western red bat (*Lasiurus blossevillii*), and Yuma myotis (*Myotis yumanensis*). If project construction-related

activities such as tree removal or removal of the existing residential structure take place it is recommended that a bat habitat assessment be conducted by a qualified bat biologist during seasonal periods of bat activity to determine suitability of the on-site habitat. If special-status bat species are discovered, construction activities may be timed to minimize impacts and additional mitigation may be required.

1.0 INTRODUCTION

Olberding Environmental, Inc. has conducted a biological resources analysis (biological constraints assessment) of the 3180 Walnut Boulevard Property, located in unincorporated Contra Costa County, California. This biological resources analysis included a review of pertinent literature on relevant background information and habitat characteristics of the site. Our review included researching existing information in the California Natural Diversity Database (CNDDB) maintained by the CDFW and the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Vascular Plants of California*. Also included was a review of information related to species of plants and animals that could potentially utilize the described habitats identified on and immediately surrounding the Property. To assist in the assessment, a field reconnaissance investigation of the Property was conducted on July 12, 2021. This report documents the methods, results, and conclusions for the reconnaissance-level survey associated with the biological resources analysis for the Property.

2.0 LOCATION

The Property is located approximately 1.0 mile east of Interstate 680, on Walnut Boulevard just outside the city limits of Walnut Creek, in unincorporated Contra Costa County, California. Attachment 1, Figure 1 depicts the regional location of the Property in Contra Costa County, and Attachment 1, Figure 2 illustrates the vicinity of the Property in relationship to the City of Walnut Creek. Attachment 1, Figure 3 identifies the location of the Property on the USGS 7.5 Quadrangle Map for Walnut Creek. An aerial photograph of the Property has been included as Attachment 1, Figure 4.

Access to the Property is provided from Interstate 680. Take the Rudgear Road exit and travel east on Rudgear Road for 0.3 miles. Turn left onto San Miguel Drive and travel north for 1.0 mile. Turn right onto Shady Glen Road and travel north for 0.6 miles and then turn right onto Walnut Boulevard. Travel for 0.2 miles on Walnut Boulevard and the Property will be on the left.

3.0 PROPERTY DESCRIPTION

The Property encompasses approximately 2.66 acres in a roughly irregular 4-sided shape bounded on the south and west by Walnut Boulevard and residential area, the east by a private lane and residential area, and on the north by residential single-family homes. The Property supports five habitat types consisting of non-native annual grassland, ephemeral drainage, riparian, mixed woodland, and developed (Attachment 1, Figure 10). Characteristic vegetation includes wild oat (*Avena fatua*), Italian rye grass (*Festuca perennis*), ripgut brome (*Bromus* diandrus), soft chess (*Bromus hordeaceus*), hare barley (*Hordeum murinum ssp. leporinum*), valley oak (*Quercus lobata*), coast live oak (*Querucs agrifolia*), California black walnut (*Juglans hindsii*) and various ornamental trees. The Property contains a single existing residential structure.

One drainage occurs on the Property. An ephemeral drainage, located on the northern boundary of the Property, flows from the northeast corner to the northwest corner of the Property. It flows underneath riparian corridors at the eastern and western ends, and empties into a concrete culvert that is partially buried underneath various debris at the northwest boundary of the Property.

The topography of the Property consists of a slightly sloping landscape with elevations ranging between 186 feet above sea level near the southern boundary and 236 feet above sea level near the center of the Property.

4.0 REGULATORY SETTING

4.1 Federal Regulatory Setting

4.1.1 Plants and Wildlife

The federal Endangered Species Act (ESA) of 1973 (16 USC 1531 et seq., as amended) prohibits federal agencies from authorizing, permitting, or funding any action that would result in biological jeopardy to a plant or animal species listed as Threatened or Endangered under the Act. Listed species are taxa for which proposed and final rules have been published in the Federal Register (U.S. Fish and Wildlife Service [USFWS] 2020). If a proposed project may jeopardize listed species, Section 7 of the ESA requires consideration of those species through formal consultations with the USFWS. Federal Proposed species (USFWS, 2019) are species for which a proposed listing as Threatened or Endangered under ESA has been published in the Federal Register. If a proposed project may jeopardize proposed species, Section 7 of the ESA affords consideration of those species through informal conferences with USFWS. The USFWS

defines federal Candidate species as "those taxa for which we have on file sufficient information on biological vulnerability and threats to support issuance of a proposed rule to list, but issuance of the proposed rule is precluded by other higher priority listing actions" (USFWS, 2019). Federal Candidate species are not afforded formal protection, although USFWS encourages other federal agencies to give consideration to Candidate species in environmental planning.

4.1.2 Wetlands/Waters

The federal government, acting through the Corps and the Environmental Protection Agency (EPA), has jurisdiction over all "waters of the United States" as authorized by §404 of the Clean Water Act (CWA) and §10 of the Rivers and Harbors Act of 1899 (33 CFR Parts 320-330). Properties that cause the discharge of dredged or fill material into waters of the United States require permitting by the Corps. Actions affecting small areas of jurisdictional waters of the United States may qualify for a Nationwide Permit (NWP), provided conditions of the permit are met, such as avoiding impacts to threatened or endangered species or to important cultural sites. Properties that affect larger areas or which do not meet the conditions of an NWP require an Individual Permit. The process for obtaining an Individual Permit requires a detailed alternatives analysis and development of a comprehensive mitigation/monitoring plan.

Waters of the United States are defined as territorial seas and traditionally navigable waters, tributaries, lakes and ponds, and impoundments of jurisdictional waters, and adjacent wetlands. Under federal regulation, wetlands are defined as areas that are inundated or saturated by surface of groundwater at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. (33 CFR Part 328.3(c)(16)). Wetlands generally include swamps, marshes, bogs, and similar areas. In addition, portions of the riparian habitat along a river or stream may be a wetland where the riparian vegetation is at or below the ordinary high water mark and thus also meets the wetland hydrology and hydric soil criteria.

Navigable waters include all waters subject to the ebb and flow of the tides, including the open ocean, tidal bays, and tidal sloughs. Navigable waters also include some large, non-tidal rivers and lakes, which are important for transportation in commerce. The jurisdictional limit over navigable waters extends laterally to the entire water surface and bed of the waterbody landward to the limits of the mean high tide line. For non-tidal rivers or lakes, which have been designated (by the Corps) to be navigable waters, the limit of jurisdiction along the shoreline is defined by the ordinary high water mark. "Other waters" refer to waters of the United States other than wetlands or navigable waters. Other waters include streams and ponds, which are generally open water bodies and are not vegetated. Other waters can be perennial or intermittent water bodies

and waterways. The Corps regulates other waters to the outward limit of the ordinary high water mark. Streams should exhibit a defined channel, bed and banks to be delineated as other waters.

The Corps does not generally consider "non-tidal drainage and irrigation ditches excavated on dry land" to be jurisdictional waters of the United States (and such ditches would therefore not be regulated by the Corps (33 CFR Parts 320-330, November 13, 1986). Other areas generally not considered jurisdictional waters include: 1) artificially irrigated areas that would revert to upland habitat if the irrigation ceased; 2) artificial lakes and ponds created by excavating and/or diking of dry land to collect and retain water, used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing; 3) waste treatment ponds; 4) ponds formed by construction activities including borrow pits until abandoned; and 5) ponds created for aesthetic reasons such as reflecting or ornamental ponds (33 CFR Part 328.3). However, the preamble also states "the Corps reserves the right on a case-by-case basis to determine that a particular waterbody within these categories" can be regulated as jurisdictional water. The EPA also has authority to determine jurisdictional waters of the U.S. on a case-by-case basis. Riparian habitat that is above the ordinary high water mark and does not meet the three-parameter criteria for a wetland would not be regulated as jurisdictional waters of the United States.

4.1.3 Migratory Bird Treaty Act

Raptors are migratory bird species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Sections 3503, 3503.5, and 3800 of the California Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs. Implementation of the take provisions requires that Property-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (generally February 1 – September 1, annually). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) or the loss of habitat upon which the birds depend, is considered "taking" and is potentially punishable by fines and/or imprisonment. Such taking would also violate federal law protecting migratory birds (e.g., MBTA).

4.1.4 Federal Bald and Golden Eagle Protection Act

In addition to protection under the MBTA, both the bald eagle and the golden eagle are also protected by the Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668-668c). The Bald and Golden Eagle Protection Act, and amended several times since being enacted in 1940, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald or

golden eagles, including their parts, nests, or eggs (USFWS 2007). The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb" (USFWS 2007).

For purposes of these guidelines, "disturb" means: "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior" (USFWS 2007).

In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment (USFWS 2007).

4.2 State Regulatory Setting

4.2.1 Plants and Wildlife

Property permitting and approval requires compliance with California Environmental Quality Act (CEQA), the 1984 California Endangered Species Act (CESA), and the 1977 Native Plant Protection Act (NPPA). The CESA and NPPA authorize the California Fish and Game Commission to designate Endangered, Threatened and Rare species and to regulate the taking of these species (§§2050-2098, Fish & Game Code). The California Code of Regulations (Title 14, §670.5) lists animal species considered Endangered or Threatened by the State.

The Natural Heritage Division of the CDFW administers the state rare species program. The CDFW maintains lists of designated Endangered, Threatened, and Rare plant and animal species (CDFW 2021b and 2021). Listed species either were designated under the NPPA or designated by the Fish and Game Commission. In addition to recognizing three levels of endangerment, the CDFW can afford interim protection to candidate species while they are being reviewed by the Fish and Game Commission.

The CDFW also maintains a list of animal species of special concern (CDFW 2021), most of which are species whose breeding populations in California may face extirpation. Although these species have no legal status, the CDFW recommends considering them during analysis of

proposed property impacts to protect declining populations and avoid the need to list them as endangered in the future.

Under provisions of §15380(d) of the CEQA Guidelines, the CEQA lead agency and CDFW, in making a determination of significance, must treat non-listed plant and animal species as equivalent to listed species if such species satisfy the minimum biological criteria for listing. In general, the CDFW considers plant species on List 1A (Plants Presumed Extinct in California), List 1B (Plants Rare, Threatened, or Endangered in California and elsewhere), or List 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere) of the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (Skinner and Pavlik 1994) as qualifying for legal protection under §15380(d). Species on CNPS Lists 3 or 4 may, but generally do not, qualify for protection under this provision.

Sensitive habitats include riparian corridors, wetlands, habitats for legally protected species and CDFW Species of Special Concern, areas of high biological diversity, areas providing important wildlife habitat, and unusual or regionally restricted habitat types. Habitat types considered sensitive include those listed on the CNDDB working list of "high priority" habitats (i.e., those habitats that are rare or endangered within the borders of California) (Holland 1986).

4.2.2 Wetlands/Waters

The RWQCB regulates activities in wetlands and other waters through §401 of the Clean Water Act. Section 401 requires a state water quality certification for properties subject to 404 regulations. Requirements of the certification include mitigation for loss of wetland habitat. In the San Francisco Bay region, the RWQCB may identify additional wetland mitigation beyond the mitigation required by the Corps. California Fish and Game Code §§1600-1607 require the CDFW be notified of any activity that could affect the bank or bed of any stream that has value to fish and wildlife. Upon notification, the CDFW has the discretion to execute a Streambed Alteration Agreement. The CDFW defines a stream as follows:

> *"... a body of water that flows at least periodically...through a bed or channel having banks and supporting fish and other aquatic life. This includes watercourses having a subsurface flow that supports or has supported riparian vegetation."*
>
> (Source: Streambed Alteration Program, California Department of Fish and Wildlife, 2016).

In practice, CDFW authority is extended to any "blue line" stream shown on a USGS topographic map, as well as unmapped channels with a definable bank and bed. Wetlands, as defined by the Corps, need not be present for CDFW to exert authority.

4.2.3 California Environmental Quality Act

According to Appendix G of the CEQA (CEQA 2021) Guidelines, a proposed project would have a significant impact on biological resources if it would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW and USFWS?

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS?

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

4.3 Local Regulatory Setting

4.3.1 Contra Costa County – Tree Protection And Preservation Ordinance

If the proposed Project plans on the potential trimming or removal of trees, county ordinances for tree protections must be adhered to. Native trees and all trees greater than 6.5 inches in diameter at breast height (dbh) are considered to be protected under the Contra Costa County Tree Protection and Preservation Ordinance (Chapter 816-6, Ordinances 94-59, 94-22, Contra Costa County Code).

According to the Contra Costa County tree ordinance, a “protected tree” is defined as the following:

(1) On all properties within the unincorporated area of the county:

(A) Where the tree to be cut down, destroyed or trimmed by topping is adjacent to or part of a riparian, foothill woodland or oak savanna area, or part of a stand of four or more trees, measures twenty inches or larger in circumference (approximately 6.5 inches in diameter) as measured four and one-half feet from ground level, and is included in the following list of indigenous trees: *Acer macrophyllum* (Bigleaf Maple), *Acer negundo* (Box Elder), *Aesculus califonica* (California Buckeye), *Alnus rhombifolia* (White Alder), *Arbutus menziesii* (Madrone), *Heteromeles arbutifolia* (Toyon), *Juglans hindsii* (California Black Walnut), *Juniperus californica* (California Juniper), *Lithocarpus densiflora* (Tanoak or Tanbark Oak), *Pinus attenuata* (Knobcone Pine), *Pinus sabiniana* (Digger Pine), *Platanus racemosa* (California Sycamore), *Populus fremontii* (Fremont Cottonwood), *Populus trichocarpa* (Black Cottonwood), *Quercus agrifolia* (California or Coast Live Oak), *Quercus chrysolepis* (Canyon Live Oak), *Quercus douglasii* (Blue Oak), *Quercus kelloggii* (California Black Oak), *Quercus lobata* (Valley Oak), *Quercus wislizenii* (Interior Live Oak), *Salix lasiandra* (Yellow Willow), *Salix laevigata* (Red Willow), *Salix lasiolepis* (Arroyo Willow), *Sambucus callicarpa* (Coast Red Elderberry), *Sequoia sempervirens* (Coast Redwood), *Umbellularia californica* (California Bay or Laurel);

(B) Any tree shown to be preserved on an approved tentative map, development or site plan or required to be retained as a condition of approval;

(C) Any tree required to be planted as a replacement for an unlawfully removed tree.

(2) On any of the properties specified in subsection (3) of this section:

(A) Any tree measuring twenty inches or larger in circumference (approximately six and one-half inches diameter), measured four and one-half feet from ground level including the oak trees listed above;

(B) Any multistemmed tree with the sum of the circumferences measuring forty inches or larger, measured four and one-half feet from ground level;

(C) And any significant grouping of trees, including groves of four or more trees.

(3) Specified properties referred to in subsection (2) of this section includes:

(A) Any developed property within any commercial, professional office or industrial district;

(B) Any undeveloped property within any district;

(C) Any area designated on the general plan for recreational purposes or open space;

(D) Any area designated in the county general plan open space element as visually significant riparian or ridge line vegetation and where the tree is adjacent to or part of a riparian, foothill woodland or oak savanna area. (Ords. 94-59, 94-22).

Any person proposing to trench, grade or fill within the dripline of any protected tree or cut down, destroy, trim by topping or remove any protected tree shall apply to the department for a tree permit, not less than ten days prior to the proposed tree removal or tree alterations. Persons who would be eligible to apply for three or more individual tree permits under provisions of this chapter may apply for a collective tree permit for the site. (Ords. 94-59, 94-22).

If the reasons for alteration or removal relate to the health of the tree or if grading, trenching or filling is proposed under the dripline of an existing tree, or the review is of a collective tree permit and the director determines that more technical expertise is necessary to make the decision, a report prepared by an arborist may be required, to be paid for by the applicant. (Ords. 94-59, 94-22).

5.0 METHODS OF ANALYSIS FOR GENERAL BIOLOGICAL RESOURCES

A special-status plant and wildlife species database search and review was conducted using the CNDDB and other sources. An additional search was conducted for special-status plants using CNPS *Inventory* on-line. Special-status species reports were accessed by searching the CNDDB database for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo USGS 7.5-minute quadrangles which surround the Property, and by examining those species that have been identified in the vicinity of the Property. These quadrangles will be henceforth noted as surrounding quads. The database report identified special-status species known to occur in the region or those that have the potential to occur in the vicinity of the Property. The CNDDB report was used to focus special-status species analysis of the site prior to the reconnaissance surveys.

An Olberding Environmental biologist conducted a reconnaissance-level survey of the Property on July 12, 2021. The survey consisted of walking throughout the Property and evaluating the site and adjacent lands for potential biological resources. Existing conditions, observed plants and wildlife, adjacent land use, soils and potential biological resource constraints were recorded during the visit. Plant and wildlife species observed within and adjacent to the Property during

the reconnaissance survey are listed in Attachment 2, Table 1. Site photographs are provided in Attachment 3 of this document. Attachment 1, Figure 9 shows where each site photo was taken.

The objectives of the field survey were to determine the potential presence or absence of special-status species habitat listed in the CNDDB database report and to identify any features that could be potentially regulated by the Corps, RWQCB, and/or CDFW (CNDDB 2021). In addition, the Olberding Environmental biologist looked for other potential sensitive species or habitats that may not have been obvious from background database reports or research. Surveys conducted after the growing season or conducted outside of the specific flowering period for a special-status plant cannot conclusively determine the presence or absence of such plant species; therefore, site conditions and habitat type were used to determine potential for occurrence. When suitable habitat was observed to support a special-status plant or animal species, it was noted in the discussion for that particular species. Regulatory agencies evaluate the possibility of occurrence based on habitats observed on-site and the degree of connectivity with other special-status animal habitats in the vicinity of the Property. These factors are discussed in each special-status plant or animal section. Potential for occurrence of each special-status or protected plant and animal species was evaluated using the following criteria.

- **Present**: The species has been recorded by CNDDB or other literature as occurring on the Property and/or was observed on the Property during the reconnaissance survey or protocol surveys.

- **May Occur**: The species has been recorded by CNDDB or other literature as occurring within five miles of the Property, and/or was observed within five miles of the Property, and/or suitable habitat for the species is present on the Property or its immediate vicinity.

- **Not Likely to Occur**: The species has historically occurred on or within five miles of the Property, but has no current records. The species occurs within five miles of the Property but only marginally suitable habitat conditions are present. The Property is likely to be used only as incidental foraging habitat or as an occasional migratory corridor.

- **Presumed Absent**: The species will not occur on the Property due to the absence of suitable habitat conditions, and/or the lack of current occurrences. Alternatively, if directed or protocol-level surveys were done during the proper occurrence period and the species was not found, it is presumed absent.

Sources consulted for agency status information include USFWS (2020) for federally listed species and CDFW (2021) for State of California listed species. Based on information from the above sources, Olberding Environmental developed a target list of special-status plants and

wildlife with the potential to occur within or in the vicinity of the Property (Attachment 2, Table 2).

5.1 Soils Evaluation

The soils present on a property may determine if habitat on the site is suitable for certain special-status plants and animals. The host plants of some special-status invertebrates may also require specific soil conditions. In the absence of suitable soil conditions, special-status plants or animals requiring those conditions would be presumed absent. Information regarding soil characteristics for the Property was obtained by viewing the Natural Resources Conservation Service (NRCS) Web Soil Survey report for the Property (NRCS 2019).

5.2 Plant Survey Methods

The purposes of the botanical surveys were (1) to characterize the habitat types (plant communities) of the study area; (2) to determine whether any suitable habitat for any special-status plant species occurs within the study area; and (3) to determine whether any sensitive habitat types (wetlands) occur within the study area. Site conditions and plant habitat surveys are important tools in determining the potential occurrence of plants not recorded during surveys (e.g., special-status plants) because presence cannot conclusively be determined if field surveys are conducted after the growing season or conducted outside a specific flowering period.

