



FORM 1
CERTIFICATE OF SEISMIC PERFORMANCE LEVEL

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

BUILDING DATA

Building Name: [Vending Machine Buildings - ATM](#)
Address: [445 Charles E Young Dr E Los Angeles, CA 90095](#)
Site location coordinates: Latitude [34.0707483](#) Longitudinal [-118.4401261](#)

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

ASCE 41-17 Model Building Type:

- a. Longitudinal Direction: [RM1 \(reinforced masonry wall with flexible diaphragm\)](#)
- b. Transverse Direction: [RM1 \(reinforced masonry wall with flexible diaphragm\)](#)

Gross Square Footage: [88](#)
Number of stories *above* grade: [1](#)
Number of basement stories *below* grade: [0](#)

Year Original Building was Constructed: [1998](#)
Original Building Design Code & Year: [UBC-1988](#)
Retrofit Building Design Code & Code (if applicable): [N/A](#)

SITE INFORMATION

Site Class: [D](#) Basis: [Inferred](#)
Geologic Hazards:
Fault Rupture: [No](#) Basis: [CGS Earthquake Hazards Zone Application](#)
Liquefaction: [Yes](#) Basis: [CGS Earthquake Hazards Zone Application](#)
Landslide: [No](#) Basis: [CGS Earthquake Hazards Zone Application](#)

ATTACHMENT

Original Structural Drawings: [\(N/A, N/A, N/A, N/A\)](#) or
Seismic Evaluation: [\(ATM Building Seismic Evaluation Tier 1, KPFF, 4/16/2021, FEMA 154 Rapid Visual Screening\)](#)
Retrofit Structural Drawings: [\(N/A, N/A, N/A, N/A\)](#)



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

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.

Campus: **UCLA**
Building Name: **Vending Machine Buildings - ATM**
CAAN ID: **4518**
Auxiliary Building ID: **4518.1**




**UNIVERSITY
OF
CALIFORNIA**

Date: **Apr 16, 2021**

CERTIFICATION SIGNATURE

AFFIX SEAL HERE

<u>Mark Hershberg</u>	<u>Principal</u>
Print Name	Title
<u>S5078</u>	<u>6/30/2021</u>
CA Professional Registration No.	License Expiration Date
	<u>4/16/2021</u>
Signature	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 – Vending Machine Building - ATM

DATE: 4/16/2021

FEMA 154 Rapid Visual Screening

Minimum Building Report Information



BUILDING DATA

Campus: UCLA

Building Name: Vending Machine Buildings - ATM

CAAN ID: 4518

Auxiliary Building ID: 4518.1

Address: 445 Charles E Young Dr E Los Angeles, CA 90095

Site location coordinates: Latitude 34.0707483 Longitudinal -118.4401261



Aerial Photo



Exterior Elevation

ASCE 41-17 Model Building Type:

- a. Longitudinal Direction: RM1 (reinforced masonry wall with flexible diaphragm)
- b. Transverse Direction: RM1 (reinforced masonry wall with flexible diaphragm)

Site-specific Ground Motion Study? No

Seismic Design Acceleration Parameters of Interest:

- a. For BSE-1E $S_{XS}=0.898g$ and $S_{X1}=0.517g$
- b. For BSE-2E $S_{XS}=1.544g$ and $S_{X1}=0.949g$

Estimated Fundamental Period (seconds)

- a. Longitudinal: Unknown
- b. Transverse: Unknown

- 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.

BRIEF DESCRIPTION OF ANTICIPATED FAILURE MECHANISM

COMMENTS AND RECOMMENDATIONS

A FEMA Level 2 evaluation was performed instead of an ASCE Tier 1 evaluation since the building has a square footage less than one thousand square feet.

