ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

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February 13, 2020
Project 984.01

Siemens Planning
5210 Carpinteria Avenue #103
Carpinteria, CA 93013

Via Email: Jennifer Siemens <Siemensjennifer@siemensplanning.com>

Re: Biological Letter Report Addendum
Coleman - 607 Sand Point Road, Carpinteria, Santa Barbara County, California.

Dear Jennifer:

This letter report addendum contains additional survey results for silvery legless lizards and globose dune beetle and their habitats on the approximately 1-acre parcel (Study Area) located at 607 Sand Point Road, south of Santa Claus Lane in unincorporated Santa Barbara County, California. Survey for obscure bumblebee will be conducted in March or April. This addendum also includes updated exhibits that show the locations of potential federal and state wetland and waters jurisdictional limits on the site plans.

Summary

- Globose dune beetles and silvery legless lizards have not been detected on site.
  - Lizard cover boards will be inspected monthly for at least two months.
  - Ciliated dune beetle, a more common relative with no sensitive species status, was detected between the two revetments, the only suitable habitat for dune beetles onsite.
- Obscure Bumblebee are highly unlikely to occur on site due to lack of coastal prairie habitat and limited host species in the area. The scheduled survey period begins in March and requires a one-day survey on a clear sunny when colonies are active.
- Dune habitat occupies approximately 0.04 acre between two rock revetments south of the house.
- Wetland occurs in the Carpinteria Salt Marsh, below the edge of road shoulder that separates the marsh from Sand Point Road.

Methods

Surveys were conducted on January 10, 2020 by Althouse and Meade principal biologist, Daniel Meade, Ph.D., and on February 3, 2020 by Althouse and Meade wildlife biologist Bret Robinson, M.S. Entomology.

Insect and lizard surveys

Globose dune beetles (*Coelus globosus*) are on the IUCN Red List as Vulnerable (VU) and listed on California Department of Fish and Wildlife's Special Animals List as Rank G1G2 S1S2. The ranking indicates that the species is imperiled, and may be critically imperiled at the global and state levels due to factors such as very steep declines making it especially ulnrerable to extirpation from the state. This species is restricted to active sand dunes or extremely sandy substrates, typically beneath various herbs and shrubs within 5 to 10 cm of the surface. Adults and immatures are common throughout the year. *C. globosus* is found from the Los Angeles basin north in extremely maritime dunes, almost always within 30 m of the high tide line (Doyen 1976).

Sampling for dune beetles was conducted by hand excavation of dune sand and placing the sand in a number 10 standard US sieve (2 mm) and sieving sand. Dune beetles are retained by the sieve and are easily captured. On the Coleman property, dune habitat is located between two rock revetments. Dune habitat across the width of the Coleman property was thoroughly sampled for dune beetles.

Silvery legless lizard (*Anniella pulchra*) is listed by the California Department of Fish and Wildlife as a Species of Special Concern with a rarity rank of G1 S1. The rarity rank of G and S both as "1" indicates that the species is critically imperiled at the global and state levels due factors such as very steep declines in population making it especially vulnerable to extirpation from the state. This lizard is found in California coastal ranges from Antioch to Baja California, and in suitable habitat in the San Joaquin Valley, southern California Mountains, foothills of the Sierra Nevada mountains and the Mojave Desert. Habitats inhabited by legless lizards include coastal dunes. Legless lizards are not found in areas with high clay soils, but can occur where soils are dense if sufficient leaf litter is present. They can occur in high densities and have small home ranges (Morey 2000). Legless lizards are known to occur in dune habitats in the Carpinteria area (Larry Hunt, personal communication) and so the dune habitats between the rock revetments were surveyed by raking.

Surveys on the Coleman property consisted of a biologist searching for appropriate habitat and raking leaf litter and sandy soil areas with a four-prong rake. Two cover boards were established on the property that will be checked periodically over the next several months. On February 4th cover boards were lifted and checked for animals.

Obscure bumblebee (*Bombus caliginosus*) is on the IUCN Red List as Vulnerable (VU) and is listed on California Department of Fish and Wildlife's Special Animals List as Rank G4? S1S2. G4 question mark indicates uncertainty about the exact rank. The species is apparently secure (uncommon but not rare, but some cause for long-term concern due to declines or other factors). The S rank of S1 and S2 indicates that the species in the state of California is imperiled, and may be critically imperiled in the state because of extreme rarity due to steep declines in the known populations.

