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Fionna Jensen Senior Planner  
County of Monterey Housing & Community Development  
1441 Schilling Place, South 2nd Floor  
Salinas California

May 29, 2024

RE: PLN230052 Tromp Property Driveway and auto court redesign to avoid Sensitive species

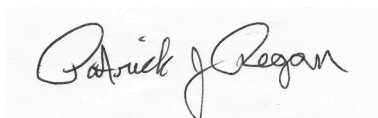
Dear Fionna,

As you know , Marcel and Astrid Tromp have been trying to complete a project design that could get permitted, for a year and a half. We met on site last Fall to discuss the few small manzanita plants that the (then current) design would be impacted by their proposed driveway. Since then, their architects have completely redesigned the layout and size of the house, the motor court and the driveway. I visited the site again in Decemb4er of 2023 and flagged every individual plant of Hookers manzanita (*Arctostaphylos hookeri* ssp *hookeri*) and Pajaro manzanita (*Arctostaphylos pajaroensis*) (Both California Rare Plant Inventory List 1B plants) that occurred within 15 feet of the proposed motor court and the proposed driveway from their property line to the proposed home site. Justin Pauly Architects then revised the plans to completely avoid any potential impacts to any of the plants. The end result is that the current iteration (and hopefully the last) has created a new driveway layout with turnouts to satisfy the fire department and allow them to easily defend the house, and avoids any impacts to roots and branches of any special status manzanita plants on the east side of the driveway, and a motor court circle that arrives to the house at a lower elevation than previously designed and completely avoids any manzanita plants on the west side of the driveway above the house.

The overall project has shifted south and west, having dramatically decreased grading near the swath of Central Maritime chaparral that borders the existing dirt road and future paved driveway, avoided any impacts to individual plants and reduced removals of Coast Live oaks (*Quercus agrifolia*) on the site. The Tromp's have taken on considerable expense to design and redesign their home and from my perspective, have responded to every concern that was expressed in our Autumn 2023 site meeting. I believe this is now a design that can easily be defended as appropriately protecting sensitive species and allowing the Tromps to have the home and views that they have hoped for.

Please let me know if you have any questions at all.

Thank You

A handwritten signature in black ink that reads "Pat Regan". The signature is written in a cursive, flowing style.

Pat Regan

Justin Pauley AIA  
550 Hartnell Street, Suite H  
Monterey, California 93940

July 27, 2023

Re :6820 Long Valley Spur, Castroville, CA 95012

Justin,

Marcel and Astrid Tromp propose construction of a 3,666 square foot single-family home (includes two car garage and guest quarters) on their property at 6820 Long Valley Spur in Castroville CA. The Property is in the Coastal Zone under the North County local Coastal Plan administered by Monterey County. The Coastal Plan requires that a Biological Assessment be included with submittals requesting development permits and that it specifically addresses Environmentally Sensitive Habitat areas. This project is sited within 100' of Environmentally sensitive habitat but has been designed to have minimal impacts on rare, threatened, or endangered plants or plant communities that will be offset with measures to replace and restore habitat on site.

From the North County plan: Section 30240 Environmentally sensitive habitat areas; adjacent developments

a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas

2.Development on parcels containing or within 100 feet of environmentally sensitive habitats, as identified on the current North County Environmentally Sensitive habitat resource map, other resource information, or planner's on-site investigation, shall not be permitted to adversely impact the habitat's long-term maintenance, as determined through the biological survey prepared for the project. Proposals shall be modified for siting, location, bulk, size, design grading, vegetation removal, and /or other methods where such modifications will reduce impacts to an insignificant level and assure the habitat's long-term maintenance. Also, the recommended mitigation measures of the biological survey will be considered by the decision-making body to implement land use plan policies and this ordinance and made conditions of project approval. (Ref. Policy 2.3.2.2)

The Biological assessment is intended to Identify the environmentally sensitive habitat found on the site and within one hundred (100) feet of the site.

On April 25, 2023, and July 18, I visited the site and walked the entire property and adjacent areas, taking photographs and noting the plant and animal species that I observed.