5.2.1 Review of Literature and Data Sources

The biologist conducted focused surveys of literature and special-status species databases in order to identify special-status plant species and sensitive habitat types with potential to occur in the study area. Sources reviewed included the CNDDB occurrence records (CNDDB 2021) and CNPS *Inventory* (Skinner and Pavlik 1994) for the surrounding quads; and standard flora (The Jepson Manual 2012). From the above sources, a list of special-status plant species with potential to occur in the Property vicinity was developed (Attachment 2, Table 2).

5.2.2 Field Surveys

A biologist from Olberding Environmental conducted a reconnaissance-level survey to determine habitat types and the potential for special-status plants based on the observed habitat types. All vascular plant species that were identifiable at the time of the survey were recorded and identified using keys and descriptions in The Jepson Manual (2012).

The habitat types occurring on the Property were characterized according to pre-established categories. In classifying the habitat types on the site, the generalized plant community classification schemes of *A Manual of California Vegetation* (Sawyer, Keeler-Wolf, and Evens 2009) were consulted. The final classification and characterization of the habitat types of the study area were based on field observations.

5.3 Wildlife Survey Methods

The purposes of the wildlife survey were to identify special-status wildlife species and/or potential special-status wildlife habitats within the study area.

5.3.1 Review of Literature and Data Sources

A focused review of literature and data sources was conducted in order to determine which special-status wildlife species had potential to occur in the vicinity of the Property. Current agency status information was obtained from USFWS (2020) for species listed as Threatened or Endangered, as well as Proposed and Candidate species for listing, under the federal ESA; and from CDFW (2021b, 2021) for species listed as Threatened or Endangered by the state of California under the CESA, or listed as "species of special concern" by CDFW. From the above sources, a list of special-status wildlife species with potential to occur in the Property vicinity was developed (Attachment 2, Table 2).

5.3.2 Field Surveys

General Wildlife Survey – An Olberding Environmental biologist conducted a survey of species habitat within the entire study area, including visible portions of the adjacent properties. The purpose of the habitat survey was to evaluate wildlife habitats and the potential for any protected species to occur on or adjacent to the Property.

Reconnaissance-Level Raptor Survey – A reconnaissance-level raptor survey was conducted on the Property. Observation points were established on the periphery of the site to view raptor activity over a fifteen- to thirty-minute time period. This survey was conducted with the use of binoculars and notes were taken for each species occurrence. Additionally, utility poles and perch sites in the vicinity of the Property were observed. All raptor activity within and adjacent to the Property was recorded during the reconnaissance-level observation period.

Reconnaissance-Level Burrowing Owl (Athene cunicularia) Survey – A reconnaissance-level burrowing owl (*Athene cunicularia*) survey was also conducted on the Property to identify

potential burrow sites or burrowing owl use of on-site habitat. The general presence and density of suitable burrow sites (e.g., rodent burrows) was evaluated for the Property.

6.0 RESULTS FOR GENERAL BIOLOGICAL RESOURCES

The search and review of the CNDDB database reports revealed the occurrence of special-status plant and wildlife species that occur in the habitats found within the Property boundaries (CNDDB 2021). The CNDDB database and background data were reviewed for the surrounding quads. Wildlife occurrences shown on Attachment 1, Figure 5 and plant occurrences shown on Attachment 1, Figure 6 are located within 5 miles of the Property and were reviewed for their potential to occur on the Property based on general habitat types. Results of the species review is tabulated on Attachment 2, Table 2. Critical habitat within the surrounding quads is shown on Attachment 1, Figure 7.

6.1 Soil Evaluation Results

The NRCS (2019) reports one soil type within the Property. A map of this soil type can be found in Attachment 1, Figure 8. The soil type mapped includes the following:

- **LcE: Lodo clay loam, 9 to 30 percent slopes (100%) –** The Lodo series consists of shallow, somewhat excessively drained soils that formed in material weathered from hard shale and fine grained sandstone. Lodo soils are on mountainous uplands and have slopes of 5 to 75 percent at elevations of 300 to 3,400 feet. The composition of this soil type within the Property consists of 85 percent Lodo and similar soils and 15 percent of minor components including Millshom (5%), Los Osos (5%), Tiera (3%), and Rock outcrop (2%).

  This series exhibits medium to rapid runoff and moderate permeability. This series shows no frequency of flooding or ponding and is non-saline. The soil is used principally for grazing, wildlife, and watershed. Native vegetation is buckwheat, scattered oak trees, Foothill pine, and chaparral. Naturalized vegetation is annual grasses and forbs. Its stratified layers consist of the following (colors are for dry soil unless otherwise stated):

  A--0 to 7 inches; grayish brown (2.5Y 5/2) shaly clay loam, very dark grayish brown (2.5Y 3/2) moist; weak fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial and tubular pores; about 15 percent by volume of distinct angular shale fragments; slightly acid; abrupt wavy boundary. (4 to 20 inches thick)

R--7 inches; shattered warped and folded dark grayish brown hard shale.

6.2 Plant Survey Results

6.2.1 Floristic Inventory and Habitat Characterization

The 2.66 acre Property supports five habitat types consisting of developed, non-native annual grassland, mixed woodland, riparian, and ephemeral drainage. In classifying the habitat types on the Property, generalized plant community classification schemes were used (Sawyer, Keeler-Wolf, and Evens 2009). The final classification and characterization of the habitat type of the Property was based on field observations. Plant species that were documented to have occurred within 5 miles of the Property are shown in Attachment 1, Figure 6.

The habitat type and a description of the plant species present within the habitat type are provided below. The habitats found on the Property are mapped on Attachment 1, Figure 10. Dominant plant species are also noted. A complete list of plant species observed on the Property can be found within Attachment 2, Table 1.

Non-native annual Grassland

The majority of the Property (1.31 acres) is dominated by non-native annual grassland. This habitat type exists throughout the Property with the largest areas present in the northern portion. Large portions of the grassland habitat were recently disked as of the July 12, 2021 survey. Dominant vegetation observed within this habitat type includes but is not limited to wild oat, ripgut brome, soft chess, Italian thistle (*Carduus pycnocephalus*), milk thistle (*Silybum marianum*), hare barley, and Italian rye grass.

Developed

The developed area (0.11 acres) located in the central portion of the Property contains one existing residential structure. The structure is surrounded on all sides by mixed woodland habitat that consists primarily of ornamental trees and shrubs.

Ephemeral Drainage

The Property contains one ephemeral drainage feature located along the northern boundary of the Property. The drainage (0.17 acres, 410 linear feet) flows from the northeast corner to the northwest corner of the Property where it ends in a concrete culvert. No water was observed in the drainage during the July 2021 site survey. Dominant vegetation within the drainage consists primarily of blue wild rye (*Elymus glaucus*), wild oat, ripgut brome, and soft chess. Scattered

coast live oak, valley oak, and California black walnut trees line the banks of the drainage. The drainage flows through a riparian corridor that exists at the western end of the ephemeral drainage.

Riparian

Riparian habitat (0.05 acres) consisting of valley oak and black walnut trees is present along the northern boundary of the Property at the eastern and western ends of the ephemeral drainage. Dominant understory plants include wild oat, ripgut brome, and soft chess.

Mixed Woodland

The mixed woodland habitat encompasses approximately 0.27 acres of the Property. The woodland habitat is dominated by valley oak, California black walnut, and ornamental trees. Mixed woodland habitat exists along the southern, eastern, and western boundaries of the Property, and at the northeast corner of the Property. Understory plants include but are not limited to ripgut brome, wild oat, cleavers (*Galium aparine*), and cutleaf geranium (*Geranium dissectum*).

Special-Status Plant Species

Special-status plant species include species listed as Rare, Threatened, or Endangered by the USFWS (2020) or by the State of California (CDFW 2021b). Federal Proposed and Candidate species (USFWS, 2020) are also special-status species. Special-status species also include species listed on List 1A, List 1B, or List 2 of the CNPS Inventory (Skinner and Pavlik, 1994; CNPS 2021). All species in the above categories fall under state regulatory authority under the provisions of CEQA, and may also fall under federal regulatory authority. Considered special-status species are species included on List 3 (Plants About Which We Need More Information—A Review List) or List 4 (Plants of Limited Distribution—A Watch List) of the CNPS *Inventory*. These species are considered to be of lower sensitivity and generally do not fall under specific state or federal regulatory authority. Specific mitigation considerations are not generally required for List 3 and List 4 species.

Attachment 2, Table 2 includes a list of special-status plants with the potential to occur within or in the immediate vicinity of the Property based on a review of the surrounding quads. The special-status plant species identified by the CNDDB as potentially occurring on the Property are known to grow only from specific habitat types. The specific habitats or "micro-climate" necessary for many of the plant species to occur are not found within the boundaries of the Property. The habitats necessary for the CNDDB reported plant species consist of valley and foothill grassland, cismontane woodlands, chaparral, playas, chenopod scrub, adobe clay soils,

alkaline soils, serpentine soils, sandy soils, gravelly soils, coastal prairie, coastal scrub, coastal dunes, coastal bluff scrub, coastal salt marsh, vernal pools, seeps, meadows and sinks, marshes or swamps, riparian woodlands, on slopes near drainages, closed cone coniferous forest, north coast coniferous forest, redwood forest, lower montane coniferous forest, and broad-leafed upland forest.

A query of the CNDDB showed that twenty-six special-status plant species have been recorded within a 5-mile radius of the Property. Occurrence distance from the Property is estimated from this center point (Attachment 1, Figure 6). The majority of these species were identified as having no potential to occur on the Property based on the absence of suitable habitat, soil composition, and the development and disturbance of the Property. Suitable habitats for these species include vernal pool, alkaline and serpentine environments, coastal scrub, meadows and seeps, marshes and swamps, rocky outcrops, inland dunes, chenopod scrub, coniferous forest, chaparral, and seasonal wetlands, none of which are found on the Property. This, along with the clay soils present throughout the Property, makes it unlikely that these species would occur. Additionally, nine of these species, Brewer's western flax (*Hesperolinon breweri*), big tarplant (*Blepharizonia plumose*), Antioch Dunes evening-primrose (*Oenothera deltoides ssp. howellii*), Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), Jepson's coyote-thistle (*Eryngium jepsonii*), Loma Prieta hoita (*Hoita strobilina*), Mount Diablo buckwheat (*Eriogonum truncatum*), slender-leaved pondweed (*Stuckenia filiformis subsp. alpina*), and woodland woolythreads (*Monolopia gracilens*) were surveyed for during their blooming period (July) and were not observed.

Bent-Flowered Fiddleneck (*Amsinckia lunaris*). CNPS List 1B.

Bent-flowered fiddleneck is an annual of the family *Boraginaceae*. The inflorescence is a scorpiod-cyme and coiled at the tip with multiple small orange flowers. It is distributed throughout the inner north coast ranges of California, in the west Central Valley, and the San Francisco Bay Area. Habitat consists of coastal bluff scrub, cismontane woodlands, and valley and foothill grasslands. The blooming period is between March and June.

Three CNDDB occurrences of this species are present within five miles of the Property. The closest occurrence (#75), from 2015, is located approximately 4.0 miles west of the Property. Potentially suitable habitat exists in the grassland areas. However due to a large portion of the grassland area having been recently disked, potentially suitable habitat is limited. Additionally, a rare plant survey was conducted during the blooming period of this species in April 2022 and this species was not observed. Given the information above, bent-flowered fiddleneck has a low potential to occur on the Property and is presumed absent.

Congdon's Tarplant (*Centromadia parryi* ssp. *congdonii*). CNPS List 1B.

Congdon's tarplant is a member of the genus *Centromadia* in the sunflower family (*Asteraceae*). It is one of four subspecies of Parry's tarplant (*Centromadia parryi*). Congdon's tarplant is a prostrate to erect, annual herb with rigidly spine-tipped leaves and yellow ray- and disk-flowers (head). It occurs in valley and foothill grasslands in moist alkaline soils and blooms between June and November. Historically, Congdon's tarplant was distributed from Solano County south to San Luis Obispo County.

Two CNDDB occurrences of this species are present within five miles of the Property. The closest occurrence (#2), from 1998, is located approximately 2.2 miles northwest of the Property. Potentially suitable habitat exists in the grassland habitat. However due to a large portion of the grassland area having been recently disked, potentially suitable habitat is limited. Additionally, the July reconnaissance survey was conducted during the blooming period of this species and this species was not observed. Given the information above, Congdon's tarplant has a low potential to occur on the Property and is presumed absent.

Diablo Helianthella (*Helianthella castanea*). CNPS List 1B.

Diablo helianthella is a perennial that exhibits yellow sunflowers that bloom between April and June. The plant has simple broad leaves that are attached at the base of the stem and grows up to two feet in height. The Diablo helianthella is known to grow on open grassy sites in cismontane woodland and closed-cone coniferous forests.

Twenty-four CNDDB occurrences of this species are present within five miles of the Property. Two occurrences, (#117, #47), both observed in 2015, were located approximately 0.7 miles east and north respectively of the Property. Potentially suitable habitat exists in the grassland and woodland habitat. However due to a large portion of the grassland area having been recently disked, potentially suitable habitat is limited. Additionally, a rare plant survey was conducted during the blooming period of this species in April 2022 and this species was not observed. Given the information above, Diablo helianthella has a low potential to occur on the Property and is presumed absent.

Mount Diablo Fairy-Lantern (*Calochortus pulchellus*). CNPS List 1B.

Mount Diablo fairy-lantern is a spring blooming bulb that is in flower between April and June. This species exhibits light yellow globe-shaped flowers that turn down as if nodding. The plant grows to approximately one and a half feet tall and has between one to several flowers on the stem and long, narrow, pointed leaves. This bulb specifically grows on wooded slopes in chaparral and in valley and foothill grassland habitat.

Eleven CNDDB occurrences of this species are present within five miles of the Property. The closest occurrence (#4), observed in 2002, is located approximately 2.5 miles southeast of the Property. Potentially suitable habitat exists in the grassland and woodland areas. However due to a large portion of the grassland area having been recently disked, potentially suitable habitat is limited. Additionally, a rare plant survey was conducted during the blooming period of this species in April 2022 and this species was not observed. Given the information above, Mount Diablo fairy-lantern has a low potential to occur on the Property and is presumed absent.

6.3 Wildlife Survey Results

6.3.1 General Wildlife Species and Habitats

A complete list of wildlife species observed within the Property can be found in Attachment 2, Table 1. Wildlife species commonly occurring within habitat types present on the Property are discussed below:

Non-native Annual Grassland

The annual grassland habitat provides foraging opportunities for a range of species. Passerine species observed during the survey include dark-eyed junco (*Junco hyemalis*), California towhee (*Melozone crissalis*), house finch (*Haemorhous mexicanus*), and white-crowned sparrow (*Zonotrichia leucophrys*). Other avian species observed include American crow (*Corvus bracyrynchos*), Anna's hummingbird (*Calypte anna*), wild turkey (*Meleagris gallopavo*) and turkey vulture (*Cathartes aura*). The grassland habitat could potentially be utilized for foraging by raptor species including red-tailed hawk, red-shouldered hawk, Cooper's hawk, white-tailed kite, and American kestrel.

The cover from areas of the grassland habitat and various vegetative debris throughout offers suitable habitat for reptile species. Species such as western fence lizard (*Sceloporus occidentalis*) and southern alligator lizard (*Elgaria multicarinata*) were present in the grassland habitat, and other reptile species such as Pacific gopher snake (*Pituophis catenifer catenifer*) and California king snake (*Lampropeltis californiae*) may also utilize the grassland areas of the Property. Mammal species that were observed foraging throughout the grassland habitat included black-tailed jackrabbit (*Lepus californicus*).

Developed

The existing structures and adjacent ornamental trees provide suitable habitat for numerous bird species and potentially some bat species. Additionally, the existing residential structure appears

to be undisturbed for some time now and an air duct vent located on the east side of the structure did not have a screen in place. Thus, bats could find access into the residential structure via this vent. Avian species observed in the developed area include California towhee, western scrub jay (*Aphelocoma californica*), and dark-eyed junco. Multiple mule deer (*Odocoileus hemionus*) were also observed foraging in the developed area. Bat species that could potentially utilize this habitat for roosting include hoary bat, pallid bat, Townsend's big-eared bat, western red bat, and Yuma myotis.

Drainage

The drainage feature contained no water during the July 2021 site visit. However, during the rainy season the feature could provide habitat for amphibian species such as Sierran tree frog (*Pseudacris sierra*). Additionally, the drainage feature provides potential habitat for many insect species which could in turn provide potential foraging opportunities to numerous avian, reptile and bat species.

Riparian Woodland

The riparian habitat located along the ephemeral drainage could potentially provide nesting and foraging habitat for passerine and raptor avian species. Additionally, it could provide roosting habitat for various bat species. Passerine species observed in the riparian area include western scrub jay and dark-eyed junco.

Mixed Woodland

The mixed woodland habitat within the Property has the most chance to provide nesting habitat for passerine and raptor avian species as well as provide roosting habitat for bats including potentially sensitive species like the western red bat. Passerine species observed in the woodland habitat included Steller's jay (*Cyanocitta stelleri*), oak titmouse (*Baeolophus inornatus*), dark-eyed junco, and mourning dove (*Zenaida macroura*). Mule deer were also observed foraging throughout the woodland habitat.

BIRDS

Red-shouldered Hawk (*Buteo lineatus*). State Protected.

The red-shouldered hawk is a medium-sized, slender *Buteo* with long legs and a long tail and is smaller than the red-tailed hawk. Upperparts are dark with pale spotting, and rusty-reddish feathers on the wing create the distinctive shoulder patch. The tail has several wide, dark bars; the intervening narrow stripes and the tip of the tail are white, and there is variation in the

number of tail bars among adults and juveniles. The habitat that the red-shouldered hawk prefers varies from bottomland hardwoods and riparian areas to upland deciduous or mixed deciduous-conifer forest, and almost always includes some form of water, such as a swamp, marsh, river, or pond. In the west, the red-shouldered hawk sometimes occurs in coniferous forests, and has been expanding its range of occupied habitats to include various woodlands, including stands of eucalyptus trees amid urban sprawl. They typically place their nests in a broad-leaved tree (occasionally in a conifer), below the forest canopy but toward the tree top, usually in the crotch of the main trunk. Nest trees are often near a pond, stream, or swamp, and can be in suburban neighborhoods or parks. These hawks eat mostly small mammals, lizards, snakes, and amphibians. They also eat toads, snakes, and crayfish. They occasionally eat birds, sometimes from bird feeders; recorded prey includes sparrows, starlings, and doves.

The CNDDB does not track occurrences of red-shouldered hawk. However, the large trees present within the woodland area, and those found along the boundaries of the Property offer suitable nesting habitat. In addition, foraging opportunities occur throughout the Property in the ruderal grassland and mixed woodland habitat. Given the information above the red-shouldered hawk has high potential to occur on the Property in a nesting and foraging capacity.

Red-Tailed Hawk (*Buteo jamaicensis*). State Protected.

The red-tailed hawk is a large *Buteo* that is distinct due to the red color of its tail feathers in contrast to the brown color of its body. Not all red-tailed hawks exhibit the distinct coloration on their tail and gradations may occur especially in young birds. Red-tailed hawks hunt rodents by soaring over grassland habitat. Nest trees for red-tailed hawks are usually tall trees with a well-developed canopy that includes a strong branching structure on which to build a nest.

The CNDDB does not track occurrences of red-tailed hawk. However, the large trees present within and around the Property offer suitable nesting habitat. In addition, foraging opportunities occur throughout the Property. Given the information above the red-tailed hawk has high potential to occur on the Property in a nesting capacity and foraging capacity.