Appendices

- A. FEMA 154 Rapid Visual Screening



Address: 445 Charles E Young Dr E
Los Angeles, CA Zip: 90095
 Other Identifiers: 4518.1
 Building Name: Vending Machine Building - ATM
 Use: Utility
 Latitude: 34.0707483 Longitude: -118.4401261
 Ss: 2.045 s: 0.731
 Screener(s): _____ Date/Time: 4/22/21

No. Stories: Above Grade: 1 Below Grade: _____ Year Built: 1998 EST
 Total Floor Area (sq. ft.): 323 Code Year: UBC-1988
 Additions: None Yes, Year(s) Built: _____

Occupancy: Assembly Commercial Emer. Services Historic Shelter
 Industrial Office School Government
 Utility Warehouse Residential, # Units: _____

Soil Type: A B C D E F DNK
 Hard Avg Dense Stiff Soft Poor If DNK, assume Type D.
 Rock Rock Soil Soil Soil Soil

Geologic Hazards: Liquefaction: Yes No/DNK Landslide: Yes No/DNK Surf. Rupt.: Yes No/DNK

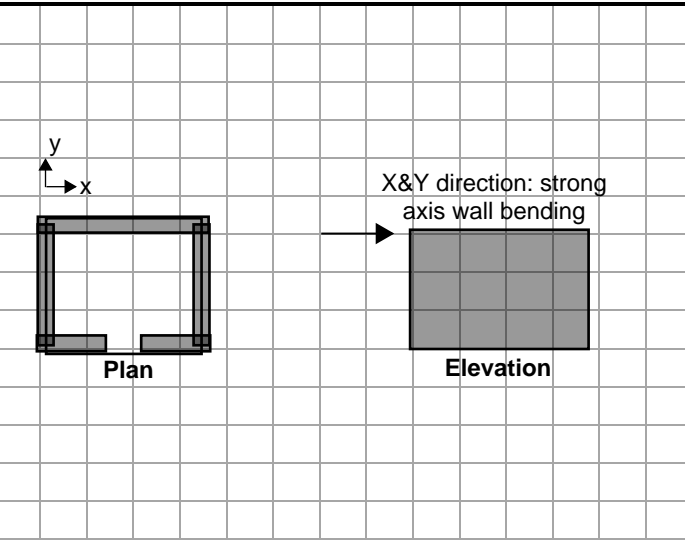
Adjacency: Pounding Falling Hazards from Taller Adjacent Building

Irregularities: Vertical (type/severity) None
 Plan (type) None

Exterior Falling Hazards: Unbraced Chimneys Heavy Cladding or Heavy Veneer
 Parapets Appendages
 Other: _____

COMMENTS:
 Building has reinforced masonry walls in both directions, has redundancy.

Additional sketches or comments on separate page



SKETCH

BASIC SCORE, MODIFIERS, AND FINAL LEVEL 1 SCORE, S_{L1}

FEMA BUILDING TYPE	Do Not Know	W1	W1A	W2	S1 (MRF)	S2 (BR)	S3 (LM)	S4 (RC SW)	S5 (URM INF)	C1 (MRF)	C2 (SW)	C3 (URM INF)	PC1 (TU)	PC2	RM1 (FD)	RM2 (RD)	URM	MH
Basic Score		2.1	1.9	1.8	1.5	1.4	1.6	1.4	1.2	1.0	1.2	0.9	1.1	1.0	1.1	1.1	0.9	1.1
Severe Vertical Irregularity, V_{L1}		-0.9	-0.9	-0.9	-0.8	-0.7	-0.8	-0.7	-0.7	-0.7	-0.8	-0.6	-0.7	-0.7	-0.7	-0.7	-0.6	NA
Moderate Vertical Irregularity, V_{L1}		-0.6	-0.5	-0.5	-0.4	-0.4	-0.5	-0.4	-0.3	-0.4	-0.4	-0.3	-0.4	-0.4	-0.4	-0.4	-0.3	NA
Plan Irregularity, P_{L1}		-0.7	-0.7	-0.6	-0.5	-0.5	-0.6	-0.4	-0.4	-0.4	-0.5	-0.3	-0.5	-0.4	-0.4	-0.4	-0.3	NA
Pre-Code		-0.3	-0.3	-0.3	-0.3	-0.2	-0.3	-0.2	-0.1	-0.1	-0.2	0.0	-0.2	-0.1	-0.2	-0.2	0.0	0.0
Post-Benchmark		1.9	1.9	2.0	1.0	1.1	1.1	1.5	NA	1.4	1.7	NA	1.5	1.7	1.6	1.6	NA	0.5
Soil Type A or B		0.5	0.5	0.4	0.3	0.3	0.4	0.3	0.2	0.2	0.3	0.1	0.3	0.2	0.3	0.3	0.1	0.1
Soil Type E (1-3 stories)		0.0	-0.2	-0.4	-0.3	-0.2	-0.2	-0.2	-0.1	-0.1	-0.2	0.0	-0.2	-0.1	-0.2	-0.2	0.0	-0.1
Soil Type E (> 3 stories)		-0.4	-0.4	-0.4	-0.3	-0.3	NA	-0.3	-0.1	-0.1	-0.3	-0.1	NA	-0.1	-0.2	-0.2	0.0	NA
Minimum Score, S_{MIN}		0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	1.0

