

Campus: [UCLA](#)
Building Name: [Building A \(Clubhouse\)](#)
CAAN ID: [4220A](#)
Auxiliary Building ID:



UNIVERSITY
OF
CALIFORNIA

Date: [Jan 29, 2021](#)

FORM 1
CERTIFICATE OF SEISMIC PERFORMANCE LEVEL

- UC-Designed & Constructed Facility**
 Campus-Acquired or Leased Facility

BUILDING DATA

Building Name: [Building A \(Clubhouse\)](#)
Address: [100 Constitution Ave, Los Angeles, CA, 90095](#)
Site location coordinates: Latitude [34.0593801](#) Longitudinal [-118.4592182](#)

UCOP SEISMIC PERFORMANCE LEVEL (OR "RATING"): [V](#)

ASCE 41-17 Model Building Type:

- Longitudinal Direction: [RM1: Reinforced Masonry Walls w/ Flexible Diaphragms](#)
- Transverse Direction: [RM1: Reinforced Masonry Walls w/ Flexible Diaphragms](#)

Gross Square Footage: [4,385](#)
Number of stories *above* grade: [1](#)
Number of basement stories *below* grade: [0](#)

Year Original Building was Constructed: [1984](#)
Original Building Design Code & Year: [UBC-1979](#)
Retrofit Building Design Code & Code (if applicable): [N/A](#)

SITE INFORMATION

Site Class: [D](#) Basis: [Inferred](#)
Geologic Hazards:
Fault Rupture: [No](#) Basis: [Inferred](#)
Liquefaction: [No](#) Basis: [Inferred](#)
Landslide: [No](#) Basis: [Inferred](#)

ATTACHMENT

Original Structural Drawings: ([UCLA Renovation of Sawtelle Field Phase 2, Gerald Lehmer Associates, 6/1/1982](#))
Seismic Evaluation: ([Building A Seismic Evaluation Tier 1, KPFF, 01/29/2020, ASCE 41-17 Tier 1](#))
Retrofit Structural Drawings: ([N/A](#))



CERTIFICATION & PRESUMPTIVE RATING VERIFICATION STATEMENT

I, **Mark Hershberg**, a California-licensed structural engineer, am responsible for the completion of this certificate, and I have no ownership interest in the property identified above. My scope of review to support the completion of this certificate included both of the following ("No" responses must include an explanation):

- a) the review of structural drawings indicating that they are as-built or record drawings, or that they otherwise are the basis for the construction of the building: Yes No
 - b) visiting the building to verify the observable existing conditions are reasonably consistent with those shown on the structural drawings: Yes No
- Due to COVID-19 protocols, observations were performed for exterior of building only.

Based on my review, I have verified that the UCOP Seismic Performance Level (SPL) is presumptively permitted by the following UC Seismic Program Guidebook provision (choose one of the following):

- 1) Contract documents indicate that the original design and construction of the aforementioned building is in accordance with the benchmark design code year (or later) building code seismic design provisions for UBC or IBC listed in Table 1 below.
- 2) The existing SPL rating is based on an acceptable basis of seismic evaluation completed in 2006 or later.
- 3) Contract documents indicate that a comprehensive¹ building seismic retrofit design was fully-constructed with an engineered design based on the 1997 UBC/1998 **or later** CBC, and (choose one of the following):
 - the retrofit project was completed by the UC campus. Further, the design was based on ground motion parameters, at a minimum, corresponding to BSE-1E (or BSE-R) and BSE-2E (or BSE-C) as defined in ASCE 41, or the full design basis ground motion required in the 1997 UBC/1998 CBC **or later** for EXISTING buildings, and is presumptively assigned an SPL rating of IV.
 - the retrofit project was completed by the UC campus. Further, the design was based on ground motion parameters, at a minimum, corresponding to BSE-1 (or BSE-1N) and BSE-2 (or BSE-2N) as defined in ASCE 41, or the full design basis ground motion required in the 1997 UBC/1998 **or later** CBC for NEW buildings, and is presumptively assigned an SPL rating of III.
 - the retrofit project was not completed by the UC campus following UC policies, and is presumptively assigned an SPL rating of IV.

