



BUILDING REPORT REQUIREMENTS
ASCE 41-17 TIER 1 SEISMIC EVALUATIONS

BUILDING REPORT

- 1) UC Campus: Los Angeles
2) Building Name: Slichter Hall
3) Building CAAN ID: 4227
4) Auxiliary Building ID:
5) Date of Evaluation: 10/26/2020
6) Evaluation by: Englekirk, TAS / NAT
7) Seismic Performance Rating and Basis of Rating: V, ASCE 41-17 Tier 1



8) Plan Image or Aerial Photo



9) Exterior Elevation Photo

- 10) Site Location
(a) Latitude Decimal Coordinates: 34.068933
(b) Longitude Decimal Coordinates: -118.440779
11) ASCE 41-17 Model Building Type and Description
(a) Longitudinal Direction: C1: Reinforced concrete moment-resisting frame
(b) Transverse Direction: C2 and C2a: Reinforced concrete shear walls
12) Number of Stories
(a) Above grade: 6
(b) Below grade: 1
13) Original Building Design Code & Year: UBC-1961
14) Retrofit Building Design Code & Year (if applicable): CBC-1995
15) Cost Range to Retrofit (if applicable): (Low, Medium, High or Very High): Medium



Comments: 1998 strengthening added reinforced concrete moment frames along the longitudinal (North-South) direction as well as reinforced concrete buttress walls along the transverse (East-West) direction. Tier 2 evaluation would be useful to confirm rating because a Tier 1 evaluation cannot properly account for the effect of the seismic upgrade work.



BACKGROUND INFORMATION

Site Information

16) Site Class (A – F) and Basis of Assessment

- (a) Site Class: **D**
- (b) Site Class Basis: **Unknown (Default)**
- (c) Site Class Company: **None**
- (d) Site Class Report Date: **None**
- (e) Site Class Ref Page No.: **None**

17) Geologic Hazards

- (a) Fault Rupture (Yes, No or Unknown) and Basis of Assessment: **No, CGS Maps**
- (b) Liquefaction (Yes, No or Unknown) and Basis of Assessment: **No, CGS Maps**
- (c) Landslide (Yes, No or Unknown) and Basis of Assessment: **No, CGS Maps**

18) Site-specific Ground Motion Study? (Yes or No) **None**

Seismic design acceleration parameters of interest:	
For BSE-1N	1.634 and 0.828
For BSE-1E	0.897 and 0.517

19) Estimated Fundamental Period (seconds)

- (a) Longitudinal: **0.87**
- (b) Transverse: **0.50**

20) Falling Hazards Assessment Summary: **There is a potential for spalling of the brick veneer.**

21) Structural Non-Compliances/Findings Significantly Affecting Rating Determination Summary
Significant Structural Deficiencies, Potentially Affecting *Seismic Performance Rating* Designation:

- (a) Lateral System Stress Check (wall shear, column shear or flexure, or brace axial as applicable):
Yes, wall shear stress deficiency noted according to Tier 1 checklist. Tier 2 analysis might show these element stresses to be conforming.
- (b) Load Path: **No deficiency noted**
- (c) Adjacent Buildings: **Yes, deficiency noted. The 4" gap provided between the structure and the Geology wing and Chemistry wing exceeds the limit of 13.3" per the Tier 1 checklist.**
- (d) Weak Story: **No deficiency noted**
- (e) Soft Story: **No deficiency noted**
- (f) Geometry (vertical irregularities): **No deficiency noted**
- (g) Torsion: **No deficiency noted**
- (h) Mass – Vertical Irregularity: **No deficiency noted**
- (i) Cripple Walls: **Not Applicable**
- (j) Wood Sills (bolting): **Not Applicable**
- (k) Diaphragm Continuity: **No deficiency noted**
- (l) Openings at Shear Walls (concrete or masonry): **Yes, deficiency noted**



- (m) Liquefaction: **No**
- (n) Slope Failure: **No**
- (o) Surface Fault Rupture: **No**
- (p) Masonry or Concrete Wall Anchorage at Flexible Diaphragm: **Not Applicable**
- (q) URM wall height to thickness ratio: **Not Applicable**
- (r) URM Parapets or Cornices: **Not Applicable**
- (s) URM Chimney: **Not Applicable**
- (t) Heavy Partitions Braced by Ceilings: **No deficiency noted**
- (u) Appendages: **No deficiency noted**

22) Brief Description of Anticipated Failure Mechanism

Shear failure of lightly confined concrete gravity columns due to deformation compatibility drift. Shear cracking and flexural compression failure of concrete shear walls.

23) Seismic Retrofit Concept Sketches/Description (only required for buildings rated V or worse)

Increase confinement of concrete columns, added shear walls or energy dissipation to reduce drift.

Building Report Appendices

A) ASCE 41-17 Tier 1 Checklists (Structural only)

B) Quick Check Calculations