Before my visit I prepared a target list for species to look for by querying the California Natural Diversity Database (CNDDDB) and the California Native Plant Society inventory of rare, threatened, and endangered species. The property is in the Prunedale quadrangle of the USGS mapping system. The Prunedale quad is a bit of a biological hotspot for the plant community known as central Maritime Chaparral and all the individual special status species that are found within it. A complete list of the CNDDDB output species and habitat types is attached in appendix #1. Based on this query, key species that have the potential to occur on this project site include Hookers manzanita (*Arctostaphylos hookeri* ssp. *hookeri*), Pajaro manzanita (*Arctostaphylos pajaroensis*), Monterey Spineflower (*Chorizanthe pungens* var. *pungens*), Seaside Birds beak (*Cordylanthus rigidus* ssp. *littoralis*), Robust spineflower (*Chorizanthe robusta* var. *robusta*), Yaden's rein orchid (*Piperia yadonii*), Santa Cruz tar plant (*Holocarpha macradenia*) and Monterey ceanothus (*Ceanothus rigidus*). Given the inland location it is clear that the Clapper rail, a Shore bird will not be an issue and other species, primarily dependent on riparian or wetland habitat will be easily ruled out. But those dependent on woodland and chaparral conditions would have to be considered. Without exception the timing of the two visits was suitable for being able to locate and identify flowering parts of all the plants that could potentially occur on the property.

The proposed single-family dwelling is near the top of a ridge that gently slopes to the Southwest above Long Valley Road in the Elkhorn highlands. The proposed house location sits at an elevation of approximately 395 on a sandstone ridge that has portions of deep sandy soil and other locations where the rock substrate is exposed at the surface. The dirt road/driveway along the east side of the lot is a visual dividing line between two plant communities that may represent a transition in the soil depth but more likely remains from where a fence line may have historically separated grazing animals on the West from rest of the property. The Tromp property and those adjacent are a mosaic of plant communities including annual grassland, oak woodland and central maritime chaparral readily apparent from aerial photographs and confirmed by walking the site. Annual grasslands are composed of mostly nonnative annual grasses introduced into California from other parts of the world. This is the dominant plant community on the Tromp property covering approximately 85% of the lot and most of the proposed building site. Weedy species like wild oats, riggut brome and rattlesnake grass are found in a continuous stand dotted occasionally by Coyote bush and poison hemlock. Oak woodland is less represented on the site but present along the road up to the building site and is dominated by Coast live oak and typical understory components Snowberry, Toyon, coffee berry, evergreen huckleberry, sticky monkey flower and the ubiquitous poison oak. This community is found above the Tromp lot and below it in patches on both sides of the driveway. The eastern edge of the Tromp property contains several oak trees along the west side of the Ranch Road which borders the property. This location and those below it appear to be transitional from the Central maritime chaparral. Central maritime chaparral occupies approximately 10% of the lot east of the building site and ranch road, extending 50-60 feet east from the Ranch Road in the area near the proposed home site into a much larger contiguous stand on the neighboring property dominated by *Arctostaphylos pajaroensis*. It is the most sensitive habitat type on the property and will be discussed in greater detail below.

Sensitive species and habitat

Environmentally sensitive habitats are areas in which plant or animal life, or their habitats are rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. These include Areas of Special Biological Significance as identified by the State Water Resources Control Board; rare and endangered species habitat, all coastal wetlands and lagoons, all marine wildlife, and kelp beds; and indigenous dune plant habitats.

The Tromp property and areas adjacent support several sensitive plant species that are associated with, and indicative of the plant community known as Central maritime chaparral. Specifically, these stands are part of the *Arctostaphylos pajaroensis* shrubland alliance called Pajaro manzanita chaparral, a subcategory of Central maritime chaparral dominated by the Pajaro manzanita. Maritime chaparral is considered Environmentally sensitive habitat. This specific subset has the highest possible rarity ranking with fewer than 6 (six) occurrences worldwide. Co-dominant with the Pajaro manzanita (*Arctostaphylos pajaroensis*) are Hooker's manzanita (*Arctostaphylos hookeri ssp hookeri*), Monterey ceanothus (*Ceanothus rigidus*), Chamise (*Adenostema fascicularis*), brittle leaf manzanita (*Arctostaphylos crustacea ssp crustacea*), Coyote bush (*Baccharis pilularis*), monkey flower (*Diplacus aurantiacus*), Coffee berry (*Frangula californica*), Toyon (*Heteromeles arbutifolia*), Deerweed (*Acmispon glaber*), Black sage (*Salvia mellifera*) and poison oak (*Toxicodendron diversilobum*). This plant community frequently supports 8 rare plants including two federally listed ones. In addition to the rare manzanita species, Monterey spine flower (*Chorizanthe pungens* variety *pungens*), Eastwood's golden bush (*Ericameria fasciculata*), Michael's rein orchid (*Piperia michaelii*) Yadon's rein orchid (*Piperia yadonii*), small leaved Lomatium (*Lomatium parvifolium*), seaside bird-beak (*Cordylanthus rigidus ssp. littoralis*), Kellogg's Horkelia (*Horkelia cuneata* var. *sericea*), and virgate eriastrum (*Eriastrum virgatum*) are uncommon to rare species that are typically associated understory herbaceous components in the Pajaro manzanita maritime chaparral. The Monterey Spine flower and Yadon's rein orchid are federally listed as Threatened and Endangered respectively and the Seaside bird's beak is listed under California's Endangered Species Act as endangered. The Monterey spine flower was found on the adjacent property south of the proposed home site approximately 270 feet East SE in sandy open soil. No Yadon's rein orchid, Michael's rein orchid, Seaside bird's beak, Kellogg's Horkelia, virgate eriastrum or Eastwood's golden bush was found during my surveys.

