



# Kenneth L. Finger, Ph.D.

## Consulting Paleontologist

18208 Judy St., Castro Valley, CA 94546-2306

510.305.1080

klfpaleo@comcast.net

November 1, 2022

Dana DePietro  
FirstCarbon Solutions  
1350 Treat Boulevard, Suite 380  
Walnut Creek, CA 94597

### Re: Paleontological Records Search for the Belvedere Mallard Pointe Project (5566.0002), City of Belvedere, Marin County

Dear Dr. DePietro:

As per the request of Madelyn Dolan, I have performed a paleontological records search for the proposed project at Belvedere Mallard Pointe Project. Its Public Land Survey location is SW¼, NW¼, Sec. 6, T1S, R5W, San Quentin and North San Francisco quadrangles (USGS 7.5-series topographic maps). The proposed project would demolish 11 existing duplex buildings containing 22 residential units along Mallard Road and redevelop the 2.8-acre site. This redevelopment project would include six single-family residences, 10 duplexes, and 23 apartment units.

#### Geologic Units

##### Key to Adjacent Map

Qmf Artificial fill over marine and marsh deposits  
(Quaternary)

##### Franciscan Complex:

KJfch Chert (Cretaceous–Jurassic)

KJfm Metamorphic rocks (Cretaceous–Jurassic)

Jfgs Greenstone (Jurassic)

Jfmgs Metagreenstone (Jurassic)

fsr Mélange (Jurassic)

sp Great Valley Complex serpentinite (Jurassic)

According to the part of the Blake et al. (2000) geologic map shown here, the entire project site (yellow outline at center) consists of Quaternary artificial fill over marine and marsh deposits, which is too young to be fossiliferous. The surrounding half-mile search area (dashed outline) also has various mostly meta-

morphic rocks of the Cretaceous–Jurassic Franciscan Complex. Vertebrate fossils are extremely rare in the Franciscan Complex, so its paleontological potential and sensitivity are both very low.



### Paleontological Records Search

The University of Museum of Paleontology (UCMP) database lists 35 vertebrate localities in Marin County but none of them is in Cretaceous or Jurassic strata. The only significant paleontological resources recorded from the Franciscan Complex are the type specimens of the Jurassic marine reptiles *Ichthyosaurus franciscanus* from San Joaquin County and *Plesiosaurus? hesternus* from San Luis Obispo County (Hilton, 2003).

### Paleontological Assessment and Mitigation Recommendations

The proposed project site is situated on artificial fill, which is a disturbed deposit that here covers marine and marsh deposits; it is too young to contain fossils. The nearby Franciscan Complex extends into the subsurface of the project site, probably well below the depth of planned construction-related excavations. Furthermore, the Franciscan has only yielded two significant fossils in distant counties and thus has a very low fossiliferous potential in the San Francisco Bay area. I therefore do not recommend any further paleontological mitigation for this project. Although extremely unlikely, should any significant paleontological resources (e.g., bones, teeth, well-preserved plant elements) be unearthed by the construction crew, their activities should be diverted at least 15 feet from the find until a professional paleontologist has assessed it and, if deemed significant, salvaged it in a timely manner. Collected fossils should be deposited in an appropriate repository, such as the UCMP, where they will be properly curated and made available for future research.

Sincerely,



### References Cited

- Blake, M.C., Graymer, R.W., Jones, D.L., and Soule, A., 2000. Geologic map and map database of parts of Marin and San Francisco, Alameda, Contra Costa, and Sonoma counties, California. USGS MF-2337, scale 1:75,000.
- Hilton, R.P., 2003. Dinosaurs and other Mesozoic reptiles of California. University of California Press, 356 p.