FINAL LEVEL 1 SCORE, $S_{L1} \geq S_{MIN}$:

1.1

EXTENT OF REVIEW

Exterior: Partial All Sides Aerial
 Interior: None Visible Entered
 Drawings Reviewed: Yes No
 Soil Type Source: _____
 Geologic Hazards Source: CGS Earthquake Hazards App.
 Contact Person: _____

OTHER HAZARDS

Are There Hazards That Trigger A Detailed Structural Evaluation?
 Pounding potential (unless $S_{L2} >$ cut-off, if known)
 Falling hazards from taller adjacent building
 Geologic hazards or Soil Type F
 Significant damage/deterioration to the structural system

ACTION REQUIRED

Detailed Structural Evaluation Required?
 Yes, unknown FEMA building type or other building
 Yes, score less than cut-off
 Yes, other hazards present
 No
 Detailed Nonstructural Evaluation Recommended? (check one)
 Yes, nonstructural hazards identified that should be evaluated
 No, nonstructural hazards exist that may require mitigation, but a detailed evaluation is not necessary
 No, no nonstructural hazards identified DNK

LEVEL 2 SCREENING PERFORMED?

Yes, Final Level 2 Score, S_{L2} 1.3 No
 Nonstructural hazards? Yes No

Where information cannot be verified, screener shall note the following: EST = Estimated or unreliable data OR DNK = Do Not Know

Rapid Visual Screening of Buildings for Potential Seismic Hazards

FEMA P-154 Data Collection Form

Optional Level 2 data collection to be performed by a civil or structural engineering professional, architect, or graduate student with background in seismic evaluation or design of buildings.

Level 2 (Optional)
VERY HIGH Seismicity

Bldg Name: Vending Machine Building - ATM	Final Level 1 Score: $S_{L1} = 1.1$	<i>(do not consider S_{MIN})</i>	
Screener:	Level 1 Irregularity Modifiers: Vertical Irregularity, $V_{L1} = 0$	Plan Irregularity, $P_{L1} = 0$	
Date/Time:	ADJUSTED BASELINE SCORE: $S' = (S_{L1} - V_{L1} - P_{L1}) = 1.1$		

