



APPENDIX A19
PALEONTOLOGICAL ASSESSMENT



COLORADO
Department of Transportation
Division of Transportation Development

Environmental Programs Branch
2829 W. Howard Place
Denver, CO 80204-2305

TO: Kara Swanson

FROM: F. Nicole Peavey

DATE: 6 December 2019

RE: Paleontological assessment for Project NHPP 0701-240, West Vail Pass Auxiliary Lanes EA

SA: 21685

Project NHPP 0701-240, for West Vail Pass Auxiliary Lanes EA, located on I-70 between MP 179.5 and MP 191.5 in Eagle and Summit Counties, will not require on-the-ground reconnaissance for paleontological resources at this time.

According to the best available geologic maps of the project area, the project is underlain by the following units:

- Artificial fill
- Holocene and Pleistocene landslide and colluvial deposits
- Pleistocene alluvium
- Pleistocene glacial moraine deposits
- Permian and Pennsylvanian Maroon Formation
- Pennsylvanian and Mississippian Minturn Formation
- Pre-Cambrian igneous and metamorphic bedrock

Artificial fill is of recent human origin and considered non-sensitive for paleontological resources. Holocene deposits are considered to be too young to be paleontologically sensitive (less than approximately 11,700 years before present). Pleistocene deposits may contain fossil or subfossil remains, particularly of ice age mammals, and are considered to be moderately paleontologically sensitive. The Maroon and Minturn Formations are both considered to be moderately sensitive, with sporadic scientifically interesting fossil localities in Colorado. Crystalline (igneous and metamorphic) rock types do not typically preserve fossil resources and are considered to have very low or nonexistent paleontological sensitivity.

One potential outcrop exists of the Maroon and Minturn Formations near the road at the truck ramp at MP 185.5. While a brief survey might be desirable for this location, it is unfortunately currently obscured by snow cover and unlikely to clear within a reasonable window of time. Because I know of no previously recorded localities at that location, nor elsewhere within the project limits, I am comfortable clearing the project at this time without that survey.



However, I will specify that I be notified of the schedule of work planned for that location with a minimum of 2 weeks/10 business days notice, so that I may make arrangements to either do a survey prior to construction or to personally monitor a portion of the construction there. As always, if paleontological resources are uncovered during project construction, work in the immediate area of the find should cease, and I should be notified as soon as possible per Section 107.23 of the Standard Specifications.

Geologic Map References

- Bergendahl, M.H., 1969, Geologic map and sections of the southwest quarter of the Dillon quadrangle, Eagle and Summit Counties, Colorado: U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-563, scale 1:24,000.
- Kellogg, K.S., Bryant, Bruce, and Redsteer, M.H., 2003, Geologic map of the Vail East quadrangle, Eagle County, Colorado: U.S. Geological Survey, Miscellaneous Field Studies Map MF-2375, scale 1:24,000.
- Tweto, Ogden, and Lovering, T.S., 1977, Geology of the Minturn 15-minute quadrangle, Eagle and Summit Counties, Colorado: U.S. Geological Survey, Professional Paper PP-956, scale 1:48,000.