From the North Monterey County LUP: *The Long Valley watershed area shall be bounded by the ridgelines located south of Strawberry Canyon Road and north of Paradise Canyon Road; by Elkhorn Road and Walker Valley Road on the west; and the Coastal Zone boundary on the east. Preservation of both the natural habitat and watershed shall be of the utmost priority. Maritime Chaparral and stands of Monterey Pine, Coast Live Oak, Madrone, and Manzanita shall be protected to the maximum extent feasible. The highly erodible, Arnold Loamy Sand soils shall be protected to the maximum extent feasible*

Preservation of these species: Pajaro manzanita (*Arctostaphylos pajaroensis*), Hooker's manzanita (*Arctostaphylos hookeri ssp hookeri*), and Monterey ceanothus (*Ceanothus rigidus*) individually, and the plant community as a whole, is to be prioritized in the final design of the building site and driveway. The first iteration of the design protected the existing Oaks and Pines just west of the Ranch Road but cut through a small remnant patch of Pajaro manzanita chaparral on that side of the road, including several individuals of Pajaro manzanita, Hooker's manzanita, and Rush-rose (*Crocantemum scoparium*) and a

much larger swath of the contiguous Pajaro manzanita chaparral across the ranch road to the east containing these and many other species. Grading would have gone right up to the eastern property line and impacted a much larger patch of Pajaro manzanita chaparral on the neighboring property. This area is contiguous with a much larger stand of Pajaro manzanita chaparral running north to south from the top of the ridge to near the Long Valley floor in the south.

Preservation of Maritime chaparral is not a simple matter of just protecting the plants. Beyond the man-made impacts of agriculture and residential development, cumulatively, Pajaro manzanita chaparral is slowly being converted to Oak woodland up and down the valley. In slow steps the successional change takes place as an organic soil layer begins to form on the low nutrient sandy soil. Oak and Pine trees tend to encroach upon the maritime chaparral edges as the stands age and mature between fire events (multiple decades or more) and will eventually shade out the *Arctostaphylos* and *Ceanothus* and other chaparral species and reduce the diversity of the plant species composition. Without natural disturbance like fire, these stands will not have the same composition, density, or height that they have today. It is not possible to manage these areas as static components of the natural landscape. Research is ongoing as to how to provide occasional manmade disturbances that will potentially renew and "reset the clock" on the successional process in plant communities such as this. The Oak trees "framing" in the driveway and house are currently spreading their canopies over several manzanita plants and some skeletal remains of deceased manzanita plants are seen under the largest tree. "Protecting" the manzanita species will require that they are kept unshaded to the greatest degree possible

The Monterey spine flower that was identified during the survey is just east of the Tromp property boundary but is indicative of the possibility that it exists in the seed bank throughout greater areas of this property. Ironically, this species, like the Seaside bird's beak and virgate *eriastrum*, is a disturbance dependent annual that will typically only germinate in significant quantities when the sandy soil it prefers is somehow moved by wind, water, fire or grading or other human soil disturbance. It is not unusual for areas that have been surveyed and found lightly occupied or vacant to be literally covered with this and other unique native annuals in the first spring post grading.

No other special status species were found on the project site.

### **Potential Impacts**

As originally designed, the construction of the Single-family dwelling and Driveway at 6820 Long Valley Spur had the potential to directly permanently impact several Rare manzanita plants (Pajaro and Hooker's manzanita) growing in the driveway area of the design and permanently impact, directly and indirectly, Pajaro manzanita chaparral, an Environmentally Sensitive habitat type on the eastern edge of the lot, within 100 feet of the proposed driveway and house, as well as along the edges of a turnout proposed below the Residence along the west side the ranch road on the Tromp property. Since my first site visit in April of this year, the site plan and grading plan have gone through several revisions to reduce these potential impacts and the most recent grading plan (included in this submittal) has eliminated any grading within the contiguous Pajaro manzanita chaparral habitat on the east of the ranch road, (which will eventually be the driveway) and at the lower turnout on the west side of the road. Anticipated direct.

permanent impacts are now reduced to several small individual plants of Pajaro manzanita (4) and Hooker's manzanita (3) in the entry to the auto court and potential indirect impacts to the edge of the Pajaro manzanita chaparral along the east side of the driveway about midway between the lower property line and the proposed house location. (This small area that may be impacted contains just the brittle leaf manzanita, which is not individually rare, threatened, or endangered, but is a common companion component in the Pajaro manzanita chaparral) Measures to further ensure protection of this rare plant community are included below.