STRUCTURAL MODIFIERS TO ADD TO ADJUSTED BASELINE SCORE

Topic	Statement (If statement is true, circle the "Yes" modifier; otherwise cross out the modifier.)	Yes	Subtotals	
Vertical Irregularity, V_{L2}	Sloping Site	W1 building: There is at least a full story grade change from one side of the building to the other.	-0.9	
		Non-W1 building: There is at least a full story grade change from one side of the building to the other.	-0.2	
	Weak and/or Soft Story (circle one maximum)	W1 building cripple wall: An unbraced cripple wall is visible in the crawl space.	-0.5	
		W1 house over garage: Underneath an occupied story, there is a garage opening without a steel moment frame, and there is less than 8' of wall on the same line (for multiple occupied floors above, use 16' of wall minimum).	-0.9	
		W1A building open front: There are openings at the ground story (such as for parking) over at least 50% of the length of the building.	-0.9	
		Non-W1 building: Length of lateral system at any story is less than 50% of that at story above or height of any story is more than 2.0 times the height of the story above.	-0.7	
		Non-W1 building: Length of lateral system at any story is between 50% and 75% of that at story above or height of any story is between 1.3 and 2.0 times the height of the story above.	-0.4	
	Setback	Vertical elements of the lateral system at an upper story are outboard of those at the story below causing the diaphragm to cantilever at the offset.	-0.7	
		Vertical elements of the lateral system at upper stories are inboard of those at lower stories.	-0.4	
		There is an in-plane offset of the lateral elements that is greater than the length of the elements.	-0.2	
	Short Column/Pier	C1,C2,C3,PC1,PC2,RM1,RM2: At least 20% of columns (or piers) along a column line in the lateral system have height/depth ratios less than 50% of the nominal height/depth ratio at that level.	-0.4	
		C1,C2,C3,PC1,PC2,RM1,RM2: The column depth (or pier width) is less than one half of the depth of the spandrel, or there are infill walls or adjacent floors that shorten the column.	-0.4	
Split Level	There is a split level at one of the floor levels or at the roof.	-0.4		
Other Irregularity	There is another observable severe vertical irregularity that obviously affects the building's seismic performance.	-0.7	$V_{L2} = 0$ (Cap at -0.9)	
	There is another observable moderate vertical irregularity that may affect the building's seismic performance.	-0.4		
Plan Irregularity, P_{L2}	Torsional irregularity: Lateral system does not appear relatively well distributed in plan in either or both directions. (Do not include the W1A open front irregularity listed above.)	-0.5	$P_{L2} = 0$ (Cap at -0.7)	
	Non-parallel system: There are one or more major vertical elements of the lateral system that are not orthogonal to each other.	-0.2		
	Reentrant corner: Both projections from an interior corner exceed 25% of the overall plan dimension in that direction.	-0.2		
	Diaphragm opening: There is an opening in the diaphragm with a width over 50% of the total diaphragm width at that level.	-0.2		
	C1, C2 building out-of-plane offset: The exterior beams do not align with the columns in plan.	-0.2		
Other irregularity: There is another observable plan irregularity that obviously affects the building's seismic performance.	-0.5			
Redundancy	The building has at least two bays of lateral elements on each side of the building in each direction.	+0.2	$M = +0.2$	
Pounding	Building is separated from an adjacent structure by less than 1.5% of the height of the shorter of the building and adjacent structure and:	The floors do not align vertically within 2 feet.		-0.7
		One building is 2 or more stories taller than the other.		-0.7
		The building is at the end of the block.		-0.4
S2 Building	"K" bracing geometry is visible.	-0.7		
C1 Building	Flat plate serves as the beam in the moment frame.	-0.3		
PC1/RM1 Bldg	There are roof-to-wall ties that are visible or known from drawings that do not rely on cross-grain bending. (Do not combine with post-benchmark or retrofit modifier.)	+0.2		
PC1/RM1 Bldg	The building has closely spaced, full height interior walls (rather than an interior space with few walls such as in a warehouse).	+0.2		
URM	Gable walls are present.	-0.3		
MH	There is a supplemental seismic bracing system provided between the carriage and the ground.	+0.5		
Retrofit	Comprehensive seismic retrofit is visible or known from drawings.	+1.2		

FINAL LEVEL 2 SCORE, $S_{L2} = (S' + V_{L2} + P_{L2} + M) \geq S_{MIN}$: $1.1 + 0.2 = 1.3$ (Transfer to Level 1 form)

There is observable damage or deterioration or another condition that negatively affects the building's seismic performance: Yes No
If yes, describe the condition in the comment box below and indicate on the Level 1 form that detailed evaluation is required independent of the building's score.

OBSERVABLE NONSTRUCTURAL HAZARDS

Location	Statement (Check "Yes" or "No")	Yes	No	Comment
Exterior	There is an unbraced unreinforced masonry parapet or unbraced unreinforced masonry chimney.			
	There is heavy cladding or heavy veneer.			
	There is a heavy canopy over exit doors or pedestrian walkways that appears inadequately supported.			
	There is an unreinforced masonry appendage over exit doors or pedestrian walkways.			
	There is a sign posted on the building that indicates hazardous materials are present.			
	There is a taller adjacent building with an unanchored URM wall or unbraced URM parapet or chimney.			
	Other observed exterior nonstructural falling hazard:			
Interior	There are hollow clay tile or brick partitions at any stair or exit corridor.			
	Other observed interior nonstructural falling hazard:			

Estimated Nonstructural Seismic Performance (Check appropriate box and transfer to Level 1 form conclusions)

Potential nonstructural hazards with significant threat to occupant life safety → Detailed Nonstructural Evaluation recommended

Nonstructural hazards identified with significant threat to occupant life safety → But no Detailed Nonstructural Evaluation required

Low or no nonstructural hazard threat to occupant life safety → No Detailed Nonstructural Evaluation required

Comments: