

# TRUE BUILDING ENGINEERS INC.

Architectural - Civil Engineering - Structural Design

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December 27, 2022

[REDACTED]  
Los Angeles, CA 91403

Attention: [REDACTED]

**Subject: Limited Structural Evaluation Report (Handrails and Guardrails)**

**Project:** [REDACTED]

*True Building Engineers Inc (TBE) Job No. 5041*

Ms. Mendoza:

In accordance with our scope of services, we have completed our limited structural evaluation of the requested 8730 Holloway Dr; (existing 2-story apartment building). The purpose of this evaluation is to identify any areas of structural concern with the existing handrails and guardrails that are installed within the courtyard staircase and balconies. Our work consisted of a site visit on December 26, 2022, conducted by Christian Cerda of our office to observe existing conditions and conduct a visual condition assessment.

This evaluation report summarizes our findings and recommendations.

## General Information

The subject structure is an existing two-story structure designed to occupy multifamily residential. The general materials of construction appear to be conventional wood framing supported on conventional concrete foundations. The building plan features a courtyard with staircases and balconies with installed handrails and guardrails. The handrails and guardrails appear to be constructed of wrought iron anchored to wood framing with lag screws.

## Findings

Several guardrail assemblies tested by pushing the top railing notably deflected out of plane. From a visual assessment of the exposed base plate anchor, it appears the large

deflections of the guardrail assemblies are due to inadequate anchorage design into existing wood framing and or damage of existing wood framing (potentially due to water) which is not allowing the lag screws to develop their full capacity. Another concern for the guardrail assemblies is the height relative to the finished floor. Per 2019 CRC Sec. R312.1.2 and CAC 1015.3 all guardrails are required to be 42 inches in height. It was observed the average guardrail height was approximately 36 ¾ inches and at the intermediate landings between the first and second floor only 32 inches in height. The handrails were observed to be without structural concern, however there was one handrail assembly observed that had one disengaged lag screws at the anchorage.

### **Conclusions and Recommendations**

We recommend removing existing guardrails and replacing them with a new guardrail system that is designed by design professionals to meet current code requirements to be approved by the local jurisdiction. In addition, it would be prudent to remove existing finish floor materials to inspect wood for signs of damage. Damaged wood framing members shall be replaced to properly engage the guardrails anchorage system that compromise of lag screws penetrating the wood member. Handrails observed to be without concern of replacement, but we recommend that any loose anchor screw be properly re-anchored into the stud framing system.

### **Terms:**

This assessment is the result of a limited cursory and visual examination. Note that no physical testing was performed nor authorized. Complete original building plans were also not available. Engineering analyses of the structure or its elements were not performed since the primary purpose of our assignment was limited to developing a judgement of the existing guardrail and handrail assemblies code compliance.

Our professional services have been performed using that degree of care and skill ordinarily exercised by reputable structural engineers practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional advice or opinions included in this report.

We hope this report fulfills your request and we thank you for the opportunity to be of service. Should you have any questions or comments, please do not hesitate to contact us.

Respectfully submitted,  
True-Building Engineers, Inc.

Eduardo Chavez



Enclosure – Photos



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