Cooper's Hawk (*Accipiter cooperii*). State Protected.

Cooper's hawk is a medium to large-size raptor, reaching an average of 28-34 in wingspan. They are distinctive for the black and white horizontal banding on the elongated tail, blue gray head, back and upper wings. Additional markings include rusty red horizontal barring on a white breast, a large square head, and long yellow legs and feet. The diet of Cooper's hawk consists mainly of small to medium-sized birds which they ambush by surprise, but they will also consume squirrels and other small mammals.

CNDDB did not list any occurrences of the Cooper's hawk. The large trees present within the mixed woodland habitat on the Property offer suitable nesting habitat. Additionally, foraging opportunities occur throughout the Property in the woodland, grassland and developed areas. Given the information above, the Cooper's hawk has high potential to occur on the Property in a nesting and foraging capacity.

White-tailed Kite (*Elanus leucurus*). Federal Species of Concern, CDFW: Fully Protected.

The white-tailed kite is falcon-shaped with a long white tail. This raptor has black patches on the shoulders that are highly visible while the bird is flying or perching. White-tailed kites forage in annual grasslands, farmlands, orchards, chaparral, and at the edges of marshes and meadows. They are found nesting in trees and shrubs such as willows (*Salix sp.*), California sycamore (*Platanus racemosa*), and coast live oak (*Quercus agrifolia*) often near marshes, lakes, rivers, or ponds. This raptor often hovers while inspecting the ground below for prey. The white-tailed kite eats mainly small mammals, as well as some birds, lizards, and insects. Annual grasslands are considered good foraging habitat for white-tailed kites, which will forage in human-impacted areas.

CNDDB did not list the white-tailed kite as occurring within the 5-mile vicinity of the Property. However, the large trees present within and surrounding the Property offer suitable nesting habitat. No small mammal burrows were observed in the grassland areas of the Property. However, foraging opportunities for white-tailed kite are most likely present in the Shell Ridge Open Space habitat east of the Property boundary. Given the information above, the white-tailed kite has a moderate potential to occur on the Property in a nesting capacity and may occur.

American Kestrel (Falco sparverius). State Protected.

The American kestrel is the smallest of raptor species and is distinct due to the black barring on its face. The female kestrel is slightly larger than the male bird and is differentiated by its brown and red coloration. The male kestrel is slightly smaller than the female and has gray wing patches near the top of the wing.

Kestrels favor open areas with short ground vegetation and sparse trees. They are generally found in meadows, grasslands, deserts, parks, farm fields, cities, and suburbs, and are attracted to many habitats modified by humans. Kestrels utilize cavities in trees and structures for nesting. Their diet consists mostly of insects and other invertebrates, but they also hunt small rodents, birds, and reptiles.

CNDDB does not track occurrences of American kestrel. However, cavities within the large trees present on the Property offer suitable nesting habitat. Additionally, foraging opportunities are

present in the woodland and grassland habitats with the number of insects, lizards, and passerine bird species observed during the July 2021 survey. Given the information above, American kestrel has a moderate potential to occur on the Property in a nesting and foraging capacity and may occur.

Burrowing Owl (*Athene cunicularia*). Federal Species of Special Concern, California Species of Special Concern.

The U.S. Fish and Wildlife Service has identified the burrowing owl as a "candidate" species. Candidate species are animals and plants that may warrant official listing as threatened or endangered, but there is no conclusive data to give them this protection at the present time. As a candidate species, burrowing owls receive no legal protection under the Endangered Species Act (ESA). However, this species does receive some legal protection from the U.S. through the Migratory Bird Treaty Act, which forbids the destruction of the birds and active nests. In California, the burrowing owl considered a "species of special concern."

Burrowing owls are ground dwelling members of the owl family and are small brown to tan colored birds with bold spots and barring. Burrowing owls generally require open annual grassland habitats in which to nest, but can be found on abandoned lots, roads, airports, and other urban areas. Burrowing owls generally use abandoned California ground squirrel holes for their nesting burrow, but are also known to use pipes or other debris for nesting purposes. Burrowing owls prefer annual grassland habitats with low vegetative cover. The breeding season for burrowing owls occurs from March through August. Burrowing owls often nest in loose colonies about 100 yards apart. They lay three to twelve eggs from mid-May to early June. The female incubates the clutch for about 28 days, while the male provides her with food. The young owls begin appearing at the burrow's entrance two weeks after hatching and leave the nest to hunt for insects on their own after about 45 days. The chicks can fly well at six weeks old.

CNDDB listed one occurrence (#472) of burrowing owl observed approximately 3.2 miles northeast of the Property. During this occurrence from January 1991, one adult burrowing owl was observed at a site determined to most likely be a winter burrowing site. No ground squirrel burrows or other mammal burrows that could provide potential habitat for burrowing owl were observed in the grassland habitats of the Property. For these reasons the burrowing owl has a low potential to occur on the Property in a nesting and foraging capacity and is not likely to occur.

MAMMALS

Special-status Bats

Bats (Order - *Chiroptera*) are the only mammals capable of "true" flight. They are nocturnal feeders and locate their prey, which consists of small to medium sized insects by echolocation. Bats consume vast amounts of insects making them very effective pest control agents. They may eat as much as their weight in insects per day. Maternity roosts comprised of only females, may be found in buildings or mine shafts with temperatures up to 40 degrees Celsius and a high percentage of humidity to ensure rapid growth in the young. Female bats give birth to only one or two young annually and roost in small or large numbers. Males may live singly or in small groups, but scientists are still unsure of the whereabouts of most males in summer.

Bat species with the potential to occur on the Property are listed below:

- Yuma myotis
- Hoary bat
- Western red bat
- Pallid bat
- Townsend's big-eared bat

CNDDB listed two occurrences of hoary bat, five occurrences of pallid bat, and two occurrences of Townsend's big-eared bat within the 5-mile radius of the Property. Although most of these are historical occurrences, the large oak and walnut trees on the Property and the existing residential structure could potentially offer roosting sites for bat species. Bats could obtain access to the inside of the residential structure through an open air duct vent located on the east side of the residence. The grassland habitat could provide an array of insects, allowing for abundant foraging opportunities. Given the above information, the bat species listed above have a moderate potential to occur on the Property in a roosting and foraging capacity and may occur.

AMPHIBIANS

California Red-Legged Frog (*Rana draytonii*). Federally Threatened, California Species of Special Concern.

California red-legged frog (CRLF) was listed as a Federal threatened species on May 31, 1996 (61 FR 25813) and is considered threatened throughout its range. If a proposed Property may jeopardize listed species, Section 7 of the ESA requires consideration of those species through formal consultations with the USFWS. Federal Proposed species (USFWS 2006) are species for which a proposed listing as Threatened or Endangered under the ESA has been published in the

Federal Register. If a proposed Property may jeopardize proposed species, Section 7 of the ESA affords consideration of those species through informal conferences with USFWS. On April 13, 2006, USFWS designated critical habitat for the CRLF under the ESA. In total, approximately 450,288 acres fell within the boundaries of critical habitat designation. A new ruling by the USFWS on March 17, 2010, revised the designation of critical habitat for CRLF (75 FR 12815 12959). In total, approximately 1,636,609 acres of critical habitat in 27 California counties fall within the boundaries of the final revised critical habitat designation. This rule became effective on April 16, 2010.

The CRLF is a rather large frog, measuring one and a half to five inches in length. They are reddish-brown to gray in color, with many poorly defined dark specks and blotches. Dorsolateral folds are present. The underside of the CRLF is washed with red on the lower abdomen and hind legs. The CRLF has a dark mask bordered by a light stripe on the jaw, smooth eardrums, and not fully webbed toes. The male has enlarged forearms and swollen thumbs. Its vocals consist of a series of weak throaty notes, rather harsh, and lasting two to three seconds. Breeding occurs from December to March with egg masses laid in permanent bodies of water.

The CRLF is found in lowlands, foothill woodland and grasslands, near marshes, lakes, ponds or other water sources. These amphibians require dense shrubby or emergent vegetation closely associated with deep still or slow moving water. Generally these frogs favor intermittent streams with water at least two and a half feet deep and where the shoreline has relatively intact emergent or shoreline vegetation. CRLF is known from streams with relatively low gradients and those waters where introduced fish and bullfrogs are absent. CRLF are known to take refuge upland in small mammal burrows during periods of high water flow. CRLF occurs west of the Sierra Nevada-Cascade and in the Coast Ranges along the entire length of the state. Historically, they occurred throughout the Central Valley and Sierra Nevada foothills south to northern Baja California. Now they are found from Sonoma and Butte Counties south to Riverside County, but mainly in Monterey, San Luis Obispo, and Santa Barbara Counties.

CNDDB listed nine occurrences of the CRLF occurring within five miles of the Property. The most recent occurrence was observed approximately 4.3 miles northeast of the Property. The closest occurrence (# 195) was observed approximately 2.3 miles southeast of the Property in Diablo Foothills Regional Park. During this occurrence, two larvae were observed in a small stock pond in May 2016. The Property is approximately 2.2 miles from USFWS designated critical habitat for CRLF (Unit ALA-1B) (Attachment 1, Figure 7). The Property contained no sources of perennial water suitable for breeding and the drainage present on the Property was dry during the July 2021 site visit. Additionally, no small mammal burrows required for upland refuge habitat were present in the annual grassland areas due to areas of grassland being recently

disked. For these reasons CRLF has a low potential to occur on the Property and is not likely to occur.

California Tiger Salamander (*Ambystoma californiense*). Federally Threatened, State Threatened.

Adult California tiger salamanders (CTS) inhabit rolling grassland and oak savannah. Adults spend most of the year in subterranean retreats such as rodent burrows, but may be found on the surface during dispersal to and from breeding sites. The preferred breeding sites are vernal pools and other temporary ponds. However, CTS may use permanent manmade ponds as breeding habitat. CTS adults begin migrating to ponds after the first heavy rains of fall and can be found in or around the breeding ponds during and after winter rainstorm events. In extremely dry years, CTS may not reproduce.

After mating, females lay several small clusters of eggs, which contain from one to over 100 eggs. The eggs are deposited on both emergent and submerged vegetation, as well as submerged detritus. A minimum of ten weeks is required to complete larval development through metamorphosis, at which time the larvae will normally weigh about ten grams. Larvae remaining in pools for a longer time period can grow to much larger sizes. Upon metamorphosis, juvenile CTS migrate in large masses at night from the drying breeding sites to refuge sites. Prior to this migration, the juveniles spend anywhere from a few hours to a few days near the pond margin. Adult CTS are largely opportunistic feeders, preying upon arthropod and annelid species that occur in burrow systems, as well as aquatic invertebrates found within seasonal pools. The larvae feed on aquatic invertebrates and insects, showing a distinct preference for larvae of the Pacific tree frog.

On August 4, 2004, the USFWS announced the listing of the CTS as threatened throughout its range with the exception of the Sonoma and Santa Barbara County populations which are listed as endangered (USFWS 2004). On March 3, 2010, the California Fish and Game Commission designated CTS as threatened under the California Endangered Species Act. On August 23, 2005, the Service designated 199,109 acres of critical habitat in 19 counties for the central California population of the CTS. On August 2, 2005, they proposed 74,223 acres of critical habitat for CTS in Sonoma County, California. This habitat is located in the Santa Rosa Plain in central Sonoma and includes lands bordered on the west by Laguna de Santa Rosa, to the south by Skillman Road, northwest of Petaluma, to the east by foothills, and to the north by Windsor Creek. On December 14, 2005, in a final decision, USFWS designated and excluded 17,418 acres of critical habitat for CTS, so that no critical habitat is being designated for the Sonoma County population.

CNDDB listed four occurrences of CTS occurring within five miles of the Property. However, all four occurrences are historical with the most recent (# 338) having been observed in 1954 and the sites are now considered to be extirpated. The Property does not offer suitable breeding or upland refuge habitat. For these reasons CTS are presumed absent from the Property.

REPTILES

Alameda Whipsnake (*Masticophis lateralis euryxanthus*). Federally Threatened, State Threatened.

The Alameda whipsnake is one of two subspecies of the California whipsnake. It is distinguished from the chaparral whipsnake (*M. l. lateralis*) by the broad orange striping on its sides. Adults reach approximately three to five feet in length and show a sooty black to dark brown back, cream colored undersides and pinkish tail. This species is typically found in chaparral, northern coastal sage scrub, and coastal sage habitats; however, annual grasslands, oak woodlands, and oak savannah serve as habitat during the breeding season. Egg-laying occurs near scrub habitat on ungrazed grasslands with scattered shrub cover. The known distribution for Alameda whipsnake includes Sobrante Ridge, Oakland Hills, Mount Diablo, the Black Hills, and Wauhab Ridge.

Male and female snakes are active from April to November finding mates. During the breeding season from late March through mid-June, male snakes exhibit more movement throughout their home range, while female snakes remain sedentary from March until egg laying. Females lay a clutch of 6 to 11 eggs, usually in loose soil or under logs or rocks.

CNDDB listed twenty occurrences of Alameda whipsnake within five miles of the Property. The exact locations of these collections were not recorded in the CNDDB due to the sensitivity of this species. Refer to Attachment 1 Figure 5 to see approximate range of listed occurrences. The Property does not overlap with USFWS designated critical habitat (unit: 3) (See Attachment 1 Figure 7). USFWS designated critical habitat for Alameda whipsnake is located approximately 2.0 miles east within the Shell Ridge Open Space. The Property contains grassland habitat but lacks scrub or rock outcrop cover which the Alameda whipsnake characteristically prefers. However, the southwestern boundary of the Shell Ridge Open Space is located approximately 0.3 miles northeast of the Property. Alameda whipsnake could utilize the Property for dispersal as it moves to and from more suitable habitat. For these reasons, Alameda whipsnake has a low potential to occur on the Property in a dispersal capacity only.

7.0 CONCLUSIONS

7.1 Wetlands

Results of the biological resource analysis survey conducted by Olberding Environmental indicate that the Property contains wetlands/waters that may be considered jurisdictional by the Army Corps of Engineers, RWQCB and/or CDFW. The Property has one ephemeral drainage feature running from the northeast to the northwest corners of the Property. If any project related activities are to occur within these features, an Army Corps of Engineers jurisdictional delineation would be required.

7.2 Special-status Plants

Four special-status plant species, Congdon's tarplant, Diablo helianthella, Mount Diablo fairy-lantern, and bent-flowered fiddleneck, were determined to have a low potential to occur on the Property. These species potential to occur were based on the presence of suitable habitats, soil types, and nearby, recent CNDDB occurrences. Limited, suitable habitat occurs within the non-native annual grassland and woodland areas. However, surveys were conducted during the blooming periods of all four species and these species were not observed. Thus, they are presumed absent from the Property.

7.3 Special-status Wildlife

Foraging or Nesting Raptor/Passerine Species – A total of five bird species were identified as having potential to occur on the Property. The red-shouldered hawk, red-tailed hawk, and Cooper's hawk have a high potential to occur in a foraging and nesting capacity. The white-tailed kite and American kestrel have a moderate potential to occur in a nesting and foraging capacity.

Special-Status Mammals – Given the presence of suitable onsite habitat; the hoary bat, western red bat, pallid bat, Townsend's big-eared bat, and Yuma myotis all have a moderate potential to occur on the Property in a foraging and roosting capacity. No immediate signs were present during the initial survey but the large trees and existing residential structure on the Property could provide roosting habitat and foraging opportunities are present throughout the grassland habitat.

Special-Status Amphibians – Both CTS and CRLF have been identified as having a low potential to occur on the Property and are not likely to occur. The Property does not contain

suitable aquatic habitat to support either species. No small mammal burrows were seen on the Property which are required for upland refugia.

Special-Status Reptiles – The Alameda whipsnake was identified by the CNDDB as occurring in the vicinity of the Property. An assessment of the Property concluded that the open space 0.3 miles northeast of the Property could provide habitat to support Alameda whipsnake. Therefore, this species has a low potential to occur on the Property in a dispersal capacity only.

8.0 RECOMMENDATIONS

- **Corps and State Regulated Wetlands/Waters** – Jurisdictional wetlands and waters potentially regulated under the authority of the Corps, RWQCB, and/or CDFW are present on the Property. Fill of these regulated features may require authorization under Sections 404 and 401 of the Clean Water Act (CWA) and authorization under Section 1600 of the Fish and Wildlife Code. A Corps wetland delineation should be prepared to document the actual extent of jurisdictional features if any construction activity could result in impacts to wetlands/waters. If the wetlands/waters are deemed jurisdictional and construction activities are proposed that could impact these features, permits must be obtained prior to construction. Setbacks from the wetlands/water features may be required to protect habitat quality and to protect water quality. Permitting to allow impacts to wetlands/waters features may also require mitigation.

- **Pre-Construction Avian Survey** – If project construction-related activities would take place during the nesting season (February through August), preconstruction surveys for nesting passerine birds and raptors (birds of prey) within the Property and the large trees within the adjacent riparian area should be conducted by a competent biologist 14 days prior to the commencement of the tree removal or site grading activities. If any bird listed under the Migratory Bird Treaty Act is found to be nesting within the project site or within the area of influence, an adequate protective buffer zone should be established by a qualified biologist to protect the nesting site. This buffer shall be a minimum of 75 feet from the project activities for passerine birds, and a minimum of 200 feet for raptors. The distance shall be determined by a competent biologist based on the site conditions (topography, if the nest is in a line of sight of the construction and the sensitivity of the birds nesting). The nest site(s) shall be monitored by a competent biologist periodically to see if the birds are stressed by the construction activities and if the protective buffer needs to be increased. Once the young have fledged and are flying well enough to avoid project construction zones (typically by August), the project can proceed without further regard to the nest site(s).

- **Pre-construction Bat Survey –** To avoid "take" of special–status bats, the following mitigation measures shall be implemented prior to the removal of any existing trees or structures on the project site:

  a) A bat habitat assessment shall be conducted by a qualified bat biologist during seasonal periods of bat activity (mid–February through mid–October – ca. Feb. 15 – Apr. 15, and Aug. 15 – October 30), to determine suitability of each existing structure as bat roost habitat.

  b) Structures found to have no suitable openings can be considered clear for project activities as long as they are maintained so that new openings do not occur.

  c) Structures found to provide suitable roosting habitat, but without evidence of use by bats, may be sealed until project activities occur, as recommended by the bat biologist. Structures with openings and exhibiting evidence of use by bats shall be scheduled for humane bat exclusion and eviction, conducted during appropriate seasons, and under supervision of a qualified bat biologist.

  d) Bat exclusion and eviction shall only occur between February 15 and April 15, and from August 15 through October 30, in order to avoid take of non–volant (non–flying or inactive, either young, or seasonally torpid) individuals.

  OR

  A qualified wildlife biologist experienced in surveying for and identifying bat species should survey the portion of the Property with large trees and abandoned structures. If tree removal is proposed to determine if any special–status bats reside in the trees. Any special–status bats identified should be removed without harm. Bat houses sufficient to shelter the number of bats removed should be erected in open space areas that would not be disturbed by project development.

- **Erosion Control** – Grading and excavation activities could expose soil to increased rates of erosion during construction periods. During construction, runoff from the Property could adversely affect aquatic life within the adjacent water features. Surface water runoff could remove particles of fill or excavated soil from the site, or could erode soil down-gradient, if the flow were not controlled. Deposition of eroded material in adjacent water features could increase turbidity, thereby endangering aquatic life, and reducing wildlife habitat. Implementation of appropriate mitigation measures would ensure that impacts to aquatic organisms would be avoided or minimized. Mitigation measures may include best management practices (BMP's) such as hay bales, silt fencing, placement of

straw mulch and hydro seeding of exposed soils after construction as identified in the Storm Water Pollution Prevention Plan (SWPPP).

