

July 6, 2017

Mr. Matt Ceragioli  
UCLA Real Estate  
10920 Wilshire Boulevard, Suite 810  
Los Angeles, California 90024

Subject: 840 Willow Creek Rd, Lake Arrowhead, CA  
Seismic Screening Report  
JLA Job no. 17101-03

Dear Mr. Ceragioli,

Per your request, John Labib + Associates Structural Engineers (JLA) performed a seismic screening of the existing buildings the above noted address. Our services included a site visit performed on May 30<sup>th</sup>, 2017, review of the available record drawings and a general evaluation of the structural systems of the building.

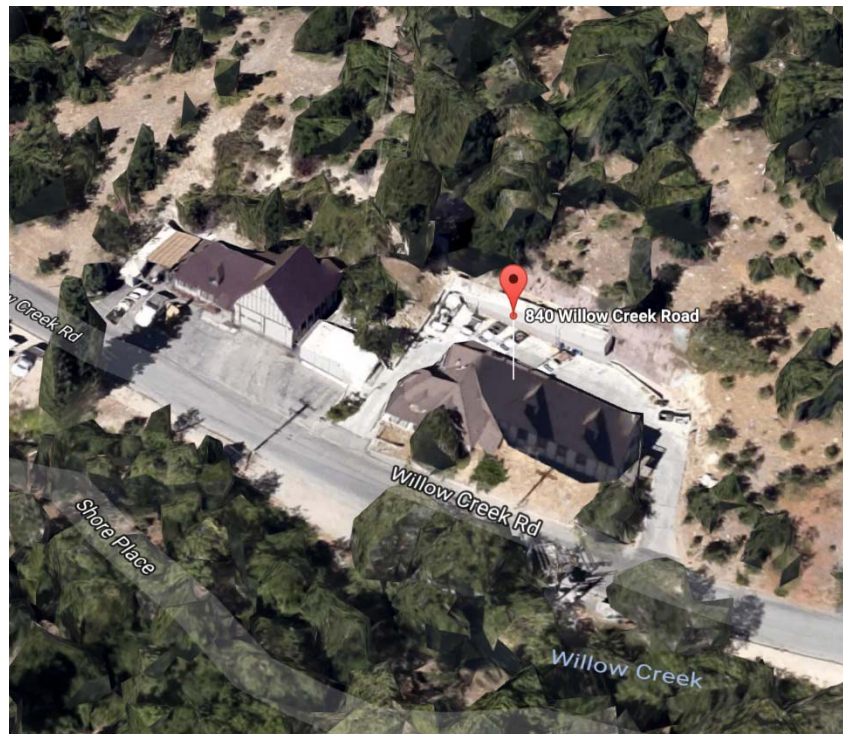


Figure 1: Birds Eye View of Complex



Figure 2: Main Building



Figure 3: Main Building

### Building Description

The architectural and structural drawings available for, and the basis of, the review included 21 sheets prepared by Jimmie N. Cartee Architects dated September 1975. The structure was originally designed to be an operational facility for the Lake Arrowhead Sanitation department.

The building is situated near Lake Arrowhead in the City of Lake Arrowhead on a site with mild slopes leading up to the property. A retaining wall at the back of the property behind a parking lot restrains larger slopes beyond the property line. The complex consists of two structures: Main Building and an ancillary building; both structures are built using conventional timber framed construction. All roofs are heavily pitched to alleviate snow loads and exterior walls are conventional stucco construction. Neither structure has a basement.

The main building is two stories and consists mostly of office spaces with a double height garage to accommodate service vehicles. There is a small (<300 sq ft) mezzanine space overlooking the garage. The interior is constructed of conventional partial and full height timber walls. Ceilings are mostly acoustical tiles and are suspended adequately with wire along with lighting fixtures.

The ancillary building is one story with a partial mezzanine and is apparently of identical construction to the main building though existing drawings were not available. Ceilings in the ancillary building were hard lid.

### Building Structure

The building was likely constructed in mid to late 1970's likely based on the 1973 Uniform Building Code. The below is a description of the structure.

#### *Gravity Load Resisting System:*

Existing drawings were made available for the main building. Construction of the ancillary building appears to be very similar based on the architecture, vintage, and materials used. The gravity systems consist of 2x8 floor joists at 16" o.c. with 3/4" plywood floors. Roof framing consists of 2x8 roof rafters with 1/2" plywood. Bearing walls are 2x4's and 2x6's at 16" o.c. Steel posts are used in the garage areas. All bearing walls and posts are supported by shallow strip and spread footings respectively. Slabs on grade consist of 6" concrete w/ welded wire fabric. The exterior is comprised of timber and stucco; as such it's very light weight.

*Lateral Load Resisting Systems:*

Existing drawings were made available for the main building. Construction of the ancillary building appears to be very similar based on the architecture, vintage, and materials used. The lateral system consists of conventional plywood shear walls distributed throughout the building. The walls bottom plate is anchored to strip footings using anchors at incremental spacing. Jambes of the walls are also anchored using deeper anchor bolts. The plywood walls extend from the foundation up to tie to the roof. Plywood sheathing transfers floor loads to the shear walls. In general the design and detailing resembles more modern construction.

One exception to these observations is the northwestern portion of the main building where annotation for shear walls is absent. Without the benefit of drawings for the ancillary building it's possible that this structure also may be missing plywood sheathing and proper anchorage to the foundation; however, this was not verified via any destructive testing. As such, we recommend that to enhance seismic performance plywood sheathing to be added where absent and to anchor these walls to the foundations.



Figure 4: Ancillary Building

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Figure 5: Ancillary Building



Figure 6: Main Building (Rear)



Figure 7: Main Building (Rear)



Figure 8: Main Building Corridor



### Seismic Evaluation Criteria

The structure was generally evaluated based on the latest University of California Seismic Safety Policy dated May 19<sup>th</sup>, 2017. The seismic policy provides 7 seismic performance ratings: I thru VII. Please refer to attached Appendix A for info on Seismic Safety Policy & rating.

### Seismic Evaluation

- The main building structure has a complete load path to transfer seismic forces to the foundations.
- The roof and floor diaphragms are continuous without major openings.
- Based on our review of the existing structural drawings and our conceptual evaluation of the lateral-load-resisting system, the lateral system is adequate for the size, configuration, and age of the building. A major seismic disturbance is likely to result in structural and non-structural damage that would represent low life hazards. Some voluntary seismic improvements could be pursued to further enhance building performance in areas where sheathing of walls may have been omitted.

### Seismic Rating

IV

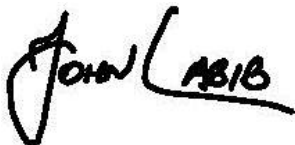
### Limitations

This limited seismic screening was based on our review of the plans. Services were performed by JLA in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions. The structural observations and recommendations represent our opinion and are not intended to preempt the responsibility of the original design consultants in any way. No other warranty, expressed or implied, is made.

If you have any questions, please do not hesitate to call us.

Yours truly,

John Labib & Associates



John Labib, S.E.  
Principal

