MILLER PACIFIC ENGINEERING GROUP

March 30, 2022
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Pinole Valley Partners, LLC
2801 Pinole Valley Road, Suite 201
Pinole, California 93564

Attn: Mr. Brian Baniqued

Re: Executive Summary of Findings
Earthquake Fault Investigation
2801 Pinole Valley Road
Pinole, California

Introduction and Project Description

As requested, this letter summarizes the results of our recent Fault Trench Investigation for your planned new residential/commercial development at 2801 Pinole Valley Road in Pinole, California. The purpose of our Investigation was to determine whether active traces of the Pinole Fault exist within or proximal to the building areas. The purpose of this letter is to provide interim documentation, prior to production of our completed formal report, so that the project may be considered for Planning approval.

The proposed project generally includes constructing a new 3-story commercial building and 5-story residential structure on a 1.75-acre site. The site is currently developed with an existing 2-story office building that will remain, while existing parking lots and landscape areas will be reconfigured to accommodate the new construction. Ancillary improvements will include new utilities, landscaping, exterior hardscape, drainage, and other "typical" improvements.

Background

We previously performed a Preliminary Geologic and Geotechnical Investigation for the project, as summarized in our report dated November 1, 2021. As discussed therein, regional geologic mapping (Dibblee 1980) indicates that an inferred/concealed trace of the Pinole Fault is mapped as passing through the site on a northwesterly trend, while a second trace is shown farther northeast with a higher level of confidence. Additionally, studies by Kleinfelder (2011) for redevelopment of the Pinole Valley High School campus just southwest of the site concluded that "it appears that the school campus is free from active fault traces and that the Pinole Fault trace is most likely situated to the east of Pinole Valley Road, as mapped by Dibblee in 1980."

Purpose and Scope

The purpose of our proposed Fault Trench Investigation is generally twofold:

1) To determine whether or not any traces of the Pinole Fault Zone (PFZ) exist in close proximity to the planned structures; and

2) Whether any fault traces discovered have ruptured during Holocene time (the last 11,000 years), are therefore considered "active" by State and local regulators, and should

therefore be considered to present a risk of surface rupture for the purpose of designing, constructing, and permitting new habitable structures.

The scope and performance of our Investigation was developed and performed in general accordance with accepted guidelines for satisfying the requirements of the A-P Act, Title 24 of the California Code of Regulations, and Chapter 16 of the California Building Code (2019 CBC). Our scope of work included review of published regional geologic and fault mapping, review of subsurface exploration data collected during previous project phases, preliminary site reconnaissance/geologic mapping, and geologic observation and logging of two exploratory fault trenches. Our exploratory trenches were excavated across the southern part of the proposed building envelope, generally along the southern edge of the proposed new residential building. Cumulatively, trenches extended west for a distance of 140-feet from a point near the proposed residential structure's eastern wall, to a point 50-feet west of the proposed commercial building. Exact trench location was dictated primarily by the proposed building footprints and by the locations of existing improvements to remain.

Fault Trench Investigation

Fault trenches were excavated and logged between March 16 and 18, 2022. Trenches were excavated by use of a track-mounted excavator equipped with a 24-inch bucket, and extended to typical depths between about 8- and 10-feet below the ground surface. The trench walls were cleaned with hand tools to expose natural stratigraphy and facilitate examination, and then logged by our Geologists at a typical scale of 1 inch = 5 feet.

Following completion of trench examination and logging and prior to backfilling, we attended a field meeting with the third-party reviewer, Mr. Jared Pratt of RGH Consultants, to observe and discuss the trench exposures and our logs.

Discussion

Soils exposed in the base of our trench consisted of relatively flat-lying clayey residual soil and alluvial deposits which are interpreted to be of Late Pleistocene age (generally older than about 12,000 years). Age determination was made on the basis of detailed soil logging and high concentrations of gypsum and calcite in various soil horizons. These gypsum- and calcite-bearing soils were documented in detail by Dr. Glenn Borchardt at Pinole Valley High School for a 2011 project at that site, who determined that gypsum precipitation was indicative of more arid climate conditions during the time period between about 8,000 and 10,000 years ago. As such soils underlying the gypsum are interpreted to be older.

It should be noted that our trenches did not extend beyond the proposed eastern limit of the new residential building, due to existing utilities underlying the eastern edge of the existing parking lot and the proximity of the adjacent property line. Therefore, we anticipate performing a supplemental soil boring in the southeastern corner of the site to confirm our conclusions and effectively extend our exploration beyond the eastern limit of the proposed structure in accordance with A-P and related guidelines. However, we judge the likelihood that evidence of faulting is observed in that boring (which will be located within 10-feet of the end of our trench) is extremely low.

Conclusions and Recommendations

The results of our Investigation indicate there are no faults underlying the proposed building footprints. Based on our Investigation, it is our opinion that the project, as proposed, may be safely constructed without modification to the proposed building locations, and that the risk of fault surface rupture affecting the site is very low to nil.

Supplemental Services

We will prepare a formal Fault Trench Investigation Report expanding on the discussion and conclusions presented above, along with supporting trench logs and other plates and figures as needed. Our final report will be peer-reviewed by RGH Consultants.

Following project planning approval and completion of peer-review services, we anticipate performing a Design-Level Geotechnical Investigation with supplemental subsurface exploration to develop design recommendations for new foundations, retaining walls, and other geotechnical project components. We also anticipate reviewing the project plans as they are completed and observing/testing the geotechnical portions of the work during construction.

We trust that this letter contains the information you require at this time. Should there be any questions or concerns regarding our work on this project please do not hesitate to contact me.

Very truly yours,
MILLER PACIFIC ENGINEERING GROUP

Mike Jewett
Engineering Geologist No. 2610
(Expires 1/31/23)