9.0 LITERATURE CITED

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ATTACHMENTS

ATTACHMENT 1
FIGURES

Figure 1 **Regional Map**
Figure 2 **Vicinity Map**
Figure 3 **USGS Quadrangle Map**
Figure 4 **Aerial Photograph**
Figure 5 **CNDDB Map of Special Status Wildlife**
Figure 6 **CNDDB Map of Special Status Plants**
Figure 7 **USFWS Designated Critical Habitat**
Figure 8 **Soils Map**
Figure 9 **Photo Location Map**
Figure 10 **Habitat Map**
Figure 11 **Habitat Areas Impacted by Development Map**

Figure 1: Regional Map
3180 Walnut Boulevard
Contra Costa County, CA

OLBERDING -ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 160
Folsom, California, 95630
Phone: (916) 985-1188

Revision Date: 7/13/2021

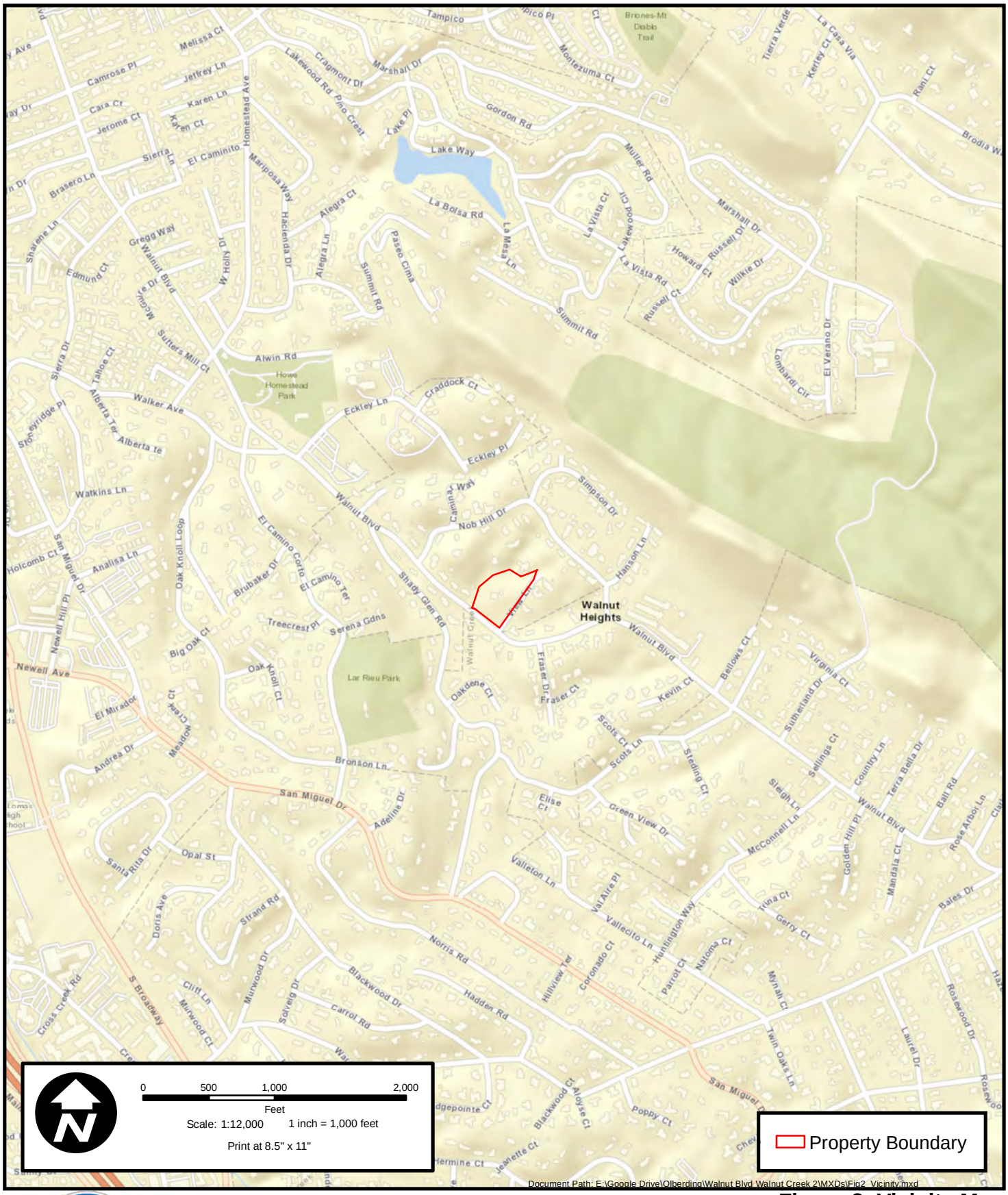

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Figure 2: Vicinity Map
3180 Walnut Boulevard
Contra Costa County, CA

OLBERDING -ENVIRONMENTAL-
193 Blue Ravine Road, Ste. 160
Folsom, California, 95630
Phone: (916) 985-1188

Revision Date: 7/13/2021

Figure 3: USGS Topographic Map
3180 Walnut Boulevard
Contra Costa County, CA

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193 Blue Ravine Road, Ste. 160
Folsom, California, 95630
Phone: (916) 985-1188

Revision Date: 7/13/2021

Figure 4: Aerial Map
3180 Walnut Boulevard
Contra Costa County, CA

OLBERDING
-ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 160
Folsom, California, 95630
Phone: (916) 985-1188

Revision Date: 7/13/2021

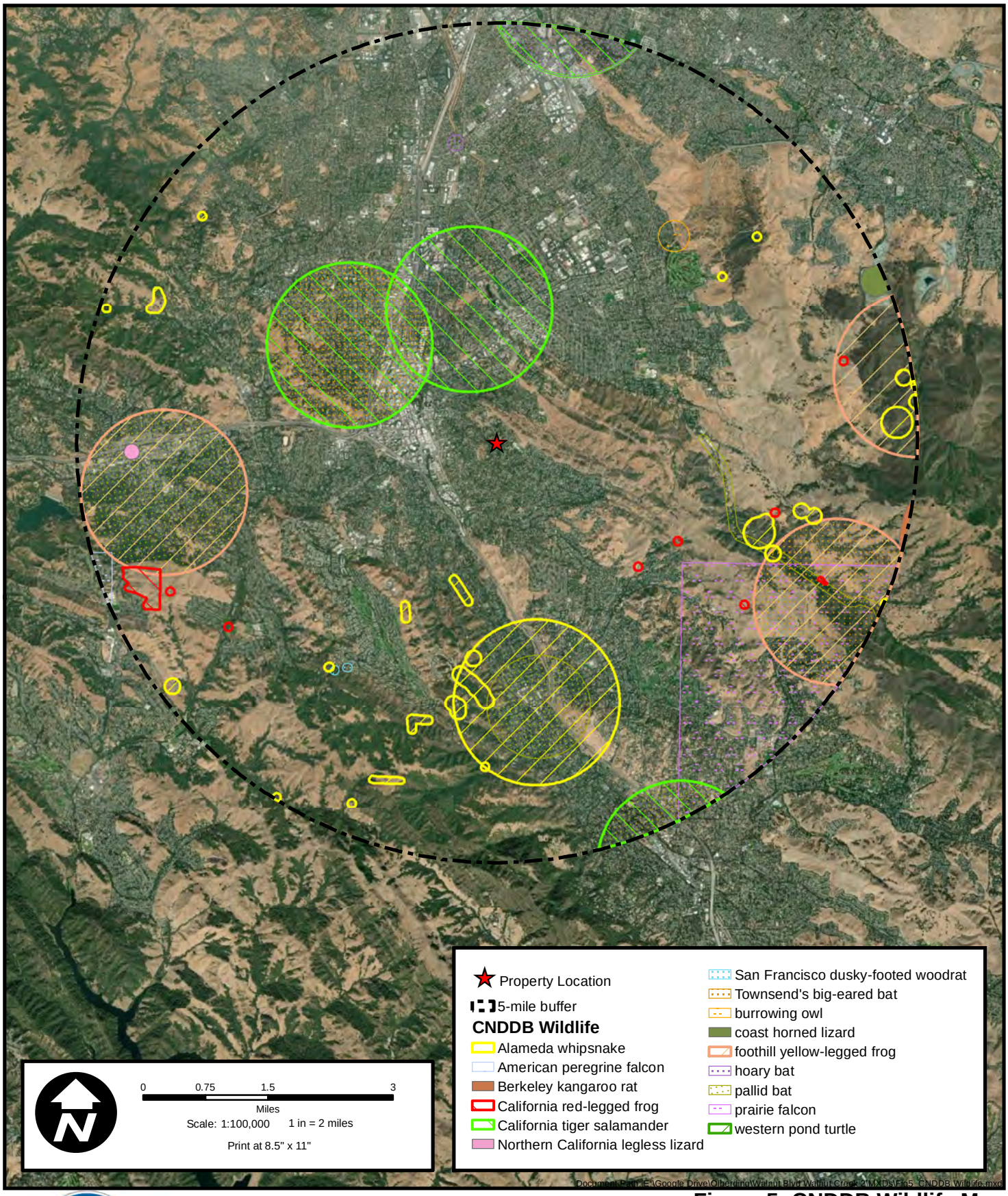

Figure 5: CNDDB Wildlife Map
3180 Walnut Boulevard
Contra Costa County, CA

OLBERDING -ENVIRONMENTAL-
193 Blue Ravine Road, Ste. 160
Folsom, California, 95630
Phone: (916) 985-1188

Revision Date: 7/14/2021

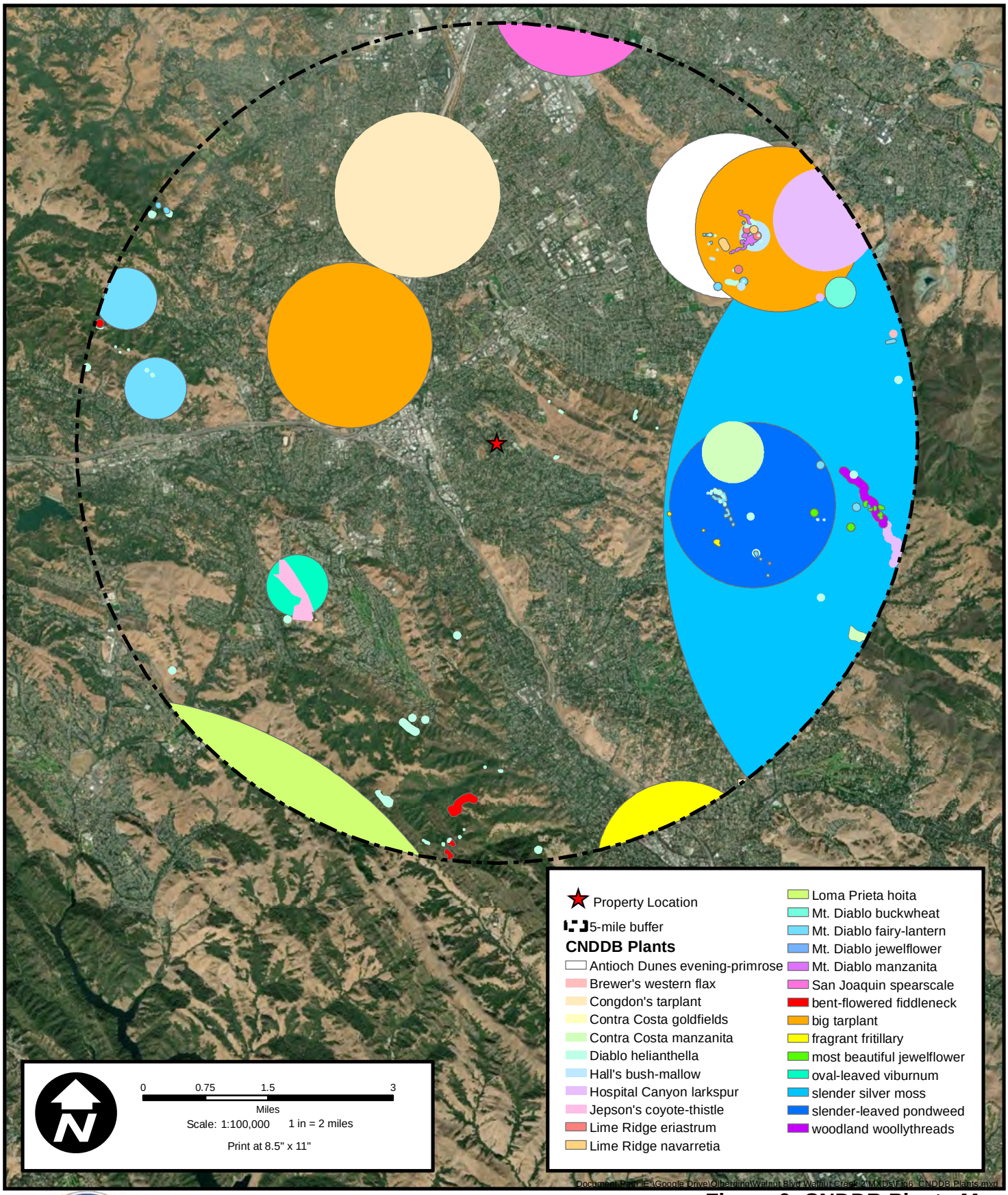

Figure 6: CNDDB Plants Map
3180 Walnut Boulevard
Contra Costa County, CA

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Folsom, California, 95630
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Revision Date: 7/14/2021

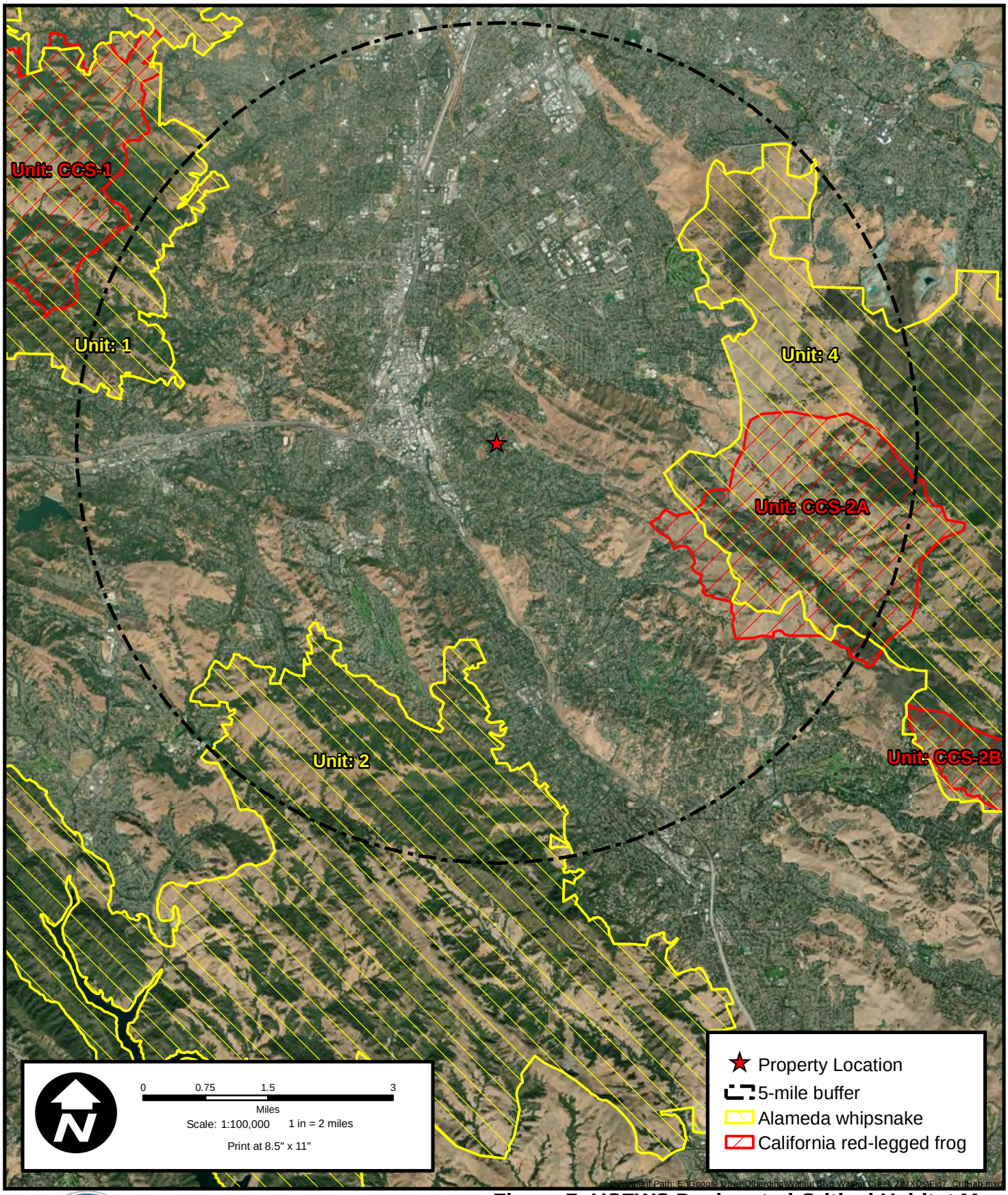

Figure 7: USFWS Designated Critical Habitat Map
3180 Walnut Boulevard
Contra Costa County, CA

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193 Blue Ravine Road, Ste. 160
Folsom, California, 95630
Phone: (916) 985-1188

Revision Date: 7/14/2021

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193 Blue Ravine Road, Ste. 160
Folsom, California, 95630
Phone: (916) 985-1188