This bumblebee inhabits open grassy coastal prairies and coast range meadows. Nesting occurs underground as well as above ground in abandoned bird nests. This species is classified as a

medium long-tongued species, whose food plants include *Ceanothus, Cirsium, Clarkia, Keckiella, Lathrys, Lotus, Lupinus, Rhododendron, Rubus, Trifolium, and Vaccinium* (Williams *et al.* 2014). Queens do not usually emerge from their overwintering nests until March.

Bumble bees are well-known to engage in "buzz pollination," a very effective foraging technique in which they sonicate the flowers to vibrate the pollen loose from the anthers. Tomatoes (Solanaceae), blueberries (Ericaceae), and many other important food plants are pollinated by bumble bees in this way (IUCN 2020). Surveys will be conducted to detect bumble bee nests after March 1st. Managed residential landscape habitats occupy vegetated areas on the property north of the revetments, therefore it is very unlikely that an obscure bumblebee colony occurs on site. Surveys will be conducted by entomologists using insect collection nets during a sunny spring day over a four hour sample period.

Wetland and dune habitat boundary locations

Mapping efforts utilized Samsung Galaxy Tab 4 tablets equipped with an EOS Arrow 100 GPS receiver with sub-meter accuracy. Maps were created by importing GPS data into ArcGIS Pro, a Geographic Information System (GIS) software program. Data were overlaid on a 2018 National Agriculture Imagery Program (NAIP) aerial of Santa Barbara County (NAIP and USDA 2018).

An arrow 100 GNSS was used to delineate the wetland boundary along Sand Point Road. Vegetation and topography were used to determine the edge of wetland, and points were taken along that edge.

Dune habitat was detected by evidence of deep sand exposed or vegetated with non-native ice plant and patches of native species. Dune geomorphological terms follow Psuty (2004) and Hamilton et al. (2008).

Results

Globose Dune beetle survey results

Thorough sampling of dune habitat on two separate days (January 10 and February 3) found eight dune beetles in sandy patches between the rock revetments. Most were found at the base of landscape plants, but one was in the flat open sandy area mid-way between revetments. These dune beetles key to *Coelus ciliatus*, ciliate dune beetle. Ciliate dune beetle and globose dune beetle can occur in the same locations in the extreme southern portion of their range, such as near Ensenada, Baja California, but are not known to occur together in the Carpinteria area. Due to landscaping around the residence, the only suitable dune habitat occurs between the revetments on this parcel. Normal high tides reach the outer rock revetment at the Coleman property and remove that area from dune formation (Photo 2).

Silvery legless lizard survey results

Soil conditions on the property vary from densely packed to dune sand. In the front yard of the Coleman residence soil is densely packed, probably imported for landscape purposes. Leaf litter is very sparse except under a few shrubs. Ground cover between garden shrubs consists of landscaping bark chips as ground cover in a thin layer. Little habitat for legless lizards is present in the front and side yards of the house, and no legless lizards were detected. In the rear of the house low shrubs have formed a leaf litter ground cover under shrubs up to a few inches and soils are slightly more sandy than the front yard in a few places. Areas with dense leaf litter were raked

and inspected for legless lizards, although several areas were not accessible to raking without damaging landscape plants. Two cover boards were established in this area to passively attract legless lizards if any are using the property. Legless lizards were not found. We also asked the regular gardeners that were on site if they had ever seen a legless lizard, and showed them photographs. They had not seen any legless lizards.

Wetland and dune habitat boundary results

The edge of Carpinteria Salt Marsh wetland contains pickleweed *(Salicornia virginica)*, alkali heath *(Frankenia salina)* and salt grass *(Distichlis spicata)*. A distinct change in elevation to the shoulder of Sand Point Road defines the limit of wetland on this parcel (Photo 3). The adjacent shoulder of Sand Point Road was covered with ice plant. Figure 5 in 2018 Biological Report indicates the wetland boundary along the edge of the Carpinteria Salt Marsh.

Ice plant mats growing along the road shoulder contain occasional tufts of saltgrass that form as stolons emerging from long rhizomes that extend from the edge of the marsh to the road shoulder. This habitat was not mapped as wetland but is considered a buffer between Sand Point Road and the Salt Marsh. The road shoulder, not part of the property, is subject to recent habitat restoration efforts by Channel Islands Restoration (CIR) to remove non-native ice plant and recruit native upland species that support native pollinators and other wildlife (personal communication with Ken Owen, Executive Director of CIR). The attached site plan prepared by Charles Hilton and Two Trees Architects (Attached Sheet A0.1, December 18, 2019) indicates the location of the proposed residence sited 105 feet from the wetland boundary.

