

APPENDIX 2c

PALEONTOLOGICAL REVIEW

PALEONTOLOGICAL REVIEW URBAN TRANSIT VILLAGE PROJECT

City of El Monte
Los Angeles County, California
CRM TECH Contract Number 1783P

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SETTING

The project area lies within the southern portion of the San Gabriel Valley, which is considered to be a sub-basin within the greater Los Angeles Basin (Yerkes et al. 1965:A5). The San Gabriel Valley is a closed, elliptical-shaped depression that is more than 12,000 feet deep (*ibid.*:A15). The valley is filled with rocks of Miocene through Recent age and rapid deposition starting in the early Pleistocene began to exceed subsidence so the Pleistocene marine sedimentation gave way to continental deposition and filled the depressed portion of the valley with up to 1,800 feet of Pleistocene-age sediments (*ibid.*:A17-19).

The project area is located in a fully urbanized area in the City of El Monte. The surface geology for at least one mile along the Rio Hondo Flood Control Channel, which traverses in a northeast-southwest direction across the westernmost portion of the project area, is mapped as Holocene in age, but as one moves away from the channel these Holocene-age sediments give way to surface materials mapped as Pleistocene-age alluvium (Jennings and Strand 1969). The Holocene-age alluvium is shown to rest directly atop the Pleistocene-age sediments with varied thickness (*ibid.*).

LITERATURE REVIEW

Schoellhamer et al. (1954) map the project site and the areas for miles around it as **Qal**, or alluvium of Holocene age. Jennings and Strand (1969) also map the surface geology at the project site as **Qal**, but a large area about a mile to the west is mapped as **Qo**, or older alluvium of Pleistocene age (*ibid.*).

While I do not have the Dibblee map coverage for the project location, I do have the map just to the east (Dibblee 2002). This map tracks well with Jennings and Strand (1969) where they overlap. Dibblee (2002) indicates the presence of **Qa** (alluvium of Holocene age) along the river courses and **Qoa** (alluvium of Pleistocene age) away from the riverbeds.

DISCUSSION AND RECOMMENDATIONS

Based on these data, the project site is located within surface alluvium of Holocene age. This material should have a low sensitivity for significant vertebrate fossil remains. However, this Holocene-age material rest with variable thickness directly atop older Pleistocene-age sediments that have a high potential for vertebrate fossils. The depth to the older sediments may be determined from on-site engineering soil borings, should they be

available. If the borings are not available, or if they do not show the depth, then part-time monitoring is suggested for excavation reaching deeper than 10 feet to determine if any of the older sediments are impacted. Once excavation reaches 20 feet below grade, or if older sediments are encountered at a shallower depth, full-time monitoring will be necessary, along with a program to mitigate impacts to any resources that are unearthed. Such a program should include, but not be limited to the following:

1. The excavation of areas identified as likely to contain paleontologic resources should be monitored by a qualified paleontological monitor. The monitor should be prepared to quickly salvage fossils as they are unearthed to avoid construction delays. The monitor should also remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor must have the power to temporarily halt or divert grading equipment to allow for removal of abundant or large specimens.
2. Collected samples of sediments should be washed to recover small invertebrate and vertebrate fossils. Recovered specimens should be prepared so that they can be identified and permanently preserved.
3. All recovered fossil specimens should be identified and curated and placed into a repository with permanent retrievable storage.
4. A report of findings, including an itemized inventory of recovered specimens, should be prepared upon completion of the steps outlined above. The report should include a discussion of the significance of all recovered specimens. The report and inventory, when submitted to the appropriate Lead Agency, would signify completion of the program to mitigate impacts to paleontologic resources.

REFERENCES

Dibblee, Thomas W., Jr.

2002 Geologic Map of the San Dimas and Ontario Quadrangles, Los Angeles and San Bernardino Counties, California. Dibblee Geological Foundation Map #DF-91. Santa Barbara, California.

Jennings, C., and R. Strand

1969 Geologic Map of California, Los Angeles Sheet (scale 1:250,000). California Division of Mines and Geology, Sacramento.

Schoellhamer, J. E., R. F. Yerkes, D. M. Kinney and J. G. Vedder

1954 Geologic Map of the Northern Santa Ana Mountains, Orange and Riverside Counties. U.S. Geological Survey Professional Oil and Gas Investigations Map OM-154.

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