¹ A comprehensive retrofit addresses the entire building structural system as indicated by the associated seismic evaluation, as opposed to addressing selective portions of the structural system.

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CERTIFICATION SIGNATURE

Mark Hershberg
Print Name

Principal
Title

S5078
CA Professional Registration No.

6/30/2021
License Expiration Date


Signature

01/29/2021
Date



KPFF Inc., (213) 418-0201, 700 S. Flower St., Suite 2100, Los Angeles, CA 90017

Firm Name, Phone Number, and Address



Table 1: Benchmark Building Codes and Standards

| Building Type ^{a,b} | Building Seismic Design Provisions | |
|---|------------------------------------|------|
| | UBC | IBC |
| Wood frame, wood shear panels (Types W1 and W2) | 1976 | 2000 |
| Wood frame, wood shear panels (Type W1a) | 1976 | 2000 |
| Steel moment-resisting frame (Types S1 and S1a) | 1997 | 2000 |
| Steel concentrically braced frame (Types S2 and S2a) | 1997 | 2000 |
| Steel eccentrically braced frame (Types S2 and S2a) | 1988 ^g | 2000 |
| Buckling-restrained braced frame (Types S2 and S2a) | f | 2006 |
| Metal building frames (Type S3) | f | 2000 |
| Steel frame with concrete shear walls (Type S4) | 1994 | 2000 |
| Steel frame with URM infill (Types S5 and S5a) | f | 2000 |
| Steel plate shear wall (Type S6) | f | 2006 |
| Cold-formed steel light-frame construction—shear wall system (Type CFS1) | 1997 ^h | 2000 |
| Cold-formed steel light-frame construction—strap-braced wall system (Type CFS2) | f | 2003 |
| Reinforced concrete moment-resisting frame (Type C1) ⁱ | 1994 | 2000 |
| Reinforced concrete shear walls (Types C2 and C2a) | 1994 | 2000 |
| Concrete frame with URM infill (Types C3 and C3a) | f | f |
| Tilt-up concrete (Types PC1 and PC1a) | 1997 | 2000 |
| Precast concrete frame (Types PC2 and PC2a) | f | 2000 |
| Reinforced masonry (Type RM1) | 1997 | 2000 |
| Reinforced masonry (Type RM2) | 1994 | 2000 |
| Unreinforced masonry (Type URM) | f | f |
| Unreinforced masonry (Type URMa) | f | f |
| Seismic isolation or passive dissipation | 1991 | 2000 |

Note: This table has been adapted from ASCE 41-17 Table 3-2. Benchmark Building Codes and Standards for Life Safety Structural Performed at BSE-1E.

Note: UBC = Uniform Building Code. IBC = International Building Code.

^a Building type refers to one of the common building types defined in Table 3-1 of ASCE 41-17.

^b Buildings on hillside sites shall not be considered Benchmark Buildings.

^c not used

^d not used

^e not used

^f No benchmark year; buildings shall be evaluated in accordance with Section III.J.

^g Steel eccentrically braced frames with links adjacent to columns shall comply with the 1994 UBC Emergency Provisions, published September/October 1994, or subsequent requirements.

^h Cold-formed steel shear walls with wood structural panels only.

ⁱ Flat slab concrete moment frames shall not be considered Benchmark Buildings.

UCLA – Jackie Robinson Stadium, Building A (Clubhouse)