Dune habitat was detected and sampled where it occurs between the old and newer rock revetments. Dune habitat is located approximately 38 feet south of the southeast corner of the existing residence (Figure 5 in 2018 Biological Report). The approximately 0.04 acre of dune habitat may be considered similar to the stable hummock habitat described by Hamilton et al. (2008). Stable hummocks typically occur inland from a foredune ridge, absent in this case due to its replacement by a rock revetment and absence of aeolian sand movement. This habitat only occurs between revetments and will not be impacted by the proposed residential remodel project.

Thank you for allowing us to be of assistance. If you have any questions or concerns, please call me at (805) 237-9626.

Sincerely,

Daniel E. Meade

Daniel E. Meade, Ph.D.
Principal Scientist

Attachments:

- References
- Photographs
- Coleman Residence Site Plan Sheet A0.1 (December 18, 2019) by Charles Hilton and Two Trees Architects

References

California Department of Fish and Wildlife, Natural Diversity Database (CDNNB). 2019. Special Animals List. Periodic publication. 67 pp. August.

Doyen, John T. 1976. Biology and Systematics of the Genus Coelus (Coleoptera: Tentyriidae). Journal of the Kansas Entomological Society, Vol 49, No 4 (Oct.). pp. 595-624.

Hamilton, Robert A., Daniel S. Cooper, Wayne R. Ferren, Cristina P. Sandoval. 2008. Biological Resources Assessment; 30732 Pacific Coast Highway, Malibu, California. Prepared for Malibu Bay Company, Malibu, CA. pp 9-11.

Hunt, Larry. 2020. Personal communications with Daniel Meade regarding the presence of legless lizards in the Carpinteria area. Larry has extensive experience with local legless lizard populations.

IUCN. 2020. The IUCN Red List of Threatened Species. Version 2019-3. Available at https://www.iucnredlist.org. ISSN 2307-8235. International Union for Conservation of Nature and Natural Resources.

Morey, S. 2000. California legless lizard *Anniella pulchra*. In: California's Wildlife. Vol. I. Amphibians and Reptiles. D. C. Zeiner, W. F. Laudenslayer Jr., K. E. Mayer, and M. White. California Department of Fish and Game, Sacramento, California.

Psuty, Norbert. 2004. The Coastal Foredune: A morphological basis for Regional Coastal dune Development *In* Ecological Studies Vol 171. M.I. Martinez, N.P. Psuty (Eds). Coastal dunes, Ecology and conservation. Springer-Verlag Berlin Heidelberg [From Page Proofs as of 12/11/03] available on line at https://marine.rutgers.edu/geomorph/geomorph/Book%20-%20ES_171_Chap_02_Psuty.pdf. Accessed February 10, 2020.