Figure 8: Soils Map
3180 Walnut Boulevard
Contra Costa County, CA

Revision Date: 7/14/2021

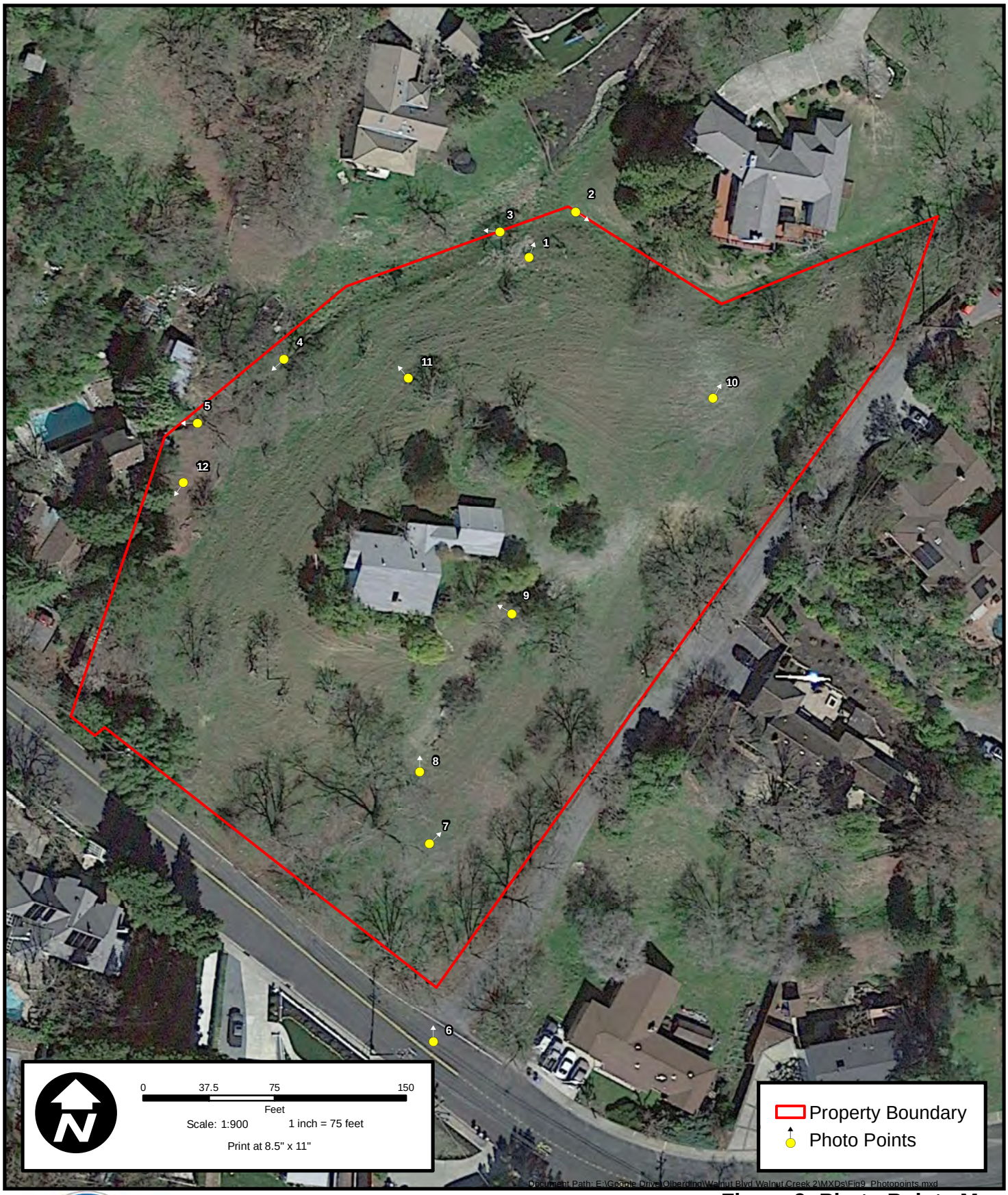


Figure 9: Photo Points Map
3180 Walnut Boulevard
Contra Costa County, CA

OLBERDING -ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 160
Folsom, California, 95630
Phone: (916) 985-1188

Revision Date: 7/23/2021

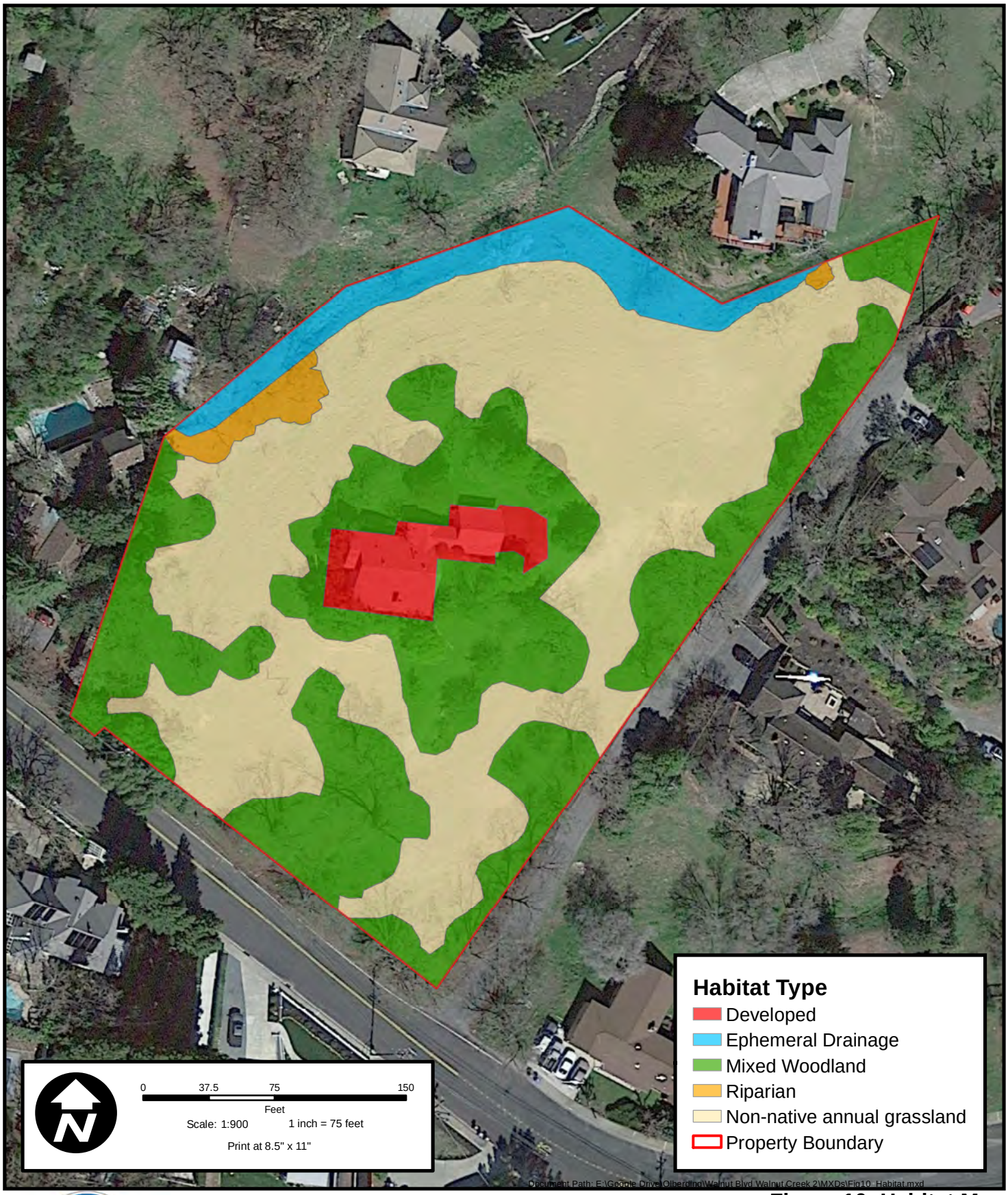
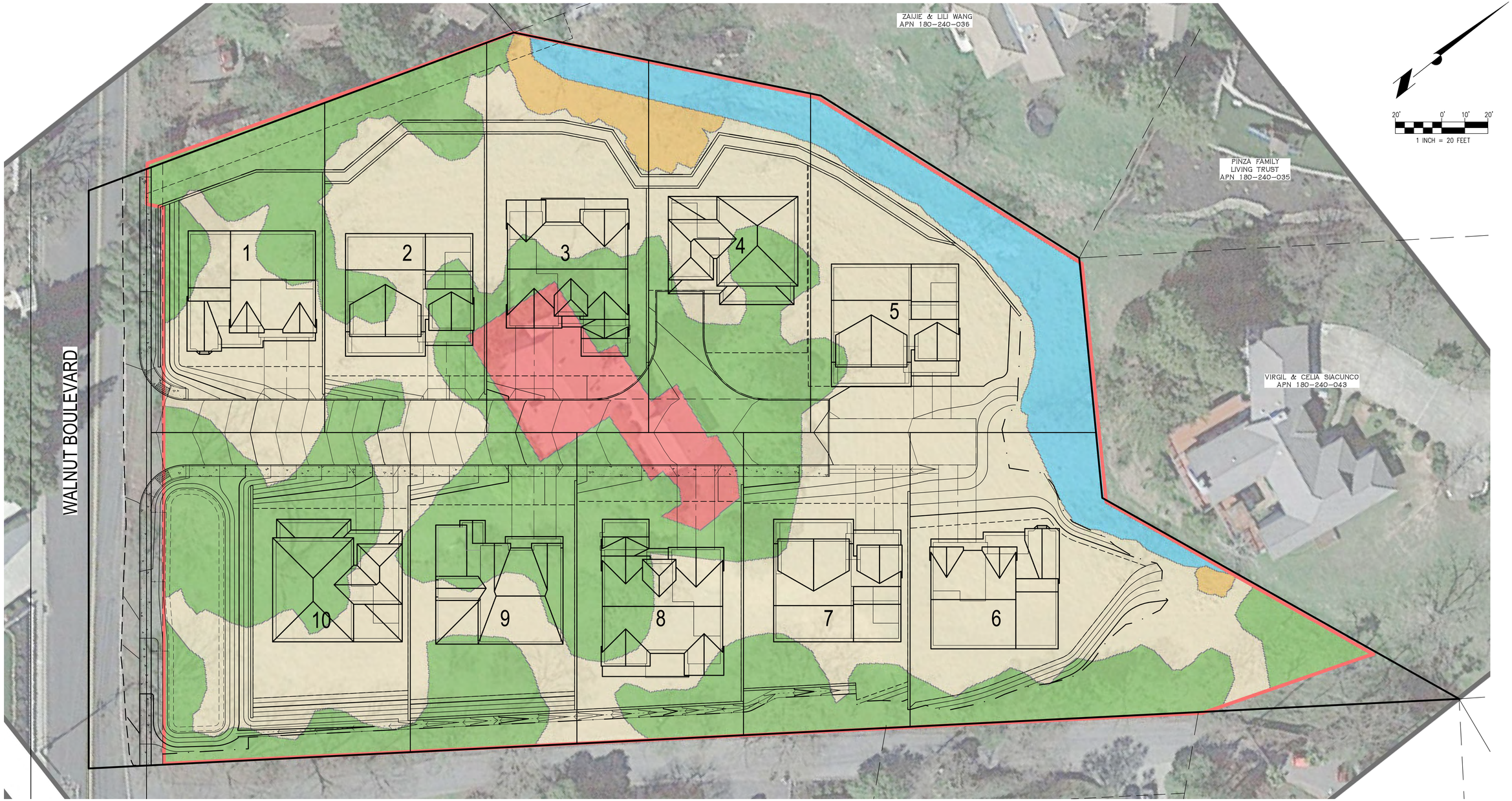


Figure 10: Habitat Map
3180 Walnut Boulevard
Contra Costa County, CA

OLBERDING
-ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 160
Folsom, California, 95630
Phone: (916) 985-1188

Revision Date: 7/20/2021



HABITAT AREAS IMPACTED BY DEVELOPMENT

DEVELOPED	0.11 ACRES
EPHEMERAL DRAINAGE	0.00 ACRES
MIXED WOODLAND	0.80 ACRES
RIPARIAN	0.00 ACRES
NON-NATIVE ANNUAL GRASSLAND	1.21 ACRES

Property Boundary

Habitat Type

- Developed (0.11 ac)
- Ephemeral Drainage (0.17 ac, 410 lnft)
- Mixed Woodland (1.01 ac)
- Riparian (0.05 ac)
- Non-native annual grassland (1.31 ac)

CALIBR VENTURES

3180 WALNUT BOULEVARD

WALL/HABITAT EXHIBIT

DECEMBER 1, 2022

ENGINEERING
SURVEYING • PLANNING
1931 SAN MIGUEL DRIVE, SUITE 100, WALNUT CREEK, CA 94596
WWW.DKENGIN.COM (925) 932-6868

F:\PROJECTS\2021\21-1007 3180 WALNUT BLVD - WALNUT CREEK\CAD\EXHIBIT\EXHIBIT-3180 12/7/2022

dk JOB# 21-1007

ATTACHMENT 2

TABLES

Table 1

Wildlife Species Observed Within/Adjacent to the Survey Area

Scientific Name	Common Name
Plant Species Observed	
Hordeum murinum ssp. leporinum	Hare barley
Avena fatua	Wild oat
Pyracantha coccinea	Scarlet firethorn
Elymus glaucus	Blue wild rye
Olea europaea	Olive
Bromus diandrus	Ripgut brome
Bromus hordeaceus	Soft chess
Carduus pycnocephalus	Italian thistle
Medicago polymorpha	California burclover
Conium maculatum	Poison hemlock
Medicago polymoprha	Bur clover
Lotus corniculatus	Birdsfoot trefoil
Nerium oleander	Oleander
Galium aparine	Cleavers
Oxalis pes-caprae	Bermuda buttercup
Torilis arvensis	Field hedgeparsley
Festuca perennis	Italian rye grass
Mentha ssp.	Mint spp.
Lactuca serriola	Prickly lettuce
Vicia sativa ssp. sativa	Common vetch
Vicia sativa ssp. nigra	Smaller common vetch
Amsinckia intermedia	Common fiddleneck
Erodium cicutarium	Redstem filaree
Geranium dissectum	Cutleaf geranium
Quercus agrifolia	Coast live oak
Quercus lobata	Valley oak
Juglans hindsii	California black walnut
Prunus dulcis	Almond
Silybum marianum	Milk thistle
Animal Species Observed	
Birds	
Aphelocoma californica	California scrub jay

Table 1

Wildlife Species Observed Within/Adjacent to the Survey Area

Scientific Name	Common Name
Baeolophus inornatus	Oak titmouse
Sayornis nigricans	Black phoebe
Calypte anna	Anna's hummingbird
Cathartes aura	Turkey vulture
Cyanocitta stelleri	Steller's Jay
Junco hyemalis	Dark-eyed junco
Melozone crissalis	California towhee
Zenaida macroura	Mourning dove
Corvus brachyrhynchos	American crow
Zonotrichia leucophrys	White-crowned sparrow
Mimus polyglottos	Northern mockingbird
Haemorhous mexicanus	House finch
Mammals	
Odocoileus hemionus	Mule deer
Lepus californicus	Black-tailed jackrabbit
Reptiles	
Sceloporus occidentalis	Western fence lizard
Elgaria multicarinata	Southern alligator lizard

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
PLANTS					
Alkali Milk-Vetch (*Astragalus tener* var. *tener*)	-/-/1B	March – June	Playas, valley and foothill, and vernal pools in alkaline soils. Micro habitat consists of low ground, alkali flats, and flooded lands	Low No suitable habitat present	Presumed absent
Antioch Dunes Evening Primrose (*Oenothera deltoides ssp. howellii*)	E/E/1B	March – September	Inland dunes.	Low No suitable habitat present	Presumed absent
Bent-flower Fiddleneck (*Amsinckia lunaris*)	-/-/1B	March-June	Coastal bluff scrub, cismontane woodland, and valley and foothill grassland	Low Suitable habitat present; survey conducted during the blooming period resulted in negative findings	Presumed absent
Big tarplant (*Blepharizonia plumosa)*	-/-/1	July - October	Valley grassland, foothill woodland, chaparral.	Low Suitable habitat present	Not likely to occur

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Big-Scale Balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*)	-/-/1B	March – June	Chaparral, cismontane woodland, and valley and foothills grasslands, sometimes in serpentine outcrops.	Low Suitable habitat present	Not likely to occur
Bolander's Water-Hemlock (*Cicuta maculata var. bolanderi*)	-/-/2B	July – September	Coastal, salt marsh and wetland riparian.	Low No suitable habitat present	Presumed absent
Brewer's Western Flax (*Hesperolinon breweri*)	-/-/1B	May – July	Chaparral, cismontane woodland, valley and foothill grassland. Often in rocky serpentine soils.	Low Surveyed during blooming period	Presumed absent
Bristly Leptosiphon (*Leptosiphon acicularis)*	-/-/4.2	April – July	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland	Low Surveyed during blooming period	Presumed absent
California Androsace (*Androsace elongate ssp. acuta)*	-/-/4.2	March – June	Chaparral, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, valley and foothill grassland	Low Suitable habitat present	Not likely to occur
California Seablite (*Suaeda californica*)	E/-/1B	July – October	Marshes and swamps, margins of coastal salt marshes.	Low No suitable habitat present	Presumed absent
Caper-Fruited Tropidocarpum (*Tropidocarpum capparideum*)	-/-/1B	March – April	Valley and foothill grasslands on alkaline hills.	Low Suitable habitat present	Not likely to occur

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Chaparral Harebell (*Campanula exigua*)	-/-/1B	May – June	Chaparral, in rocky, usually serpentine soils.	Low No suitable habitat present	Presumed absent
Congdon's Tarplant (*Centromadia parryi* ssp. *congdonii*)	-/-/1B	June – November	Valley and foothill grasslands in alkaline soils.	Low Suitable habitat present; survey conducted during the blooming period resulted in negative findings	Presumed absent
Contra Costa Goldfields (*Lasthenia conjugens*)	E/-/1B	March – June	Valley and foothill grassland, cismontane woodland, and vernal pools, swales, and low depressions in open grassy areas.	Low Suitable habitat present	Not likely to occur
Contra Costa Manzanita (*Arctostaphylos manzanita ssp. laevigata*)	-/-/1B	January – March	Chaparral and cismontane woodland with sandstone substrate.	Low No suitable habitat present	Presumed absent
Diablo Helianthella (*Helianthella castanea*)	-/-/1B	March – June	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Usually in chaparral/oak woodland interface in rocky, azonal soils, often in partial shade.	Low Suitable habitat present; survey conducted during the blooming period resulted in negative findings	Presumed absent

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Fragrant Fritillary (*Fritillaria liliacea*)	-/-/1B	February – April	Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grasslands, often in serpentine soils.	Low Suitable habitat present	Not likely to occur
Hairless Popcorn-Flower (*Plagiobothrys glaber*)	-/-/1A	March – May	Meadows and seeps, marshes and swamps, coastal salt marshes and alkaline meadows.	Low No suitable habitat present	Presumed absent
Hospital Canyon Larkspur (*Delphinium californicum ssp. interius*)	-/-/1B	April – June	Openings in chaparral, mesic cismontane woodland, coastal scrub.	Low No suitable habitat present	Presumed absent
Jepson's Coyote-Thistle (*Eryngium jepsonii*)	-/-/1B	April − August	Clay soils. Valley and foothill grasslands. Vernal pools.	Low Suitable habitat present	Not likely to occur
Jepson's Woolly Sunflower (*Eriophyllum jepsonii*)	-/-/4.3	April – June	Chaparral, foothill woodland, northern coastal scrub, coastal sage scrub. Serpentine soils.	Low No suitable habitat present	Presumed absent
Loma Prieta Hoita (*Hoita strobilina*)	-/-/1B	May – October	Chaparral, cismontane woodland, riparian woodland, usually in mesic, serpentine soils.	Low Surveyed during blooming period	Presumed absent

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Hall's Bush-Mallow (*Malacothamnus hallii)*	-/-/1B	May – September	Chaparral, coastal scrub	Low Surveyed during blooming period	Presumed absent
Most Beautiful Jewel-Flower (*Streptanthus albidus* ssp. *peramoenus*)	-/-/1B	April – June	Chaparral, cismontane woodland, and valley and foothill grasslands in serpentine soils on ridges and slopes.	Low No suitable habitat present	Presumed absent
Mount Diablo Buckwheat (*Eriogonum truncatum*)	-/-/1B	April – November	Chaparral, coastal scrub, and valley and foothill grasslands in sandy soils.	Low Surveyed during blooming period	Presumed absent
Mount Diablo Fairy-Lantern (*Calochortus pulchellus*)	-/-/1B	April – June	Chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland; on wooded and brushy slopes.	Low Suitable habitat present; survey conducted during the blooming period resulted in negative findings	Presumed absent
Mount Diablo Jewel-Flower (*Streptanthus hispidus*)	-/-/1B	March – June	Valley and foothill grassland, chaparral; talus or rocky outcrops.	Low Suitable habitat present	Not likely to occur