DATE: 1/29/2021

ASCE 41-17 Tier 1 Seismic Evaluation
Minimum Building Report Information



BUILDING DATA

Campus: UCLA

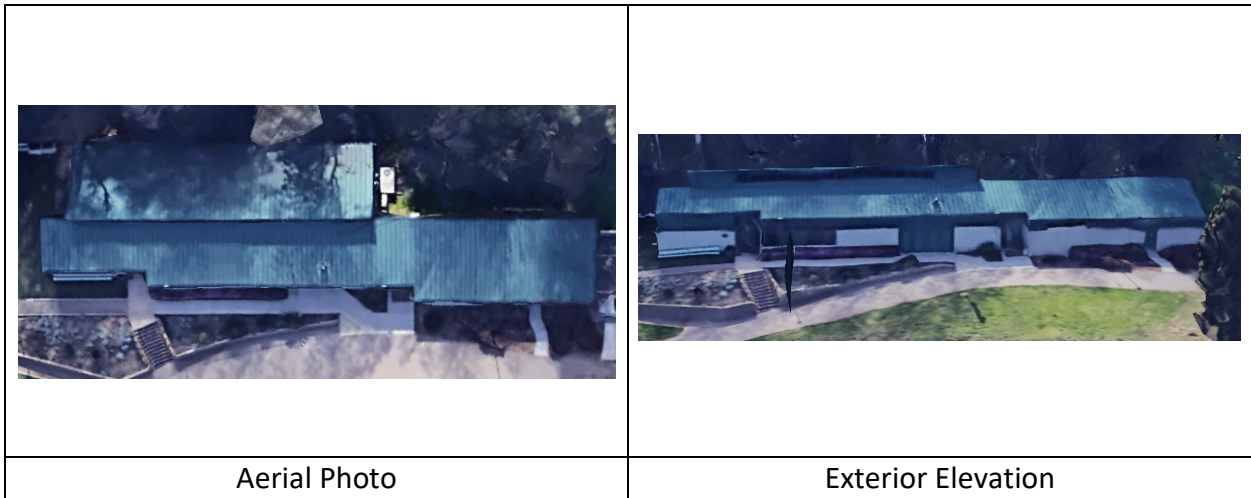
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Site-specific Ground Motion Study? No

Seismic Design Acceleration Parameters of Interest:

- a. For BSE-1E $S_{XS}=0.892g$ and $S_{X1}=0.512g$
- b. For BSE-2E $S_{XS}=1.829g$ and $S_{X1}=0.937g$

Estimated Fundamental Period (seconds)

- a. Longitudinal: 0.13s
- b. Transverse: 0.13s

Gross Square Footage: 4,385
Number of stories *above* grade: 1
Number of basement stories *below* grade: 0

Year Original Building was Constructed: 1984
Original Building Design Code & Year: UBC-1979
Retrofit Building Design Code & Code (if applicable): N/A

SITE INFORMATION

Site Class: D Basis: Inferred
Geologic Hazards:
Fault Rupture: No Basis: Inferred
Liquefaction: No Basis: Inferred
Landslide: No Basis: Inferred

UCOP SEISMIC PERFORMANCE RATING (OR "RATING"): V

"BALLPARK" RETROFIT COST (if applicable)

- Minor (<\$50/sf)
- Moderate (~\$50-\$200/sf)
- Major (>\$200/sf)

SUMMARY 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)
- Lateral System Detailing (reinforcement ratio, confinement, aspect ratio, etc)
- Load Path
- Adjacent Buildings
- Weak Story
- 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 Diaphragm
- URM wall height to thickness ratio
- URM Parapets or Cornices
- URM Chimney
- Heavy Partitions Braced by Ceilings
- Appendages

POTENTIAL FALLING HAZARDS

- Heavy ceilings, features or ornamentation above large lecture halls, auditoriums, lobbies or other areas where large numbers of people congregate.
- Heavy masonry or stone veneer above exit ways.
- Unbraced masonry parapets, cornices or other ornamentation above exit ways.
- Unrestrained hazardous materials storage.
- Masonry chimneys.
- Unrestrained natural gas-fueled equipment such as water heaters, boilers, emergency generators, etc.
- None of the above.

Due to current COVID-19 protocols, we did not verify in field that as-built documentation match current conditions or perform any condition assessment of the existing structure to identify falling hazards as required by the UCOP SSP.

BRIEF DESCRIPTION OF ANTICIPATED FAILURE MECHANISM

The diaphragm at Building A is not directly connected to the masonry shear walls and could be sensitive to load transfer issues, particularly at walls taking out-of-plane loads. In the longitudinal direction, the diaphragm connects to wood headers supported by steel posts embedded in the walls. In the transverse direction, the diaphragm connects to wood infill shear panels that are supported by / anchored to the top of the masonry shear walls. We were not able to justify these load paths bath based on the prescribed checks in Tier 1.

COMMENTS AND RECOMMENDATIONS

It is recommended that a Tier 2 evaluation be performed. A Tier 2 evaluation will provide more information related to the potential load path issues observed at Building A that were not necessarily covered in the Tier 1 evaluation .