### **Recommendations**

After reviewing the plans and onsite staking with the architect (Justin Pauly) it was decided that there is no way to avoid direct impacts to the several Pajaro and Hookers manzanita plants in the proposed Auto court entry from the driveway. To offset the removal of these 7 individual plants and to ensure no net loss of Pajaro or Hooker's manzanita we propose to propagate several clones (cuttings) of each of the 7 unavoidable plants. This would include taking up to 5 cuttings of each plant during the late fall of this year, rooting them in a nursery, growing them out to 1-gallon sized containers (approximately 1 year process) and planting them out as close to their original location as possible after the building is complete. These "replacement plants" would be grown and planted on a two for one ratio; two plants for each one removed. These plants would be connected to a temporary irrigation system and monitored for survival for a minimum of 3 years. Any plants that do not survive the 3-year monitoring period would be required to be replaced during that monitoring period.

Method two, to include only as a back-up redundancy if the timing is right, would be that the 7 manzanita plants in the Auto court entry get transplanted to other locations on the site during the late part of the dormant period of the plants (between October 15 and December 15) The late fall/early winter window would be the best time to maximize the potential for successful transplant. The project biologist and Project design team would predetermine the best location to move the plants to and create planting holes big enough to get the entire root system into with as little disturbance as possible and then using a backhoe or small tree spade attachment on the backhoe, scoop up the entire plant and root system, (one plant at a time) and carry it to its receiver site. The plant shall be carefully tamped in, and the crown of the root system kept at the same height as it was originally. The Plants will then be watered into the receiver site (saturated ) and then watered again in two days and then once a week until April, regardless of rainfall in the interim. The plants would be monitored for survival monthly for the first 9 months and then quarterly for 3 years post-transplant. This would have to be considered a voluntary measure that could only be considered if the timing was just right to do the transplant prior to groundbreaking and have a temporary irrigation system set up and out of the way of any construction activity

To avoid direct and indirect impacts to the stand of maritime chaparral on the east side of the dirt road extension of Long Valley Spur during grading, construction and road surfacing, symbolic exclusionary fencing like orange snow fencing should be installed along the east edge of the dirt road prior to groundbreaking of any kind. The intent is to clearly delineate the sensitive habitat on the project site and keep all machinery out, as well as any deposit of cut material from being piled against or on top of the



plants. The fencing should extend uphill to the limits of grading for the house and driveway and downhill to the limits of where temporary access to the work site exists by the RV parking pad.

The turnout location proposed just north of the entry to the Tromp property should have the same exclusionary fencing along its eastern edge from the fence line north to 50 feet beyond the proposed location.

Prior to any groundbreaking the Project biologist or another Monterey County approved biologist will meet with the contractor on site to delineate the limits of grading and specify the location of the exclusionary fencing in all locations. Contractor will notify the Biologist when all the fencing is installed. The biologist will return to the lot and document these protective measures with photographs, and then provide a condition compliance letter with Monterey County planning Services.

By avoiding or offsetting direct impacts to individual rare plants and indirect impacts to the special status plant community Pajaro manzanita chaparral the development of the single-family home at 6820 Long Valley Spur in Castroville will have a less than significant impact on EHA or the rare plants and animals that may occur on or near the project site.

## **Tromp CNDDDB Output for Prunedale Quad. PLANT, ANIMAL & HABITAT DESCRIPTIONS**

### **ANIMAL SPECIES**

***Actinemys marmorata* – Western Pond turtle.** California Species of Special Concern.

The State's only abundant native turtle, the western pond turtle is uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. Elevation range extends from near sea level to 1430 m (4690 ft.) (Jennings and Hayes 1994). Associated with permanent or nearly permanent water in a wide variety of habitat types. Individuals normally associate with permanent ponds, lakes, streams, irrigation ditches or permanent pools along intermittent streams. No Suitable habitat on site.

