ROCKRIDGE GEOTECHNICAL

September 27, 2019
Project No. 19-1724

Mr. Morgan Read
Read Investments, LLC
2025 4th Street
Berkeley, California 94710

Subject: Confirmation Letter
Seismic Hazard Evaluation and Geotechnical Investigation
Proposed Mixed-Use Building
Ashby Avenue and San Pablo Avenue
Berkeley, California

Dear Mr. Read,

The letter confirms that Rockridge Geotechnical, Inc. is currently performing a seismic hazard evaluation as a part of our geotechnical investigation for the proposed mixed-use building, Aquatic Ashby, to be constructed at Ashby and San Pablo avenues in Berkeley, California. Our geotechnical investigation is being performed in accordance with our proposal dated July 10, 2019.

The subject property consists of two adjoining parcels located on the southern side of Ashby Avenue, west of its intersection with San Pablo Avenue. The site is bordered by Ashby Avenue to the north, San Pablo Avenue to the east, Murray Street to the south, and existing commercial building to the west. The site is relatively flat and rectangular shaped with maximum plan dimensions of approximately 100 by 175 feet. It is currently occupied by two concrete buildings with a concrete driveway in between the buildings.

We understand plans are to construct a five-story multi-family residential building above a one-story at-grade concrete podium. The proposed building footprint will be approximately 100 by 140 feet. The ground floor will include parking spaces equipped with triple-stacked parking lifts. The parking lifts will not extend below grade. The ground floor will also include commercial and retail spaces fronting along San Pablo Avenue. There will be a new outdoor garden area along the western property line between the new building and neighboring property.

The site has been mapped within a zone of liquefaction potential on the map titled *State of California, Seismic Hazard Zones, Oakland West Quadrangle, Official Map*, prepared by the California Geological Survey (CGS), dated February 14, 2003. Special Publication 117 by CGS (2008) recommends subsurface investigations in mapped

liquefaction potential areas be performed using rotary-wash borings and/or cone penetration tests (CPTs).

We are currently performing a geotechnical investigation for the project. The purpose of our geotechnical investigation is to evaluate subsurface conditions at the site and provide recommendations for the geotechnical aspects of the project. Our geotechnical investigation includes an evaluation of site seismicity and seismic hazards, including the potential for liquefaction and lateral spreading, and total and differential settlement resulting from liquefaction and/or cyclic densification.

To explore the subsurface conditions at the site, we performed two cone penetration tests (CPT) on August 15, 2019 and drilled one boring on August 1, 2019. The CPTs and boring were located within the property and were advanced to a depth of about 50 feet below the ground surface. In the laboratory, selected soil samples from the boring were tested to determine moisture content, dry density, plasticity, shear strength, and corrosivity. Details and results of our field investigation and laboratory test program will be presented in our geotechnical investigation report.

On the basis of the field investigation, laboratory test results, and our engineering analyses, we are preparing a geotechnical investigation report that will provide information about the subsurface conditions at the site and our conclusions and recommendations regarding:

- design groundwater level
- site seismicity and seismic hazards, including the potential for liquefaction and lateral spreading, and total and differential settlement resulting from liquefaction and/or cyclic densification
- the most appropriate foundation type(s) for the proposed building
- design criteria for the recommended foundation type(s), including vertical and lateral capacities for each of the foundation type(s)
- estimates of foundation settlement
- subgrade preparation for interior and exterior concrete slabs-on-grade
- site grading and excavation, including criteria for fill quality and compaction
- 2016 and 2019 California Building Code (CBC) site class and design spectral response acceleration parameters

- corrosivity of the near-surface soil and the potential effects on buried concrete, metal structures and foundations
- construction considerations.

The results of our geotechnical investigation, including the results of seismic hazard evaluation and our conclusions and recommendations for design, will be presented in a geotechnical report.

We trust that this letter provides you with the information you requested. If you have any questions, please call.

Sincerely yours,
ROCKRIDGE GEOTECHNICAL, INC.

Linda H. J. Liang, P.E., G.E.
Associate Engineer