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Mt. Diablo Manzanita (*Arctostaphylos auriculata*)	-/-/1B	January – March	Chaparral and cismontane woodland with sandstone substrate.	Low No suitable habitat present	Presumed absent
Mount Diablo Phacelia (*Phacelia phacelioides*)	-/-/1B	April – May	Chaparral, cismontane woodland; adjacent to trails, on rock outcrops and talus slopes; sometimes on serpentine.	Low No suitable habitat present	Presumed absent
Oval-Leaved Viburnum (*Viburnum ellipticum*)	-/-/2B	May – June	Chaparral, cismontane woodland, lower montane coniferous forest.	Low No suitable habitat present	Presumed absent
Robust Spineflower (*Chorizanthe cuspidata var. robusta*)	E/-/1B	April – September	Sandy or gravelly substrate in maritime chaparral, cismontane woodland openings, coastal dunes and coastal scrub.	Low No suitable habitat present	Presumed absent
San Joaquin spearscale (*Atriplex joaquiniana)*	-/-/1B	April-October	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland in seasonal alkali wetlands or alkali sink scrub with *Distichlis spicata, Frankenia,* etc.	Low No suitable habitat present	Presumed absent
Santa Clara Red Ribbons (*Clarkia concinna* ssp. a*utomixa*)	-/-/4	May – June	Cismontane woodland, chaparral, on slopes and near drainages.	Low Suitable habitat present	Not likely to occur
Showy Golden Madia (*Madia radiate*)	-/-/1B.1	March – May	Cismontane woodland, or valley and foothill grassland.	Low Suitable habitat present	Not likely to occur

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Slender-Leaved Pondweed (*Stuckenia filiformis subsp. alpina*)	-/-/2	May – July	Assorted freshwater marshes and swamps. Shallow, clear water of lakes and drainage channels.	Low No suitable habitat present	Presumed absent
Slender Silver Moss (*Anomobryum julaceum*)	-/-/4.2	N/A	Damp rock and soil on outcrops, usually on roadcuts. Broadleaf upland forest, lower montane coniferous forest, north coast coniferous forest.	Low No suitable habitat present	Not likely to occur
Tehama Navarretia (*Navarretia heterandra*)	-/-/4.3	April – June	Vernal pools, valley grassland, freshwater wetlands, and wetland riparian.	Low No suitable habitat present	Presumed absent
Woodland Woolythreads (*Monolopia gracilens*)	-/-/1B	February – July	Found in serpentine, broadleafed upland forest (openings), chaparral (openings), cismontane woodland, north coast coniferous forest (openings), valley and foothill grassland.	Low Surveyed during blooming period	Presumed absent

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
BIRDS					
Alameda Song Sparrow (*Melospiza melodia pusillula*)	-/-/SSC	February – August	Resident of salt marshes bordering south arm of San Francisco Bay, inhabits *Salicornia* marshes, nests low in *Grindelia* bushes (high enough to escape high tides) and in *Salicornia*.	Low No suitable habitat present	Not likely to occur
American Kestrel (*Falco sparverius)*	-/CP/-	February – August	Various grassland habitats, urban land, oak woodlands with grassland for foraging.	Moderate Suitable habitat present	May occur
American Peregrine Falcon (*Falco peregrinus anatum*)	-/-CP/-	February – August	Nests near wetlands, lakes, rivers, or other water. On cliffs, banks, dunes, mounds, and human-made structures.	Low No suitable habitat present	Not likely to occur
Burrowing Owl (*Athene cunicularia*)	SOC/-/SC	February – August	Dry open annual or perennial grassland, desert and scrubland. Uses abandoned mammal burrows for nesting.	Low No suitable habitat present	Not likely to occur
California Horned Lark (*Eremophila alpestris actia*)	-/-/SSC	February – August	Short-grass prairie, bald hills, mountain meadows, open coastal plains, fallow grain fields, and alkali flats. Prefer open terrain where they construct nests on the ground, often in sparsely vegetated areas.	Low No suitable habitat present	Not likely to occur

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Cooper's Hawk (*Accipiter cooperii*)	-/CP/-	February – August	Oak woodlands, coniferous forests, riparian corridors. Often hunts on edges between habitats.	High Suitable habitat present	May occur
Ferruginous Hawk (*Buteo regalis*)	-/CP/-	Late Fall – Winter	Open country such as semiarid grasslands with few trees, rocky outcrops, and open valleys. Also along streams or in agricultural areas during migration.	Low No suitable habitat present	Not likely to occur
Golden Eagle (*Aquila chrysaetos*)	-/CP/SC	February – August	Nests in cliff-walled canyons and tall trees in open areas. (Nesting and wintering) Rolling foothills mountain areas, sage-juniper flats, and desert.	Low Suitable habitat present	Not Likely to Occur
Grasshopper Sparrow (*Ammodramus savannarum*)	-/-/SSC	February – August	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes; favors native grasslands with a mix of grasses, forbs, and scattered shrubs. Nesting and feeding mostly takes place on the ground; loosely colonial when nesting.	Low Suitable habitat present	Not Likely to Occur
Great Blue Heron (*Ardea herodias*) ROOKERIES	-/-/-	February – August	(Rookery) Nests in tall trees in close proximity to foraging areas such as marshes and streams.	Low No suitable habitat present	Not likely to occur

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Loggerhead Shrike (*Lanius ludovicianus*)	SOC/-/SSC	February – August	Open grassland habitats, grazed grasslands. Uses shrubs for nesting.	Low Suitable habitat present	Not likely to occur
Northern Harrier (*Circus cyaneus*)	-/-/SSC	February – August	Nests in grasslands and marshlands, ground nesting bird. (Nesting) Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Low No suitable habitat present	Not likely to occur
Prairie Falcon (*Falco mexicanus*)	-/CP/-	February – August	Nests on cliffs in dry open terrain. Forages in marshlands and ocean shores.	Low No suitable habitat present	Not likely to occur
Red-shouldered Hawk (*Buteo lineatus*)	-/CP/-	February – August	Forages in variety of semi-developed habitats including orchards. Forages in woodlands and riparian areas. Nests in riparian habitat but also eucalyptus groves.	High Suitable habitat present	May occur
Red-tailed Hawk (*Buteo jamaicensis*)	-/CP/-	February – August	Various grassland habitats, urban land, oak woodlands with grassland for foraging.	High Suitable habitat present	May occur
Sharp-Shinned Hawk (*Accipiter striatus*)	-/CP/-	February – August	Oak woodlands, coniferous forests, riparian corridors. Often hunts on edges between habitats. (Nesting) Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas.	Low No suitable habitat present	Not likely to occur

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Swainson's Hawk (*Buteo swainsoni*)	-/T/-	February – October	Nests in riparian areas and in oak savannah near foraging areas. Forages in alfalfa and grain fields with rodent populations.	Low No suitable habitat present	Not likely to occur
Tricolored Blackbird (*Agelaius tricolor*)	SOC/-/SSC	February – August	Nesting within seasonal wetland marshes, blackberry brambles or other protected substrates. Forages in annual grassland and wetland habitats.	Low No suitable habitat present	Not likely to occur
White-tailed Kite (*Elanus leucurus*)	SOC/CP/FP	February – August	Various grassland habitats, urban land, oak woodlands with grassland for foraging.	Moderate Suitable habitat present	May occur
Yellow Warbler (*Dendroica petechia brewsteri*)	-/-/SSC	February – August	(Nesting) Riparian plant associations, prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging. Also nests in montane shrubbery in open conifer forests.	Low No suitable habitat present	Not likely to occur

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
MAMMALS					
American Badger (*Taxidea taxus*)	-/-/SSC	Resident	Shrub, forest, and herbaceous habitats with friable soils to dig burrows. Need open, uncultivated ground. Prey on fossorial mammals.	Low Suitable habitat present	Not likely to occur
Berkeley Kangaroo Rat (*Dipodomys heermanni berkeleyensis*)	-/-/-	Resident	Open grassy hilltops and open spaces in chaparral and blue oak/digger pine woodlands; needs fine, deep, well-drained soil for burrowing.	Low No suitable habitat present	Not likely to occur
Big Free-Tailed Bat (*Nyctinomops macrotis*)	-/-/SSC	Resident	Inhabits rocky or canyon country where it roosts in crevices. Arid landscapes such as desert shrub, woodlands and evergreen forests.	Low Suitable habitat present	Not likely to occur
Hoary Bat (*Lasiurus cinereus*)	-/-/-	Resident	Prefers open habitats or habitat mosaics with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees near water. Feeds mainly on moths.	Moderate Suitable habitat present	May occur
Little Brown Bat (*Myotis lucifugus*)	-/-/-	Resident	Inhabits woodlands and forests. Roosts in large groups in caves, rock crevices, attics, buildings and dead/dying trees near water. Hibernates in caves and mines.	Low Suitable habitat present	Not likely to occur

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Pallid Bat (*Antrozous pallidus*)	-/SC/-	N/A	Forages in grasslands, shrublands, deserts, forests, and woodlands. Most common in open, dry habitats. Roosts in rock crevices, caves, tree hollows, and buildings. Roosts must protect bats from high temperatures; very sensitive to disturbance of roosting sites.	Moderate Suitable habitat present	May occur
Salt Marsh Harvest Mouse (*Reithrodontomys raviventris)*	E/E/FP	Resident	Salt marshes with dense stands of pickleweed and other dense wetland vegetation such as cattails or bullrush.	Low No suitable habitat present	Not likely to occur
San Francisco Dusky-Footed Woodrat (*Neotoma fuscipes annectens*)	-/SC/-	Resident	Forest habitats of moderate canopy and moderate to dense understory, may prefer chaparral and redwood habitats. Nests constructed of grass, leaves, sticks, feathers, etc. Population may be limited by availability of nest materials.	Low No suitable habitat present	Not likely to occur
San Joaquin Kit Fox (*Vulpes macrotis mutica*)	E/T/-	Resident	Annual grasslands or grassy stages with scattered shrubby vegetation. Needs loose soils for burrowing.	Low Suitable habitat present	Not likely to occur
Silver-haired bat (*Lasionycteris noctivagans*)	-/-/-	Resident	Roosts in hollow trees, snags, buildings, rock crevices, caves, and under bark. Summer habitats include coastal and montane coniferous forests, valley foothill woodlands, pinyon-juniper woodlands, and valley foothill and montane riparian habitats. Feeds above forest streams, ponds, and open brushy areas.	Low Suitable habitat present	Not likely to occur

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Townsend's Big-Eared Bat (*Corynorhinus townsendii*)	-/SSC/-	Resident	Throughout California in a wide variety of habitats; roosts in the open, hanging from walls and ceilings. Needs sites free from human disturbance. Most common in mesic sites.	Moderate Suitable habitat present	May Occur
Western Mastiff Bat (*Eumops perotis californicus*)	-/-/SSC	Resident	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Low No suitable habitat present	Not likely to occur
Western Red Bat (*Lasiurus blossevillii)*	-/-/SSC	Resident	Winter in western lowlands and coastal regions of the San Francisco Bay. Roosts in forests and woodlands. Feed in grasslands, shrublands, open woodlands and forests and croplands.	Moderate Suitable habitat present	May occur
Yuma Myotis (*Myotis yumanensis*)	-/-/-	Resident	Optimal habitats are open forests and woodlands with sources of water over which to feed. Maternal colonies occur in caves, mines, buildings or crevices.	Moderate Suitable habitat present	May Occur

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
AMPHIBIAN					
California Red-Legged Frog (*Rana draytonii*)	T/-/SC	May 1 – November 1	Lowlands and foothills in or near permanent deep water with dense, shrubby or emergent riparian habitat. Requires 11-20 weeks of permanent water for breeding and larval development. Must have access to aestivation habitat.	Low No suitable habitat present	Not likely to occur
California Tiger Salamander (*Ambystoma californiense*)	T/T/-	Aquatic Surveys - Once each in March, April, and May with at least 10 days between surveys. Upland Surveys - 20 nights of surveying under proper conditions beginning October 15 and ending March 15.	Vernal pools, swales and depressions for breeding, needs underground refugia.	Low No suitable habitat present	Not likely to occur
Foothill Yellow-Legged Frog (*Rana boylii*)	SOC/-/SC	Year-round resident	Partially-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need cobble for egg-laying.	Low No suitable habitat present	Presumed absent

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
REPTILE					
Alameda Whipsnake (*Masticophis lateralis euryxanthus*)	T/T/-	Year-round resident	Valley-foothill hardwood habitat of the coast ranges between Monterey and north San Francisco Bay areas. Inhabits south-facing slopes and ravines where shrubs form a vegetative mosaic with oak trees and grasses.	Low Suitable habitat present	May occur in dispersal capacity only
Coast Horned Lizard (*Phrynosoma blainvillii*)	-/SSC/-	Year-round resident	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes; requires open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Low Suitable habitat present	Not likely to occur
Northern California Legless Lizard (*Anniella pulchra)*	-/-/SSC	Year-round resident	Occurs in moist warm loose soil with plant cover. Moisture is essential. Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks.	Low No suitable habitat present	Presumed absent
Western Pond Turtle (*Emys marmorata*)	-/-/SC	March – October	Aquatic turtle needs permanent water in ponds, streams, irrigation ditches. Nests on sandy banks or grassy fields.	Low No suitable habitat present	Not likely to occur

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**

1. Special-status plants and animals as reported by the California Natural Diversity Data Base, California Native Plant Society, and other background research July 2021
2. Order of Codes for Plants - Fed/State/CNPS

Order of Codes for Animals - Fed/State/CDFW

Codes:

SOC - Federal Species of Concern

SC - California Species of Special Concern

E - Federally/State Listed as an Endangered Species

T - Federally/State Listed as a Threatened Species

C - Species listed as a Candidate for Federal Threatened or Endangered Status

R - Rare

D - Delisted

CP- California protected

FP - State Fully Protected

DFG: SC California Special Concern species

1B - California Native Plant Society considers the plant Rare, Threatened, or Endangered in California and elsewhere.

1A - CNPS Plants presumed extinct in California.

2 - CNPS Plants Rare, Threatened or Endangered in California, but more common elsewhere.

3 - CNPS Plants on a review list to find more information about a particular species.

4 - CNPS Plants of limited distribution - a watch list.

ATTACHMENT 3

SITE PHOTOGRAPHS

1. Facing northeast, photo shows a view of the confluence of the two drainages (one of which is located offsite on the adjacent residential property) along the northern boundary of the Property. Photo taken July 12, 2021.

2. Facing east, photo shows the drainage that flows along the northern boundary of the Property. Photo taken July 12, 2021.

3. Facing west, photo shows a view of the drainage along the north boundary of the Property. Photo taken July 12, 2021.

4. Facing southwest, photo shows the more incised drainage along the northwestern edge of the Property facing downstream. Photo taken July 12, 2021.

5. Facing west, photo shows a view of where the drainage leaves the Property via a partially obstructed culvert that diverts flows beneath the adjacent property. Photo taken July 12, 2021.

6. Facing north, photo shows the mixed woodland habitat present on the south corner of the Property from Walnut Boulevard. Photo taken July 15, 2021.

7. Facing northeast, photo shows the mixed woodland and disked grassland habitat present along the eastern boundary of the Property. Photo taken July 15, 2021.

8. Facing north, photo shows the existing residential structure present on the Property and the surrounding ornamental trees. Photo taken July 15, 2021.

9. Facing west, photo shows the existing residential structure located centrally on the Property. Photo taken July 15, 2021.

10. Facing northeast, photo shows the disked grassland habitat present in the northern portion of the Property. Photo taken July 15, 2021.

11. Facing northwest, photo shows the disked grassland habitat present along the drainage at the northwestern boundary of the Property. Photo taken July 15, 2021.

12. Facing southwest, photo shows the mixed woodland habitat present at the western boundary of the Property. Photo taken July 15, 2021.

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B.2 - Pre-construction Special-status Plant Survey Report

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OLBERDING ENVIRONMENTAL, INC.
Wetland Regulation and Permitting

May 6, 2022

Mr. Andy Byde
Calibr Ventures
1908 Cambridge Place
Walnut Creek, CA 94598

SUBJECT: 3180 Walnut Blvd – Contra Costa County - Pre-construction Special-status Plant Survey Results

Dear Mr. Byde:

On April 5, 2022, Olberding Environmental, Inc. conducted a pre-construction special-status plant survey within the 3180 Walnut Blvd Property located within the City of Walnut Creek, in Contra Costa County, California. The purpose of the survey was to identify the presence/absence of special-status plants within or adjacent to the Property prior to the initiation of construction activities.

The focal species of this survey included Mt. Diablo Helianthella (*Helianthella castanea)*. The survey was scheduled to coincide with the blooming period for this species (March – June). The survey area included the entire Property, with emphasis focused on the woodland and grassland habitats found throughout the Property (Attachment 1, Figure 1).

Representative photos of the Property and survey are included in Attachment 3.

METHODS

Special-status Plant Survey **–** A special-status plant survey was conducted on the Property on April 5, 2022. The focal species of this survey was Mt. Diablo Helianthella. The survey followed the California Department of Fish and Wildlife (CDFW) (2009) and California Native Plant Society (CNPS) (2001) published survey guidelines to the extent possible. These guidelines state that special-status plant surveys should be conducted at the proper time of year when special-status plants are both evident and identifiable. Mt. Diablo Helianthella typically blooms March – June. The biologists conducting the survey were trained and familiar with identifying this species during all life stages and remnant plants would have been observed if they were present on the Property. Areas of potential habitat were identified (open, grassy areas—transition zones between scrubland, oak woodland, and oak savanna) and visually surveyed. Plant species observed within this site were identified and if further evaluation was needed samples were taken to be keyed out in the lab. Final determinations for collected plant material were made by key using *The 2012 Jepson Manual*.

RESULTS

No rare or special-status plants were observed within the Property. The survey occurred within the blooming period for Mt. Diablo Helianthella and this species was not observed. Additionally, no other special-status plant species were observed.

CONCLUSIONS

In summary, no special-status plant species, including Mt. Diablo Helianthella, were observed on the Property at this time. It is likely that due to other developments completely surrounding the site, along with an overgrowth of non-native weedy species, recruitment of Mt. Diablo Helianthella is not possible. As no special-status plants were identified, no further special-status plant surveys will need to be conducted on the Property.