***Ambystoma californiense* - California Tiger salamander.** Federal Threatened, State Threatened. Adult tiger salamander is a semi-permanent resident of annual grasslands and valley and foothill woodlands and is occasionally found along streams. Adults spend most of the year underground in mammal burrows, logs, or rocks, typically within 500 yards or closer to breeding locations. The first heavy rains of winter initiate the migration of adults to permanent and temporary ponds (Stebbins 1985). Larvae require ponds, lakes, or vernal pools usually in grasslands. Ponds stocked with mosquito fish are known to have reduced or eradicated populations altogether. No suitable breeding habitat on site. Marginal upland habitat on site. Not found on site.

***Ambystoma macrodactylum croceum* – Santa Cruz long toed salamander.** Federal Endangered, State Endangered, DFG Fully Protected. A small ambystomatid salamander. Differs from the other four subspecies of long-toed salamanders by a series of discrete, irregular patches of dull orange or metallic

yellow markings on its dorsal side and by greatly reduced dorsal head markings of small, scattered dots, which are often absent, anterior to the eyes. The ventral surface is sooty black, with bluish to whitish flecks on the sides. Habitat Comments: Coastal woodland and chaparral near ponds and marshes used for breeding (California Department of Fish and Game 1990). Shade and abundant soil humus are prime requirements. Spends most of time underground in animal burrows or in spaces among root systems of woody plants. Breeds in shallow ponds with abundant submerged vegetation; ponds fill in winter and spring, dry by late summer, must hold water for at least 90 days. Eggs are laid on submerged stalks of spike rush or similar aquatic plants. Known in only a few breeding locations in coastal Southern Santa Cruz and Northern Monterey Counties. No suitable habitat on site.

***Athene cunicularia* – Burrowing owl.** California Species of Special Concern.

A yearlong resident of open, dry grassland and desert habitats and in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. Formerly common in appropriate habitats throughout the state, excluding the humid northwest coastal forests and high mountains. Numbers markedly reduced in recent decades. Present on the larger offshore islands. Found as high as 1600 m (5300 ft) in Lassen Co.

Uses rodent or other burrow for roosting and nesting cover. Moves perch to thermoregulate; perches in open sunlight in early morning, and moves to shade, or to burrow, when hot (Coulombe 1971). Reproduction: Usually nests in old burrows of ground squirrel, or other small mammal. Frequents open grasslands and shrublands with perches and burrows. Some marginal habitat on site. Not found on site.

***Elanus leucurus* – White tailed kite.** DFG Fully Protected.

Common to uncommon, yearlong resident in coastal and valley lowlands; rarely found away from agricultural areas. Inhabits herbaceous and open stages of most habitats mostly in cismontane California. Has extended range and increased numbers in recent decades.

Uses herbaceous lowlands with variable tree growth and dense population of voles (Waian and Stendell 1970). Substantial groves of dense, broad-leaved deciduous trees used for nesting and roosting.

Preys mostly on voles and other small, diurnal mammals, occasionally on birds, insects, reptiles, and amphibians. Forages in undisturbed, open grasslands, meadows, farmlands, and emergent wetlands. Soars, glides, and hovers less than 30 m (100 ft) above ground in search of prey. Slowly descends vertically upon prey with wings held high, and legs extended; rarely dives into tall cover (Thompson 1975). Potential nesting habitat nearby, suitable habitat on site and adjacent. Not seen on or around project site.

***Rallus longirostris obsoletus* – California clapper rail.** Federal Endangered, State Endangered, DFG Fully Protected.

Locally common yearlong in coastal wetlands and brackish areas around San Francisco, Monterey, and Morro bays (California clapper rail, *R. l. obsoletus*); in coastal saline emergent wetlands along southern California from Santa Barbara Co. to San Diego Co. (light-footed clapper rail, *R. l. levipes*); and April through September in freshwater and brackish emergent wetlands along the Colorado River from Needles southward, and around Salton Sea (Yuma clapper rail, *R. l. yumanensis*). Requires emergent wetlands and tidal sloughs. Occasionally uses ecotone between wetland and adjacent upland vegetation. No habitat on site.

***Rana draytonii* - California red-legged frog.** Federal Threatened, California Species of Special Concern. In the coast range, requires ephemeral or permanent water, ponds, reservoirs, or creeks (with slow moving pools during the winter/spring) with water that lasts at minimum until the end of June for reproduction (Reis 1999a). During the late summer or fall, adult frogs are known to utilize a variety of upland habitat types with either leaf litter or mammal burrows. Adult frogs are known to travel as far as 3 miles overland in non-riparian habitats to an aquatic site. No suitable breeding habitat on site or nearby. No suitable habitat on site

***Reithrodontomys megalotis distichlis* - Salinas harvest mouse** *Reithrodontomys megalotis distichlis* occurs in the region of Monterey Bay (Hall, 1981), in fresh and brackish water wetlands and probably in adjacent upland grasslands. It was included on the working list because of its restricted distribution and the high rate of urbanization in that area. Most of the wetland communities where these mice live are under protection. There is no evidence that they are threatened. No habitat on site.

