

UC Seismic Evaluation

Date:	06/11/2021
UC Campus:	UCLA – on campus
Building Name:	Park Pool Locker Room
Building Address:	111 Easton Drive, Los Angeles, CA 90024
CAAN ID:	4205H
Auxiliary Building ID ¹ :	N/A



Summary of information provided by Evaluator: Nabih Youssef Associates Structural Engineers

UCOP Seismic Performance Level² (or "Rating") based on ASCE 41-17 Tier 1 evaluation findings: V



Exterior Elevation Photo



Site location coordinates (decimal): Latitude: 34.070524 Longitude: -118.45107

Is this a "Partial" Building (i.e., a single structure in a complex building? (Y or N): Y

ASCE 41-17 Model Building Type³:

Transverse Direction:	C2 – Reinforced Concrete Shear Wall
Long Direction (Back):	C2 – Reinforced Concrete Shear Wall
Long Direction (Front):	W1 – Wood Shear Wall

Number of stories:

Above grade:	1
Below grade:	0

¹ Applicable only for individual buildings that are structurally separate units within a building complex. Each auxiliary building shall be designated with the main building CAAN ID with a decimal number suffix (i.e. main building CAAN ID 5534; auxiliary building CAAN ID 5534.1). Auxiliary building ID is null for a single building or the main building in a building complex.

¹ The designated Seismic Performance Level shall be a Roman numeral associated with the most applicable performance description from Table A.1 in Appendix A of the UC Seismic Safety Policy.

¹ If a building has multiple building types in one story, the model building type should be designated based on engineering judgement as the lateral system that would have the most predominantly negative effect on the seismic behavior of the building in that respective direction.



Original Building Design Code and Year: Building Code of The City of Los Angeles 1962 Edition **Retrofit Building Design Code and Year**: N/A

Cost Range to Retrofit (if applicable)⁴: Low

"Low" cost-range corresponds to a complete retrofit cost less than \$50 per square foot (sf), "Medium" costrange corresponds to a complete retrofit cost greater than \$50 per sf and less than \$200 per sf, "High" costrange corresponds to a complete retrofit cost greater than \$200 per sf and less than \$400 per sf, and "Very High" cost-range corresponds to a complete retrofit cost greater than \$400 per sf.

Building information used in this evaluation:

Structural drawings by John Kariotis & Associates Structural Engineers "Canyon Recreation Center", dated 09/03/1963

Scope for completing this form:

Reviewed structural drawings for original construction and performed ASCE 41-17 Tier 1 evaluation.

Brief description of structure:

The 1-story building includes a 2600 sf locker room. The building is hexagonal in plan. The back side of the building retains about 9'-0" of soil against the hillside. The front side and the roof are wood framed.

<u>Foundation System</u>: The foundation system consists of concrete grade beams supported by deep concrete piers. A 4" thick concrete slab forms the ground floor.

<u>Structural System for Vertical (gravity) loads</u>: The roof consists of plywood sheathing supported by wood joists. The roof joists span to interior and exterior bearing walls. The bearing walls are supported by grade beams and deep piers.

<u>Structural System for Lateral (seismic/wind) loads</u>: The plywood sheathed roof acts as diaphragms to transfer seismic forces to the reinforced concrete and light framed shear walls.

BACKGROUND INFORMATION

Site Information:

Site Class (A-F): D; Default

Geologic Hazards (Y or N):

- Fault Rupture: N; EZRIM Beverly Hills
- Liquefaction: N; USGS
- Landslide: N; EZRIM Beverly Hills

Site-specific Ground Motion Study? N

Site-modified Spectral Response (0.2s), Hazard Level BSE-2E, S_{xs}: 1.844

Site-modified Spectral Response (1.0s), Hazard Level BSE-2E, S_{X1}: 0.943

Estimated Fundamental Period: 1.12 seconds

Falling Hazards Assessment Summary: None



Summary of Tier 1 Seismic Evaluation Structural Non-compliances/Findings Significantly Affecting Rating Determination:

Significant Structural Deficiencies, Potentially Affecting Seismic Performance Level Designation:

- ☑ Lateral System Stress Check (wall shear, column shear or flexure, or brace axial as applicable)
- 🛛 Load Path
- □ Adjacent Buildings
- □ Weak Story
- \Box Soft Story
- □ Geometry (vertical irregularities)
- □ Torsion
- □ Mass Vertical Irregularity
- □ Cripple Walls
- □ Wood Sills (bolting)
- □ Diaphragm Continuity
- □ Openings at Shear Walls (concrete or masonry)
- □ Liquefaction
- □ Slope Failure
- □ Surface Fault Rupture
- □ Masonry or Concrete Wall Anchorage at Flexible Diaphragm
- □ URM wall height to thickness ratio
- □ URM Parapets or Cornices
- □ URM Chimney
- □ Heavy Partitions Braced by Ceilings
- □ Appendages

Note: Positive connection (out-of-plane wall anchors) between the concrete walls and wood framed roof is required.

Brief Description of Anticipated Failure Mechanism:

Connection between the wood roof and concrete walls due to out-of-plane loading; and failure of wood shear wall.

Comments and Additional Deficiencies:

None

Seismic Retrofit Concept Sketches/Description (only if above-listed rating is V or greater):

Provide out-of-plane anchors between the concrete walls and wood roof. Provide wood sheathing and hold downs at 2, 7.6' long wood shear walls



Appendices:

- A. ASCE 41-17 Tier 1 Checklists
- B. Quick Check Calculations