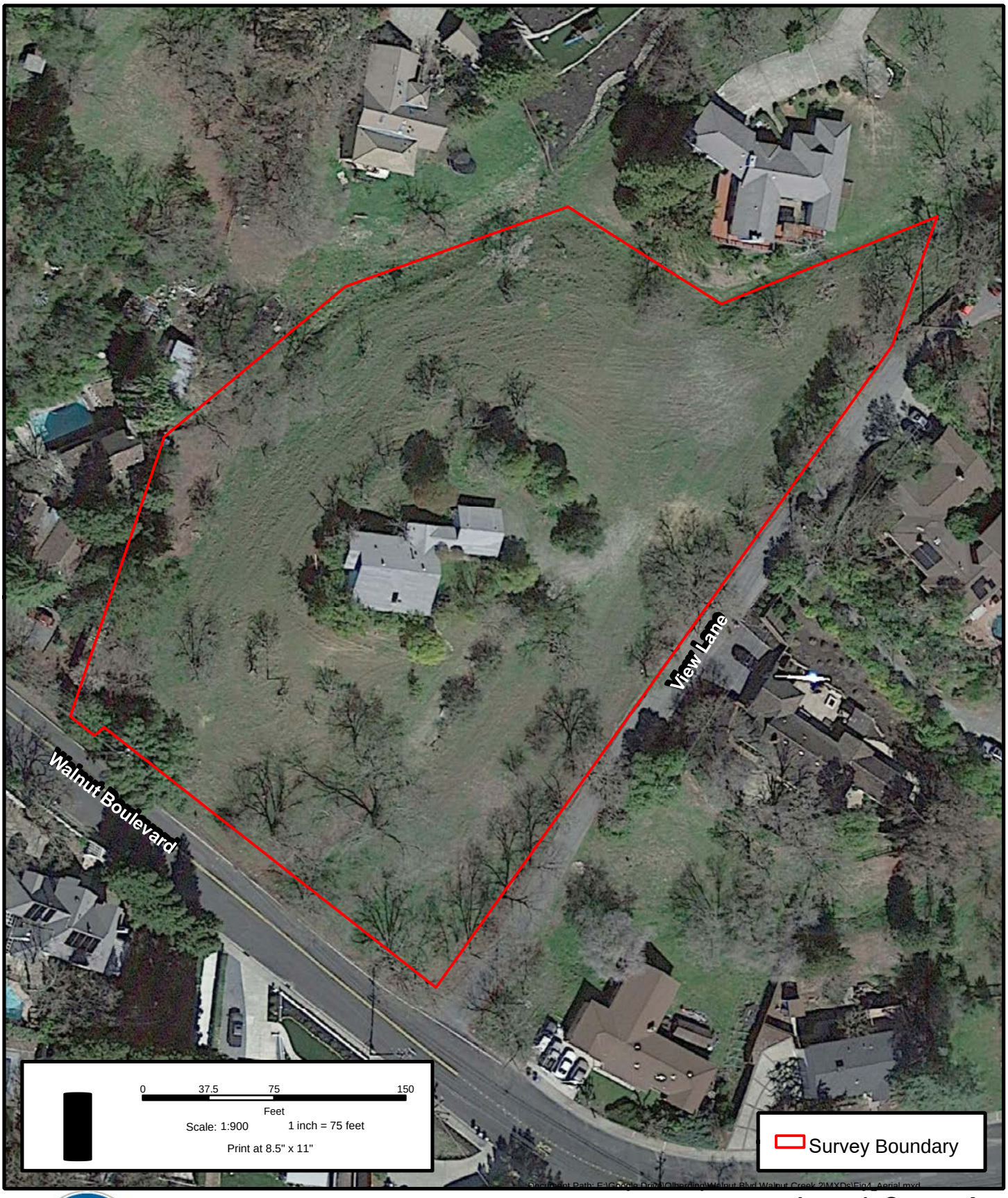
A complete list of all plant species observed during the survey is included in Attachment 2.

If you have any questions, please feel free to contact me at (916) 985-1188.

Sincerely,

Jeff Olberding
Regulatory Scientist

ATTACHMENT 1



OLBERDING
-ENVIRONMENTAL-

193 Blue Ravine Road, Ste.160
Folsom, California, 95630
Phone: (916) 985-1188

Figure 1: Survey Area
3180 Walnut Boulevard
Contra Costa County, CA

Revision Date: 7/13/2021

ATTACHMENT 2

Table 1

Wildlife Species Observed Within/Adjacent to the Survey Area

Scientific Name	Common Name
Plant Species Observed	
Agapanthus africanus	Lily of the Nile
Agave parryi	Parry's agave
Amsinckia intermedia	Common fiddleneck
Avena fatua	Wild oat
Baccharis pilularis	Coyote brush
Brassica nigra	Black mustard
Bromus diandrus	Rip-gut brome
Bromus hordeaceus	Soft chess
Cardus pychocephalus	Italian thistle
Claytonia parviflora	Narrow leaved miner's lettuce
Convolvulus arvensis	Field bindweed
Cotoneaster pannosus	Wooly cotoneaster
Crataegus monogyyna	Common hawthorn
Diospyros virginiana	Common persimmon
Erodium cicutarium	Coastal heron's bill
Erodium moschatum	White stemmed filaree
Euphorbia peplus	Petty spurge
Festuca bromoides	Brome fescue
Festuca perennis	Italian rye grass
Galium aparine	Catchweed bedstraw
Geranium dissectum	Cutleaf geranium
Gladiolus grandiflora	Sword lily
Grevillea rosmarinifolia	Rosemary grevillea
Helminthotheca echioides	Bristly ox-tongue
Hemerocallis sp.	Daylily
Hordeum murinum	Wall barley
Hypochaeris radicata	Hairy cats ear
Juglans hindsii	Black walnut
Juglans regia	English walnut
Ligustrum lucidum	Glossy privet
Lysimachia arvensis	Scarlet pimpernel
Medicago polymorpha	Burclover
Nerium oleander	Oleander
Olea europaea	Olive
Oxalis pes-caprae	Bermuda buttercup

Table 1

Wildlife Species Observed Within/Adjacent to the Survey Area

Scientific Name	Common Name
Phalaris paradoxa	Hood canarygrass
Pinus contorta	Lodgepole pine
Prunus domestica	European plum
Prunus dulcis	Almond
Pycrantha koidzumii	Taiwan firethorn
Pyrus communis	Common pear
Querucus agrifolia	Coast live oak
Quercus chrysolepis	Canyon live oak
Quercus lobata	Valley oak
Quercus wislizeni	Interior live oak
Rumex crispus	Curly dock
Sequoia sempervirens	Coast redwood
Schinus molle	Peruvian pepper tree
Senecio vulgaris	Common groundsel
Silybum marianum	Milk thistle
Sonchus asper	Prickly sow thistle
Sonchus oleraceus	Common sow thistle
Syringa vulgaris	Common lilac
Torilis arvensis	Hedge parsley
Toxicodendron diversilobum	Western Poison oak
Trifolium hirtum	Rose clover
Veronica persica	Bird's eye speedwell
Vicia sativa ssp. nigra	Smaller common vetch
Vicia sativa ssp. sativa	Common vetch
Vicia villosa ssp varia	Smooth vetch

ATTACHMENT 3

1. Photo taken from the northwest edge of the Property, facing west, showing mixed woodland habitat following an expanse of grassland habitat consisting primarily of non-native annual grasses/weeds

2. Photo taken facing Walnut Blvd from the east end of the Property showing large trees mainly valley oak, and cultivated species. There is low vegetation present in this area, mainly non-native grasses/weeds.

3. Photo taken from east end of the Property, facing northeast, showing trees within boundary, mainly cultivated, and some valley oak. Low vegetation almost consistent throughout bulk of site.

4. Photo taken from west end of site, facing north. Photo shows grassland habitat in northern portion of the Property with mixed valley oak and walnut trees present throughout.

5. Photo shows ephemeral drainage habitat at northern boundary of the Property, facing northeast. Mainly non-native grasses are present throughout the drainage.

6. Photo shows ephemeral drainage habitat as above, facing northwest.

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B.3 - Arborist Report

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January 10, 2023

Andy Byde
Calibr Ventures
925-683-5493 | andy@calibrventures.com

Re: Arborist Report for 3180 Walnut Blvd, Walnut Creek

Dear Andy,

This arborist report addresses the proposed subdivision at 3180 Walnut Blvd. Per the Contra Costa County Tree Protection and Preservation Ordinance Chapter 816-6 for developed property, the scope of work includes:

- Tag, identify and measure all trees with diameters 6.5" or larger within 50' of proposed improvements. Multi-stemmed trees will be included if the total circumference of their stems exceeds 40".
- Note protected trees, defined as:
    - Any tree that is adjacent to or part of a riparian, foothill woodland or oak savanna area, or part of a stand of 4 or more trees, and measures 6.5" in diameter or more, and is of one of the following species: Bigleaf maple (*Acer macrophyllum*), Box elder (*Acer negundo*), California buckeye (*Aesculus californica)*, White alder (*Alnus rhombifolia*), Madrone (*Arbutus menziesii*), Toyon (*Heteromeles arbutifolia*), California Black Walnut (*Juglans hindsii)*, California juniper (*Juniperus californica*), Tanoak (*Lithocarpus densiflora*), Knobcone pine (*Pinus attentuata*), Digger pine (*Pinus sabiniana*), California sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), Black cottonwood (*Populus trichocarpa*), Coast live oak (*Quercus agrifolia)*, Blue oak (*Q. douglasii*), California black oak (*Q. kellogii*), Valley oak (*Q. lobata*), Interior live oak (*Q. wislizenii*), Yellow willow (*Salix lasiandra*), Red willow (*Salix laevigata*), Arroyo willow (*Salix lasiolepis*), Coast red elderberry (*Sambucus callicarpa*), Coast redwood (*Sequoia sempervirens*), California bay (*Umbellularia californica*).
    - Any tree shown to be preserved on an approved tentative map, development or site plan or required to be retained as a condition of approval.
    - Any tree required to be planted as a replacement for an unlawfully removed tree.
- Assess proposed improvements for potential encroachment.
- Based on proposed encroachment, tree health, structure, and species susceptibility, make recommendations for preservation.
- Provide above information on a Tree Protection Plan, to include: tag #s, approximate dripline, whether a tree is removed or preserved, tree protection fencing locations, and tree protection recommendations.

Project Summary

The property is a 2.88 acre site with an existing but uninhabited single-family home in the very center of the property. The original driveway off Walnut Blvd has been reduced to a dirt path. A semi-natural drainage swale parallels the entire north property line, terminating in a culvert at the northwest corner of the property. The proposed project will subdivide the property and construct ten (10) homes, with a road down the center of the property and a bio-retention basin at the south corner.

I included seventy-four (74) trees in my tree inventory, including fourteen (14) protected trees. Orchard remnants, including mature & aging pecans, almonds and walnuts, are distributed across the site, while the highest density of native oaks is found along the south property line. After my site visit, I provided recommendations for preserving key trees along the property lines, both to maintain

screening and to reduce encroachment on off-site and/or spectacular specimens. These recommendations were incorporated into the latest plan set.

It is my opinion that a total of forty-three (43) trees will need to be removed to accommodate the proposed project, which includes four (4) protected trees. The remaining thirty-one (31) trees can be retained given that the protection measures within this report are followed.

Assumptions & Limitations

This report is based on my site visit on 5/19/21 and the vesting tentative map package by DK Engineering dated 12/22. It was assumed that the trees and the proposed improvements were accurately surveyed. A few trees were not surveyed, so I approximately located them on the tree protection plan. Their precise locations will not affect the recommendations in this report. Significant changes to the plans shall be reviewed to update the tree protection recommendations.

The health and structure of the trees were assessed visually from ground level. No drilling, root excavation, or aerial inspections were performed. Internal or non-detectable defects may exist and could lead to part or whole tree failures. Due to the dynamic nature of trees and their environment, it is not possible for arborists to guarantee that trees will not fail in the future.

Discussion

Due to the significant grading required to construct the site improvements, the majority of the trees in the center of the property & along Walnut Blvd will need to be removed. Of the 43 proposed removals, 4 are considered protected per County ordinance (trees # 340-343). Separately, four are recommended for removal solely based on their poor condition (trees #321, 325, 330 & 333) – while they can be preserved with low encroachment, their declining health means that they will not be an asset for long to both the current and future site. Tree preservation efforts are best focused on healthy trees that can provide benefits for years to come.

Such trees include the valley oaks along the southeast property line along View Lane, at the end of the proposed subdivision road (tree #314, Figure 1),

Figure 1. Proposed grading originally required the removal of valley oak #314 – the design has been adjusted so it can remain at the end of the main road.

Figure 2. Valley oak #310 is across the swale from the proposed retaining walls and homes. An arborist shall be on site during grading beneath its canopy.

and along the west property line. I provided recommendations on where to terminate grading, which reduced overall encroachment along the perimeter and increased the ability to preserve most of the mature trees. Still, I recommend having an arborist on site during grading within the driplines of selected trees to ensure that their roots are not excessively encroached. For instance, oak #310 is located on the west side of the drainage swale – the proposed retaining walls will occur at the top of the bank opposite of this tree (Figure 2). Although the likelihood of encountering large roots is lower, it is not zero, and the worthy character of this tree warrants additional caution with an arborist on site.

Two general recommendations apply across all the trees that will be preserved. The temporary protection fencing must be chain-link on posts driven into the ground. Movable footings or plastic/wire fencing is not sufficient, as these make it easy to move or remove fencing. The contractors may only adjust fencing with my approval – otherwise, encroachment would be far too easy given the size of the development and the site's gentle slopes. If the fencing is moved without my knowledge, the extent of tree impact becomes unknown and can jeopardize the long-term condition of the trees. Additionally, pruning shall be done by certified arborists or tree workers, who receive the credentials from the International Society of Arboriculture (ISA) once they have demonstrated a baseline level of knowledge and skill. Improper pruning of trees results in compromised growth and/or permanently destroys the trees' architecture, leading to increased issues in future years.

Figure 3. The neighbor's Monterey pine #303 is heading into its twilight years and is likely to continue to decline regardless of construction. The species has been rapidly dying throughout the county.

Lastly, although the proposed design has been adjusted to preserve the neighbor's pine (#303, Figure 3), this tree is likely to continue to decline. Monterey pines are short lived, native to coastal regions, and are highly vulnerable to drought stress when planted in inland environments. Once stressed, they become susceptible to infestation by red turpentine beetle and can rapidly die within a few months – this has been observed throughout the county, especially in the last year or two. This specific tree is aging and does not have many years left – it is likely to continue its decline regardless of construction.

Tree Protection Recommendations (to be printed on site plans)

Pre-Construction Phase

- Remove trees # 315, 321, 325, 326, 330, 332, 333, 335 & 340-374 (43 trees).
- Mulch from tree removals may be spread out under the driplines of trees that will be retained, keeping at least 12" away from the trunks.
- Prior to construction or grading, contractor shall install 6' chain-link fencing on steel posts driven into the ground to construct a temporary Tree Protection Zone (TPZ) around each tree or grove of trees as indicated on the tree protection plan. Wire or plastic fencing shall not be used as it is easy to damage or remove.

- TPZ fencing shall remain in an upright sturdy manner from the start of grading until the completion of construction. Fencing shall not be adjusted or removed without consulting the project arborist.

Foundation, Grading, and Construction Phase

- The project arborist shall be on-site during excavation/grading within the driplines of trees #310, 327-331, 334 & 335 to monitor root encroachment and to provide additional tree protection recommendations as needed. Roots ≥ 2" shall be cleanly pruned with a handsaw or sawzall, immediately covered, and kept moist till backfilled.
- All pruning – especially of trees #310, 327-331, 334 & 335 - shall be performed by personnel certified by the International Society of Arboriculture (ISA). All pruning shall adhere to ISA and American National Standards Institute (ANSI) Standards and Best Management Practices.
- Should Tree Protection Zone (TPZ) encroachment be necessary, the contractor shall contact the project arborist for consultation and recommendations.
- Contractor shall keep TPZs free of all construction-related materials, debris, fill soil, equipment, etc. The only acceptable material is mulch spread out beneath the trees.
- Should any damage to the trees occur, the contractor shall promptly notify the project arborist to appropriately mitigate the damage.

Landscaping Phase (if applicable)

- The Tree Protection Zone (TPZ) fencing shall remain in place with the same restrictions until landscape contractor notifies and meets with the project arborist.
- Contractor shall avoid trenching and grade changes within oak driplines.
- All planting and irrigation shall be kept a minimum of 10' away from native oaks. All irrigation within the driplines shall be targeted at specific plants, such as drip emitters or bubblers. No overhead irrigation shall occur within the driplines of native oaks.
- All planting within oak driplines shall be compatible with oaks, consisting of plant material that requires little to no water after two years' establishment. A list of oak-compatible plants can be found in a publication from the California Oak Foundation, available at: http://californiaoaks.org/wp-content/uploads/2016/04/CompatiblePlantsUnderAroundOaks.pdf

Thank you for the opportunity to provide this report, and please do not hesitate to contact me if there are any questions or concerns.

Please see tree inventory table below & attached tree protection plan.

Sincerely,

Jennifer Tso
Certified Arborist #WE-10270A
Tree Risk Assessor Qualified

Tree Inventory & Assessment Table

#s: Each tree was given a square metal tag with numbers ranging from #301-374. Their locations are given in the tree protection plan.
DBH (Diameter at Breast Height): Trunk diameters in inches were measured at 4.5' above average grade with a diameter tape. Height of measurement may deviate from the standard on atypical trunks; deviations are noted under the "Comments" section.

Health & Structural Condition Rating
Dead: Dead or declining past chance of recovery.
Poor (P): Stunted or declining canopy, poor foliar color, possible disease or insect issues. Severe structural defects that may or may not be correctable. Usually not a reliable specimen for preservation.
Fair (F): Fair to moderate vigor. Minor structural defects that can be corrected. More susceptible to construction impacts than a tree in good condition.
Good (G): Good vigor and color, with no obvious problems or defects. Generally more resilient to impacts.
Very Good (VG): Exceptional specimen with excellent vigor and structure. Unusually nice.

Dripline: Canopy radius was visually estimated in each cardinal direction.

Age
Young (Y): Within the first 20% of expected life span. High resiliency to encroachment.
Mature (M): Between 20% - 80% of expected life span. Moderate resiliency to encroachment.
Overmature (OM): In >80% of expected life span. Low resiliency to encroachment.

DE: Dripline Encroachment (X indicates encroachment)
CI: Anticipated Construction Impact (L = Low, M = Moderate, H = High)

Tree Encroachment Summary

- Trees that will need to be removed: 315, 321, 325, 326, 330, 332, 333, 335, 340-374 (43 trees)
  - Trees #321, 325, 330 & 333 are recommended for removal strictly based on poor condition; they will not be significantly encroached by construction.
  - Protected trees to be removed: #340-343 (4 trees)
- Trees to be saved that will be subjected to dripline encroachment: 301-303, 306, 309, 310, 314, 316, 322-324, 327, 328, 331, 334, 338, 339 (17 trees)
- Trees to be saved that will not be encroached: 304, 305, 307, 308, 311, 317-320, 329, 336, 337 (12 trees)

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
301	Almond (*Prunus dulcis*)	12	F-P	F	0	0	12	12	M	X	L	Large dead branches. Multiple branches at 2.5'; diameter measured below. 11' from proposed grading outside retaining wall.	Install temporary protection fencing.
302	Valley oak (*Quercus lobata*)	17	G	F	0	10	20	20	M	X	L	Phototropic lean to S due to declining pine. Trunk flare buried. Co-dominant stems at 6' with wide attachment. 11' from proposed limit of grading; 15' from proposed retaining wall.	Install temporary protection fencing.

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
303	Monterey pine (*Pinus radiata*)	36	F-P	F	10	20	20	18	OM	X	L-M	DBH estimated due to clutter below. Sparse canopy with yellowing needles. Debris obscuring base. 28' from proposed retaining wall. **Note: species has been declining in area and is likely to die from drought stress regardless of construction.**	Install temporary protection fencing.
304	Monterey pine	17.5	F	F	15	25	0	0	M		L	Debris obscuring base. Phototropic lean to E. 25' from proposed retaining wall.	None.
305	Coast redwood (*Sequoia sempervirens*)	11	G-F	G	12	12	12	12	Y		L	Off-site; DBH estimated; tag on fence. Top sparse. 22' from proposed retaining wall.	None.
306	Holly oak (*Quercus ilex*)	7	G-F	F	12	12	12	12	Y	X	L	Top sparse. 9' from proposed retaining wall.	Install temporary protection fencing.
307	Coast redwood	12	F-P	G	8	8	8	8	Y		L	Off-site; DBH estimated; tag on fence. Browned and sparse foliage; early loss of old foliage. 22' from proposed retaining wall.	Install temporary protection fencing.
308	Valley oak	13	G	F	10	15	15	10	Y		L	Off-site; DBH estimated; tag on fence. Co-dominant stems at 8'. 23' from proposed retaining wall.	Install temporary protection fencing.
309	California black walnut (*Juglans hindsii*)	14	G-F	F	0	25	15	10	M	X	L-M	**Protected tree.** Diameter measured at 5' above grade above large co-dominant swelling (other stem removed). Several dead stems & removed scaffolds exaggerating diameter. Remaining canopy healthy. 14' from proposed retaining wall.	Install temporary protection fencing.
310	Valley oak	29.5	G-F	G	20	25	25	20	M	X	L-M	**Protected tree.** Top moderately sparse with typical amount of dead lower branches. Wide co-dominant stems at 18'. Swale cuts next to trunk; wide trunk flare. 13' from proposed retaining wall (to be built on opposite side of swale).	Install temporary protection fencing - arborist on site during grading. For lower retaining wall.
311	California black walnut	17.5	G-F	F	20	15	0	25	M		L	**Protected tree.** Off-site tree. 5" dead scaffold, other lower branches dead. Remaining canopy is healthy. Clear of construction.	None.
312	California black walnut	26	F-P	F	20	20	20	20	M	X	H	**Protected tree.** Diameter measured at 18" above grade due to swelling for co-dominant stems above (at 6'). Sparse upper canopy. Small diameter dieback at top.	Install temporary protection fencing.
313	Almond	9, 6	G	F	10	12	12	5	M	X	H	Good health. Some minor lower dieback.	None.
314	Valley oak	14	VG	G	15	15	15	15	Y	X	L	Nice tree. Close to top of swale. Co-dominant stems at 6'. Proposed grading terminates 13' radius from tree.	Install temporary protection fencing.