***Sorex ornatus salarius* - Monterey shrew.** California Species of Special Concern. *Sorex ornatus salarius* occupies a variety of riparian, wetlands, and upland terrestrial communities in the vicinity of the Salinas River Delta (Owen and Hoffmann, 1983; unpubl. data). Although the region is undergoing intense development, I could not find information documenting its status. The relatively wide range of communities providing habitat for *S. o. salarius* suggests that it is probably not jeopardized. No habitat on site.

***Tryonia imitator* - California brackishwater snail.** Global concern, no State or Federal protection. Small aquatic snail that lives in tidal flushed brackish water of estuaries and Bays in Coastal Central California. No habitat on site.

## PLANT SPECIES

***Arctostaphylos hookeri ssp. hookeri* - Hooker's manzanita.** CNPS List 1B.2. Shrub, mat- to mound-like, generally < 1 m, sometimes 2–3 m; no burl. **Ecology:** Coastal scrub, woodland, Maritime chaparral. Flowers February to April.

**Elevation:** < 600 m.

**Bioregional distribution:** n&c Central Coast, w San Francisco Bay Area.

Plant found on site in Central maritime chaparral (Pajaro manzanita chaparral) plant community areas in remnant on west side of Ranch Road by proposed driveway entrance and across ranch Road on east edge of property and west of Tromp property.

***Arctostaphylos pajaroensis* - Pajaro manzanita.** CNPS List 1B.1. Shrub 1–4+ m; no burl. **Ecology:** Chaparral. Flowers December to April.

**Elevation:** < 200 m.

**Bioregional distribution:** north-central Central Coast, s San Francisco Bay Area (Pajaro Hills)

Plant found on site in Central maritime chaparral (Pajaro manzanita chaparral) plant community areas in remnant on west side of Ranch Road by proposed driveway entrance and across ranch Road on east edge of property and west of Tromp property.

***Ceanothus rigidus* - Monterey ceanothus.** CNPS List 4.2. Shrub, prostrate to erect, < 1.5 m. **Ecology:** UNCOMMON. Sandy hills, flats, closed-cone-pine forests. Flowers February to April

**Elevation:** < 200 m.

**Bioregional distribution:** s San Francisco Bay Area, Central Coast (near Hazard Canyon, San Luis Obispo Co.)

Plant found on site in Central maritime chaparral plant community areas west of Tromp property and across ranch Road on east edge of property.

***Centromadia parryi* ssp. *congdonii* - Congdon's tarplant.** CNPS List 1B.2. Plants annual prostrate to erect, not puberulent or glandular. **Ecology:** Alkaline Valley and Foothill Grassland. Blooms July to October

**Elevation:** < 100 m.

**Bioregional distribution:** c&s Central Western California.

Marginal habitat on site. (Presumed extirpated in Prunedale quad) not found on site.

***Chorizanthe pungens* var. *pungens* - Monterey spineflower.** Federal Threatened, CNPS List 1B.2 Annual plant, prostrate or ascending. **Ecology:** Sandy openings in maritime chaparral, old and active dunes. Blooms April to July.

**Elevation:** 0-65 m.

**Bioregional distribution:** Central coast Monterey and Santa Cruz counties.

Plant found in disturbed sand of pathway east of Tromp property line at approximately same elevation as proposed house.

***Chorizanthe robusta* var. *robusta* - robust spineflower.** Federal Endangered, CNPS List 1B.1 Annual, plant spreading or decumbent, 1–2 dm, 1–6 dm across. **Ecology:** Sandy or gravelly openings in Chaparral, dunes. Blooms May to September.

**Elevation:** 10-300 m.

**Bioregional distribution:** North central Central coast, South Santa Cruz, North Monterey Counties. Most records were considered extirpated. Not documented in Prunedale quadrant. Not found on site.

***Cordylanthus rigidus* ssp. *littoralis* - seaside bird's-beak.** State Endangered, CNPS List 1B.1. Annual Plant 30–150 cm, yellow-green or tinged red, puberulent to soft hairy. **Ecology:** Dunes, openings in Maritime chaparral and Pine woodland. Blooms April to September.