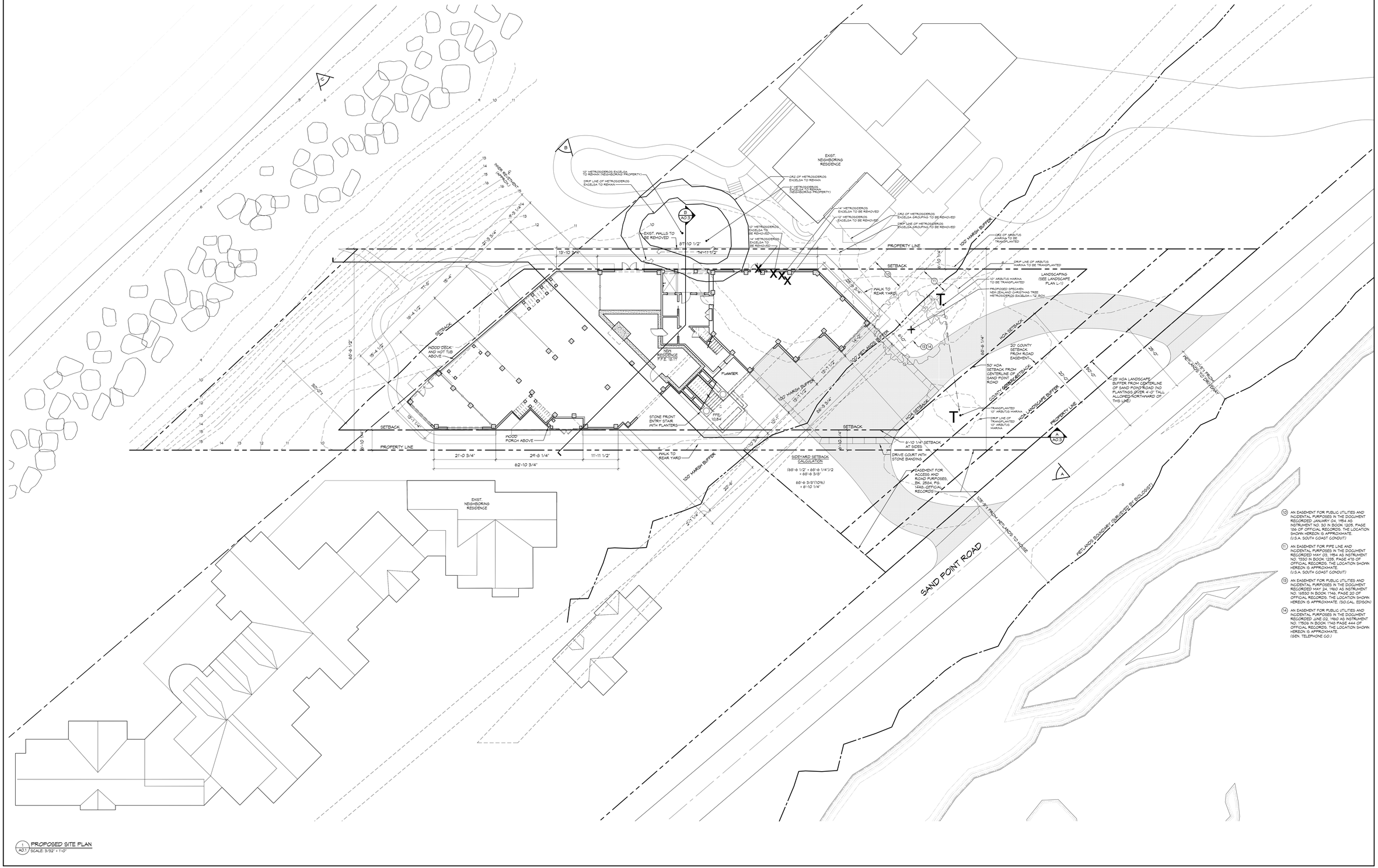
United States Department of Agriculture (USDA). 2014. Aerial photomosaic of Santa Barbara County. National Agriculture Imagery Program (NAIP).

Photographs

Photo 1. Dune habitat between revetments where the common ciliate dune beetle (*Coelus ciliatus*) occurs. Beetles are found buried in the sand near the base of herbaceous plants on the left side (inland) of this photo. View southeast January 10, 2020.

Photo 2. Outer revetment rocks were void of intertidal plant and animal species, view southeast. Not suitable habitat for dune beetles or bumblebees. January 10, 2020.

Photo 3. Edge of Carpinteria Marsh wetland view northwest (left photo) and southeast (right photo). January 10, 2020.



1 PROPOSED SITE PLAN
A0.1 SCALE: 3/32" = 1'-0"

(10) AN EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED JANUARY 04, 1954 AS INSTRUMENT NO. 30 IN BOOK 1209, PAGE 186 OF OFFICIAL RECORDS. THE LOCATION SHOWN HEREON IS APPROXIMATE. (U.S.A. SOUTH COAST CONDUIT)

(11) AN EASEMENT FOR PIPE LINE AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED MAY 03, 1954 AS INSTRUMENT NO. 7930 IN BOOK 1239, PAGE 418 OF OFFICIAL RECORDS. THE LOCATION SHOWN HEREON IS APPROXIMATE. (U.S.A. SOUTH COAST CONDUIT)

(13) AN EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED MAY 24, 1960 AS INSTRUMENT NO. 16530 IN BOOK 1746, PAGE 20 OF OFFICIAL RECORDS. THE LOCATION SHOWN HEREON IS APPROXIMATE. (SO.CAL. EDISON)

(14) AN EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED JUNE 02, 1960 AS INSTRUMENT NO. 17509 IN BOOK 1748 PAGE 444 OF OFFICIAL RECORDS. THE LOCATION SHOWN HEREON IS APPROXIMATE. (GEN. TELEPHONE CO.)

TWO TREES
ARCHITECT

Charles Hilton
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PRELIMINARY
NOT FOR CONSTRUCTION

PROJECT:
COLEMAN RESIDENCE
607 Sand Point Road
Carpinteria, CA 93013
004-098-006

JOB NUMBER:
1701

DATE ISSUED:
16 DECEMBER 2019

SHEET:
A0.1
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