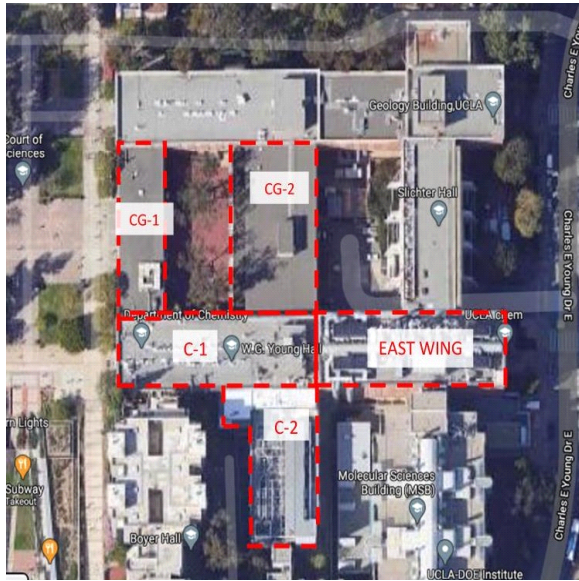




BUILDING REPORT REQUIREMENTS
ASCE 41-17 TIER 1 SEISMIC EVALUATIONS

BUILDING REPORT

- 1) UC Campus: Los Angeles
2) Building Name: Young Hall, Building CG-2
3) Building CAAN ID: 4228B
4) Auxiliary Building ID: 4228B.1
5) Date of Evaluation: 12/4/2020
6) Evaluation by: Englekirk, TAS / NAT
7) Seismic Performance Rating and Basis of Rating: VI, ASCE 41-17 Tier 1



1) Plan Image or Aerial Photo



9) Exterior Elevation Photo

10) Site Location

- (a) Latitude Decimal Coordinates: 34.0688448
(b) Longitude Decimal Coordinates: -118.441199

11) ASCE 41-17 Model Building Type and Description

- (a) Longitudinal Direction: C2 and C2a: Reinforced concrete shear walls
(b) Transverse Direction: C2 and C2a: Reinforced concrete shear walls

12) Number of Stories

- (a) Above grade: 4
(b) Below grade: 1

13) Original Building Design Code & Year: UBC-1949

14) Retrofit Building Design Code & Year (if applicable):

15) Cost Range to Retrofit (if applicable): (Low, Medium, High or Very High): Medium



Comments: Young Hall consists of five separate buildings (see the plan view showing buildings CG-1, CG-1, C-1, C-2, and the East Wing). Separate reports have been prepared for each building.

The lateral force resisting system of Building CG-2 in each orthogonal direction consists of 10" or 12" thick reinforced concrete shear walls; however, there are a limited number of shear walls along the longitudinal North-South direction. Refer to the calculations for the typical floor plan view.



Structural deficiencies per the Tier 1 evaluation include overstressed shear walls especially along the North-South direction as well as insufficient confinement of secondary components for deflection compatibility.

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) **No**

Seismic design acceleration parameters of interest:	
For BSE-1N	1.633 and 0.828
For BSE-1E	0.897 and 0.517

19) Estimated Fundamental Period (seconds)

- (a) Longitudinal: **0.365**
- (b) Transverse: **0.365**

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
- (b) Load Path: **No deficiency noted**
- (c) Adjacent Buildings: **Yes, deficiency noted. The 5" gap provided between Building G-1 to the north as well as Building C-1 to the south is less than the required separation of 8.64" 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): **No 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 cracking and flexural compression failure of shear walls. Shear failure of lightly confined concrete gravity columns due to deformation compatibility drift.

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

Increase confinement of concrete columns via FRP overlay, added shear wall strength using thickened cross-section or FRP overlay, or energy dissipation to reduce drift.

Building Report Appendices

- A) ASCE 41-17 Tier 1 Checklists (Structural only)
- B) Quick Check Calculations