**Elevation:** 0–200 m.

**Bioregional distribution:** c Central Coast (s Monterey Bay and Peninsula), s Central Coast (w Santa Barbara Co.) Potential habitat on site. Not previously documented in Prunedale quad. Not found on site

***Ericameria fasciculata* - Eastwood's goldenbush.** CNPS List 1B.1. Shrub, plant < 5 dm, densely leafy, glabrous to sparsely puberulent. **Ecology:** Dunes, coastal chaparral, closed-cone-pine forest. Flowers July to October.

**Elevation:** < 100 m.

**Bioregional distribution:** c Central Coast (n Monterey Co.) Potential habitat on site. No plants were found on site.

***Fritillaria liliacea* - fragrant fritillary.** CNPS List 1B.2. Perennial bulb; large scales 2–7; small scales 1–2. **Ecology:** Heavy soil, open hills, and fields near coast. Blooms February to April.

**Elevation:** generally, < 200 m.

**Bioregional distribution:** Sacramento Valley (Solano Co.), Central Western California. No habitat on site.

***Holocarpha macradenia* - Santa Cruz tarplant.** Federal Threatened, State Endangered, CNPS List 1B.1. Annual, densely glandular, strongly scented. Stems 1–5 dm; branches few, stiffly spreading, bristly, and glandular. **Ecology:** Grassy coastal terraces, Northern Coastal scrub. Blooms July to October.

**Elevation:** < 100 m.

**Bioregional distribution:** n Central Coast (n&c Monterey Bay), sw San Francisco Bay Area. No habitat on site.

***Lomatium parvifolium* - small-leaved lomatium.** CNPS List 4.2. Perennial plant 1.5–4 dm; taproot slender; herbage glabrous, ± glaucous, ± fleshy. **Ecology:** UNCOMMON. Pine woods, serpentine outcrops. Blooms March to June.

**Elevation:** 70–150 m.

**Bioregional distribution:** Central Coast, South Coast Ranges. Plant found in understory of disturbed maritime chaparral in lot adjacent to eastern boundary of Tromp property.

***Piperia michaelii* - Michael's rein orchid.** CNPS List 4.2. Perennial, caudex tuber- or bulb-like, 1–4 cm, generally ovoid, plant 15–70 cm. **Ecology:** UNCOMMON. Generally dry sites, coastal scrub, woodland, mixed-evergreen or closed-cone-pine forest. Flowers January to June.

**Elevation:** < 700 m.

**Bioregional distribution:** North Coast, Sierra Nevada Foothills, Central Coast, San Francisco Bay Area, n South Coast. No habitat on site.

***Piperia yadonii* - Yadon's rein orchid.** Federal Endangered, CNPS List 1B.1. Perennial, Caudex tuber- or bulb-like, 1–4 cm, generally ovoid, plant 10–50 cm. **Ecology:** Generally sandy soil or sandstone, coastal scrub, Monterey-pine Forest. Flowers March to June.

**Elevation:** < 150 m.

**Bioregional distribution:** c Central Coast (n Monterey Co.). Suitable habitat on site. Plant not found on site.

***Rosa pinetorum* - pine rose.** CNPS List 1B.2. Dwarf shrub, generally < 10 dm, ± rhizome. **Ecology:** Pine woodlands, canyons. Blooms May to July.

**Elevation:** generally, < 300 m.

**Bioregional distribution:** west-central Central Western California. No habitat on site.

### **Habitat/ Plant Community types**

**Central Maritime Chaparral** – A variable sclerophyll scrub of moderate to high cover (50-100%) dominated by forms of *Arctostaphylos tomentosa* plus one or more other narrowly distributed manzanita. Found on well-drained, sandy substrates within the zone of summer coastal fog incursion. Fire appears necessary for continued reproduction. Intergrades on more mesic, less sandy sites with Monterey Pine Forest, Bishop Pine Forest, and Monterey Pygmy Cypress Forest; with Chamise and Upper Sonoran Mixed Chaparral on stonier sites out of the foggy area; and with Lucian Coastal Scrub closer to the coast or on shaley substrates. Survives at scattered locations near Monterey and Ft. Ord (Pajaro Hills), and in southern San Luis Obispo and northern Santa Barbara counties. Significant patches of an even rarer subcategory – Pajaro manzanita chaparral were found on and adjacent to project site.