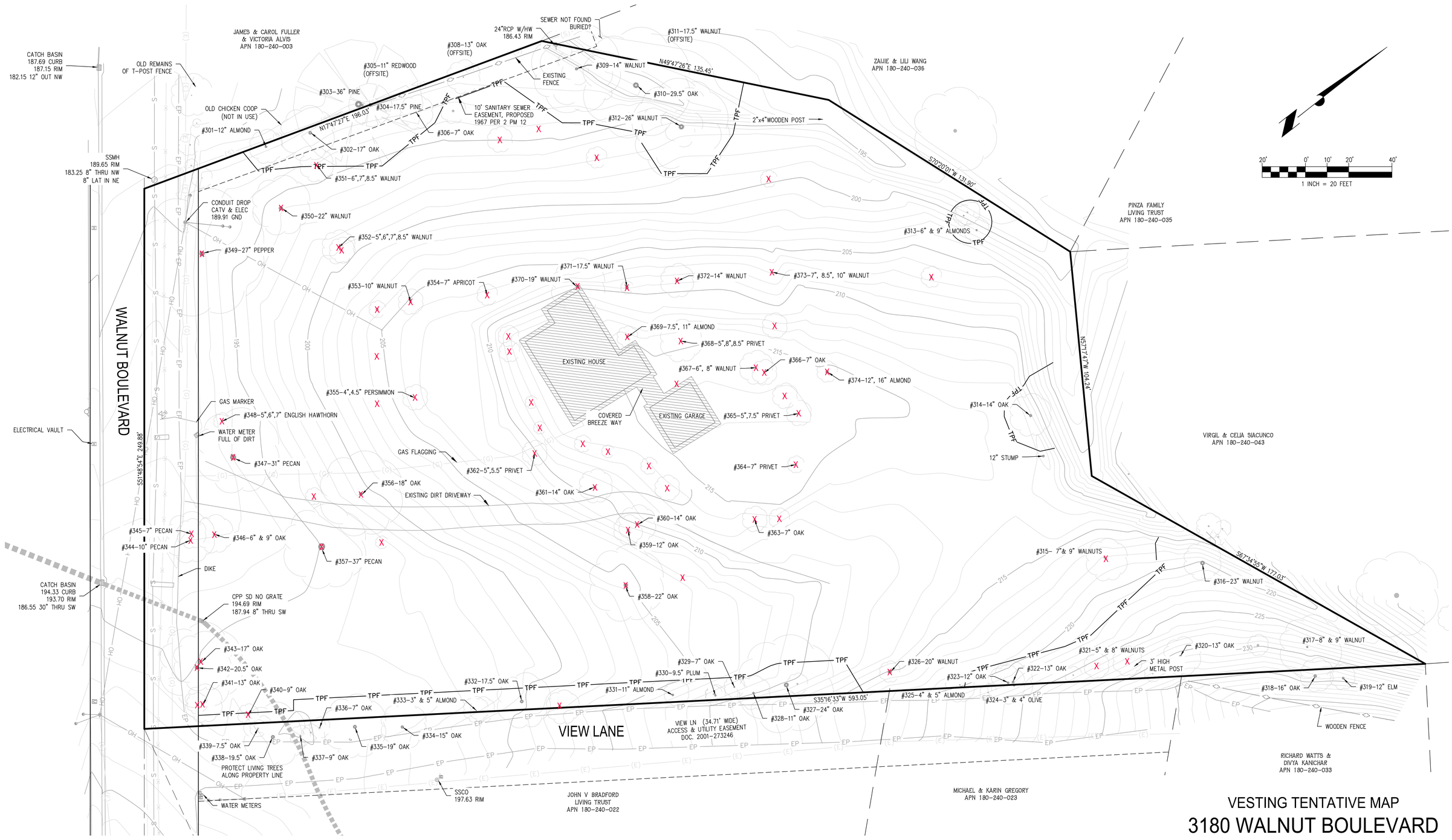
#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
315	English walnut (*Juglans regia*)	7.5, 9, 7, 7, 9, 6	P	P	15	10	10	12	OM	X	H	Half dead. Rootstock resprouting. Canopy died back to smaller crown. Decay throughout tree. In proposed grading.	Remove.
316	California black walnut	23	G	P	12	12	12	12	M	X	L-M	Topped at 12' with healthy regrowth. Trunk sounds hollow. Proposed grading daylights 22' from tree.	Install temporary protection fencing.
317	California black walnut	8, 8, 9, 6	F-P	F	15	10	20	15	M		L	Sparse canopy; one trunk dead. Co-dominant trunks at base. Clear of construction.	None.
318	Valley oak	16	G	G	20	15	15	12	M		L	Off-site tree. Co-dominant stems at 7' with wide attachment. Slightly sparse canopy. Clear of construction.	None.
319	Siberian elm (*Ulmus pumila*)	12	F-P	F-P	8	10	10	15	M		L	Off-site tree. Large branch dieback throughout canopy with remaining foliage healthy. Clear of construction.	None.
320	Valley oak	13	G	G	18	15	15	15	M		L	Very good structure with wide attachments. Large scaffold branch at 3'. Clear of construction.	None.
321	California black walnut	8, 5	VP	P	15	12	10	0	OM		L	Noted as dead on survey. All other stems are dead. Sparse canopy with mistletoe. 18' from proposed limit of grading.	Remove (due to condition).
322	Valley oak	13	VG	G-F	15	15	15	0	M	X	L	Buried trunk flare. Minor phototropic lean to E. Power lines to E across road. 10' from proposed limit of grading.	Install temporary protection fencing.
323	Valley oak	12	G	F	15	0	10	18	M	X	L	Phototropic lean to NW with bowed top; still understory. Buried trunk flare. 10' from proposed limit of grading.	Install temporary protection fencing.
324	Olive (*Olea europea*)	4, 4, 3, 4, 3	G	G-F	8	8	10	10	Y	X	L	Multiple trunks. Minor phototropic lean to S. 12' from proposed limit of grading.	Install temporary protection fencing.
325	Almond	4, 4, 5, 5	P	P	5	3	6	5	OM		L	Aging tree. Several dead trunks, remaining healthy foliage consists of water-sprouts. 10' from proposed limit of grading.	Remove (due to condition).
326	California black walnut	20	VP	P	10	15	6	12	OM	X	H	Main trunk decayed and nearly dead - diameter exaggerated. Live branches actually only up to 5" diameter. Sparse stunted foliage with significant mistletoe. 2' from proposed limit of grading.	Remove.
327	Valley oak	24	G	G-F	20	18	15	25	M	X	M/M-H	Large branches extended to W, multiple large stems between 5'-7'. Proposed retaining wall 13' from trunk; V-ditch/swale 9' from tree.	Install temporary protection fencing. Arborist on site during grading within tree dripline. Pruning to be done by certified personnel
328	Valley oak	11	G	G-F	0	18	15	0	Y	X	L	Trunk winds through branches of larger oak. Proposed retaining wall 13' from trunk; V-ditch/swale 8' from tree.	Install temporary protection fencing.

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
329	Valley oak	7	VG	F	0	0	0	20	Y		L	Phototropic lean to W. 7' from proposed retaining wall; 4' from proposed V-ditch/swale.	Install temporary protection fencing.
330	Plum (*Prunus* sp.)	9.5	P	F-P	0	10	12	4	OM	X	M/M-H	Half dead. In cluster with dead almond and oak. 10' from proposed retaining wall; 6' from proposed V-ditch/swale.	Remove (due to condition).
331	Almond	11	G	F	10	10	10	10	M	X	M	Diameter measured at 3' - narrow co-dominant stems at 4' exaggerating DBH. Minor dead lower branches. 9' from proposed retaining wall; 5' from proposed V-ditch/swale.	Install temporary protection fencing. Arborist on site during grading within tree dripline.
332	Valley oak	17.5	F	F	20	15	18	20	M	X	H	Small branch dieback and responding with vigorous epicormic growth. Unknown cause of stress. 9' from proposed retaining wall; 5' from proposed V-ditch/swale.	Remove.
333	Almond	5, 4, 3	F-P	F-P	0	10	12	5	OM	X	L-M	Dieback with epicormic sprouts comprising canopy. Dead black walnut at base (3" & 4"). 12' from proposed retaining wall; 8' from proposed V-ditch/swale.	Remove (due to condition).
334	Valley oak	15	VG	G-F	18	18	18	18	M	X	L	**Protected tree.** Buried flare. Multiple stems at 15' with narrow attachment. 14' from proposed drainage.	Install temporary protection fencing. Arborist on site during grading within tree dripline.
335	Valley oak	19	G	G	15	18	15	18	M	X	L-M	**Protected tree.** Buried flare. Some areas of canopy lacking branches. 13' from proposed drainage.	Install temporary protection fencing. Arborist on site during grading within tree dripline.
336	Valley oak	7	G	F	10	0	0	15	Y		L	**Protected tree.** Asymmetrical canopy to NW. 12' from proposed drainage.	Install temporary protection fencing.
337	Valley oak	9	G	G-F	6	15	4	4	Y		L	**Protected tree.** Co-dominant stems at 6' with narrow attachment. Unusually narrow canopy with elongated branches over small road. Buried trunk flare. 18' from proposed drainage.	Install temporary protection fencing.
338	Valley oak	19.5	G	G-F	18	18	18	18	M	X	L	**Protected tree.** Co-dominant stems at 8'. Minor small diameter deadwood. Buried trunk flare. 13' from proposed bioretention basin.	Install temporary protection fencing.
339	Valley oak	7.5	G	G	4	10 SE	10	6	Y	X	L	**Protected tree.** Phototropic lean to SE. 8' from proposed bioretention basin.	Install temporary protection fencing.
340	Valley oak	9	G	G-F	0	15 SE	12	15	Y	X	H	**Protected tree.** Minor asymmetrical canopy to W. Within 1' of proposed bioretention basin.	Remove.

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
341	Valley oak	13	G	G-F	12	15	15 SE	0	M	X	H	**Protected tree.** Phototropic lean to SE has corrected at top. Buried flare. 3' from proposed bioretention basin.	Remove.
342	Valley oak	20.5	G-F	G-F	18	18	18	18	M	X	H	**Protected tree.** Multiple large spreading stems at 7'-9' above grade. Some dead branches at outer edge of canopy, 3" dead secondary branch to N. Trunk flare buried. 4" x 6" wound on S side. 3' from proposed bioretention basin; in proposed sidewalk.	Remove.
343	Valley oak	17	G	F	25	0	15 S W	25	M	X	H	**Protected tree.** Trunk buried. Phototropic lean to NW, not corrected. Within 1' of proposed bioretention basin.	Remove.
344	Pecan (*Carya illinoinensis*)	10, 10	G	F	0	25	20	15	M	X	H	Co-dominant stems at 2' with moderate bark inclusion. Asymmetrical canopy due to shading. Trunk wound on street side (car damage) 16" x 8" surrounded by large woundwood. In proposed sidewalk.	Remove.
345	Pecan	7	G	G-F	12	0	18 S W	18	Y	X	H	Large 2' x 6" scar on N side of trunk, cause unknown. Minor phototropic lean. In proposed sidewalk.	Remove.
346	Valley oak	9, 6	G	G-F	8	20	6	6	Y	X	H	Large secondary stem at 2'. Corrected lean to E; cause unknown. End of chain attached to S side of trunk. In proposed bioretention basin.	Remove.
347	Pecan	31	G-F	F	18	18	20	15	M	X	H	Evidence of branch failures throughout canopy; hanger in tree. 12" x 14" wide cavity on NW side of trunk, surrounded by thick woundwood - may be from failure of old co-dominant stem. Co-dominant stems at 6'. North stem has large canker at 7' above grade. Some large dieback in upper crown. Within 1' of proposed bioretention basin and sidewalk.	Remove.
348	English hawthorn (*Crataegus laevigatum*)	6, 7, 5	G-F	F	10	10	10	10	M	X	H	Multiple stems at 18" above grade. Vigorous epicormic shoots. Understory tree, dominated by pecan. In proposed road.	Remove.
349	Peruvian pepper (*Schinus molle*)	27, 27	G	P	20	20	20	25	M	X	H	Tree consists of 2 major trunks - west trunk is horizontal on ground for 3'; other trunk failed at 8' above grade. Large suckers comprise remaining stems - 15" stem failed at base but is alive due to small strip of tissue still attached. <5" oaks within canopy. Within 1' of proposed sidewalk; in proposed grading.	Remove.
350	California black walnut	22	P-VP	P	5	5	5	10	M	X	H	Large deadwood, significant dieback. Live foliage healthy. In proposed grading.	Remove.

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
351	California black walnut	7, 6, 8.5	G-F	P	5	15	3	0	M	X	H	Significant phototropic lean, some small twig dieback. Suckers from original trunk. Within 1' of proposed retaining wall.	Remove.
352	California black walnut	5, 8.5, 7, 5, 6	F	G-F	10	5	10	10	M	X	H	Actually one tree. Sparse canopy, small twig dieback throughout, including upper canopy. In proposed grading.	Remove.
353	English walnut	10	F-P	F	5	5	5	5	M	X	H	Diameter measured at 2.5'; below co-dominant branches. Dieback in upper canopy. In proposed grading.	Remove.
354	Apricot (*Prunus armeniaca*)	7	VP	F	0	5	5	5	OM	X	H	Main scaffold dead, remaining canopy very sparse. In proposed grading.	Remove.
355	Persimmon (*Diospyros* sp.)	4.5, 4, 4.5, 4.5, 4	F-P	F	7	5	5	5	M	X	H	Top dieback and dead twigs, some water sprouts, sparse canopy. In proposed grading.	Remove.
356	Valley oak	18	F	G-F	20	15	5	15	M	X	H	Phototropic lean to N, corrected at 25'. Scaffolds at 15' with included bark. Small twig dieback, somewhat sparse. In proposed grading.	Remove.
357	Pecan	37	G-F	F-P	25	20	30	45	M	X	H	Co-dominant stems at 6' with included bark. Sparser canopy on north side, southern side very full. Overextended, heavy limbs, swelling on main scaffolds may indicate internal defects. Decay from prior pruning. In proposed grading.	Remove.
358	Valley oak	22	F-P	F	20	15	20	15	Y-M	X	H	Small twig dieback throughout canopy, sparse upper canopy, lots of epicormic growth on main stems and scaffolds. In proposed grading.	Remove.
359	Holly oak	12	F	P/P-VP	5	5	0	8	Y	X	H	Co-dominant stems with included bark at 1' wrapping around each other. Sparse upper canopy. In proposed grading.	Remove.
360	Holly oak	14	F-P/P	F-P	5	5	10	10	Y	X	H	Diameter measured at 4', twig dieback throughout upper canopy. Interior waterspouts. Decay pocket on N co-dominant stem. In proposed grading.	Remove.
361	Valley oak	14	F	G	10	15	10	15	Y	X	H	Dead mistletoe. Epicormic sprouts in interior canopy, small twig dieback in outer canopy. In proposed grading.	Remove.
362	Privet (*Ligustrum lucidum*)	5. 5.5, 4, 5	F-P	VP	3	5	5	5	M	X	H	Large shrub with sucker growth and rubbing stems. Twig dieback especially on N side. Chlorotic and sparse canopy. In proposed grading.	Remove.
363	Holly oak	7	G	F/F-P	3	8	8	8	Y	X	H	Previously topped at 6' with multiple upright stems. In proposed grading.	Remove.
364	Privet	7	F	F	5	5	8	5	M	X	H	Somewhat sparse and chlorotic canopy, nice structure for a privet. Surrounded by shrubs. In proposed grading.	Remove.

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
365	Privet	5, 5, 7.5	F/F-P	P	5	3	7	5	M	X	H	Main stems rubbing/fusing with narrow attachment, some twig dieback on north side. Slightly chlorotic and sparse canopy. In proposed grading.	Remove.
366	Holly oak	7	F/F-P	F	5	3	0	5	M	X	H	Lean to south due to partially uprooted (now stable) root ball. Some twig dieback in upper canopy. In proposed grading.	Remove.
367	California black walnut	6, 8	F	F-P	0	0	10	5	Y	X	H	Co-dominant stems at 1' with significant included bark. Large scaffold branch on north side previously removed. Twig and tip dieback throughout canopy. In proposed grading.	Remove.
368	Privet	8, 5, 5.5, 8.5	P	F	10	10	10	10	M	X	H	Twig dieback throughout, sparse & chlorotic canopy. Small cavity at base between trunks. In proposed grading.	Remove.
369	Almond	11, 7.5	VP	P	0	0	0	0	OM	X	H	Small live shoots, large deadwood, severe decline. Less than 5% live canopy. In proposed grading.	Remove.
370	California black walnut	19	F/F-P	F	5	0	5	0	M	X	H	Diameter measured at 3'. N scaffold dead; top dieback. In proposed grading.	Remove.
371	English walnut	17.5	P	F	5	0	10	5	M	X	H	Leader died back and bark missing on N side of trunk up to 5'. Significant decay in main stem. Dieback and very sparse canopy. In proposed grading.	Remove.
372	California black walnut	14	G-F	F-P	5	5	8	5	M	X	H	Diameter measured at 2.5'. Some twig dieback and larger deadwood. In proposed grading.	Remove.
373	English walnut	10, 7, 8.5	F/F-P	F	10	5	7	10	M	X	H	Top dieback, live foliage healthy. In proposed grading.	Remove.
374	Almond	12, 16	F-P	F-P	5	0	0	5	M	X	H	Large dead limbs, sparse canopy on east side, spiraling trunks. In proposed grading.	Remove.



NOTE: THE PROPOSED DEVELOPMENT WILL REMOVE 43 TREES FROM THE PROJECT SITE. THE REMAINING 31 TREES WILL BE RETAINED. REFERENCE THE ARBORIST REPORT FOR 3180 WALNUT BOULEVARD DATED MAY 25, 2021 FOR FURTHER DETAILS ON THE TREES TO BE REMOVED.

REGISTERED PROFESSIONAL ENGINEER ANDREW D. PARRY No. 79704 CIVIL STATE OF CALIFORNIA

PRELIMINARY

VESTING TENTATIVE MAP
3180 WALNUT BOULEVARD
WALNUT CREEK, CALIFORNIA
JANUARY 11, 2023

ENGINEERING SURVEYING • PLANNING
1931 SAN MIGUEL DRIVE, SUITE 100, WALNUT CREEK, CA 94596
WWW.DKENGIN.COM (925) 932-6866

BOUNDARY & TOPOGRAPHIC SURVEY

F:\PROJECTS\2021\21-1007 3180 WALNUT BLVD - WALNUT CREEK\DWG\MJ\SK-BOUNDARY & TOPO-21071MJ 1/11/2023

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