**Coastal Brackish Marsh** – Usually at the interior edges of coastal bays and estuaries or in coastal lagoons. Adjacent to several Salt Marshes. Most extensively developed around Suisun Bay at the mouth of the Sacramento-San Joaquin Delta. Dominated by perennial, emergent, herbaceous monocots to 2m tall. Cover is often complete and dense. Like Salt Marshes and Freshwater Marshes with some plants characteristic of each. Like Coastal Salt Marshes, but brackish from freshwater input. Salinity may vary considerably and may increase at high tide or during seasons of low freshwater runoff or both. Usually intergrades with Coastal Salt Marshes toward the ocean and occasionally with Freshwater Marshes at the mouths of rivers, especially in the Sacramento-San Joaquin River Delta. Not found on or near project site.

**Northern Coastal Salt Marsh** - Along the coast from the Oregon border south to about Pt. Conception. Intergrades with Southern Coastal Salt Marsh over a considerable portion of the south-central coast. Extensively developed around Humboldt Bay and other Humboldt Co. areas; Tomales Bay, Marin Co.; Elkhorn Slough, Monterey Co.; Morro Bay, San Luis Obispo Co.; and very extensively in the San Francisco Bay Area. Highly productive, herbaceous and suffrutescent, salt-tolerant hydrophytes forming moderate to dense cover and up to 1m tall. Most species are active in summer, dormant in winter. Usually segregated horizontally with *Spartina* nearer the open water, *Salicornia* at mid-littoral elevations, and a richer mixture closer to high ground. Usually found along sheltered inland margins of bays, lagoons, and estuaries. These hydric soils are subject to regular tidal inundation by salt water for at least part of each year. Not found on or near project site.





Figure 1: Dense central maritime chaparral on Eastern edge of property

Figure 2: View looking south through dense annual grassland in proposed home site







Figure 3: View looking west through small stand of coast Live oak on east side of proposed home site.



Figure 4: Young Pajaro manzanita in proposed driveway location

Plant list observed on site April 25, 2023

*Acmispon glaber* - deerweed  
*Adenostoma fasciculatum* - Chamise  
*Anagalis arvensis* - scarlet pimpernel\*  
*Anaphilis margaritacea* - pearly everlasting  
*Arctostaphylos crustacea* ssp. *crustacea* - brittle-leaf manzanita  
*Arctostaphylos hookeri* ssp. *hookeri* - Hooker's manzanita  
*Arctostaphylos pajaroensis* - Pajaro manzanita  
*Avena fatua* - wild oat\*  
*Baccharis pilularis* - coyote bush  
*Briza maxima* - rattlesnake grass\*  
*Bromus diandrus* - riggut brome\*  
*Camissoniopsis micrantha* - small primrose  
*Ceanothus dentatus* - dwarf ceanothus  
*Ceanothus rigidus* - Monterey ceanothus  
*Ceanothus thyrsiflorus* var. *thyrsiflorus* - blue blossom  
*Chlorogalum pomeridianum* - soap plant/amole  
*Chorizanthe pungens* var. *pungens* - Monterey spineflower  
*Cortaderia jubata* - pampas grass\*  
*Crassula connata* - sand pygmy weed.  
*Crocanthemum scoparium* - rush-rose  
*Eriogonum gracile* - slender wooly buckwheat  
*Eriogonum nudum* - naked buckwheat  
*Eriophyllum confertiflorum* - golden yarrow  
*Galium californicum* - California bedstraw  
*Gnaphalium stramineum* - cotton-batting plant  
*Heteromeles arbutifolia* - toyon  
*Hosackia gracilis* - coast lotus  
*Lathyrus jepsonii* var. *californicus* - buff pea  
*Leontodon saxatilis* - hairy hawkbit\*  
*Lomatium parvifolium* -small leaved lomatium  
*Lupinus nanus* - sky lupine  
*Marah fabaceus* - wild cucumber  
*Mimulus aurantiacus* var. *aurantiacus* - sticky monkeyflower  
*Navarretia squarrosa* - skunkweed  
*Nuttallanthus canadensis* - blue toadflax  
*Pinus radiata* - Monterey pine  
*Plantago coronopus* - cut-leaf plantain\*

*Quercus agrifolia* var. *agrifolia* - coast live oak  
*Salvia mellifera* - Black sage  
*Senecio vulgaris* - common groundsel\*  
*Senecio glomeratus* - Cut leaf fireweed\*  
*Stipa cernua* - nodding needle grass  
*Stipa pulchra* - Purple needle grass  
*Taraxacum officinale* - common dandelion\*  
*Taraxia ovata* - sun cups  
*Toxicodendron diversilobum* - poison oak  
*Toxicoscordion fremontii* - Fremont's star lily  
*Vicia sativa* ssp. *nigra* - smaller common vetch\*

\* = Nonnative species

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Figure 5: View down dirt road at Home site on right and dense Pajaro manzanita chaparral on left

