



BUILDING REPORT REQUIREMENTS
ASCE 41-17 TIER 1 SEISMIC EVALUATIONS

BUILDING REPORT

- 1) UC Campus: Los Angeles
2) Building Name: Math Sci Bldg - Addition South Wing
3) Building CAAN ID:
4) Auxiliary Building ID: 4359.2
5) Date of Evaluation: 8/27/2020
6) Evaluation by: Englekirk, TAS
7) Seismic Performance Rating and Basis of Rating: V, ASCE 41-17 Tier 1

MATH SCIENCE BUILDINGS KEY PLAN



8) Plan Image or Aerial Photo



9) Exterior Elevation Photo

- 10) Site Location
(a) Latitude Decimal Coordinates: 34.0695771
(b) Longitude Decimal Coordinates: -118.4427578
11) ASCE 41-17 Model Building Type and Description
(a) Longitudinal Direction: S1 and S1a: Steel moment-resisting frame
(b) Transverse Direction: S1 and S1a: Steel moment-resisting frame
12) Number of Stories
(a) Above grade: 4
(b) Below grade: 0
13) Original Building Design Code & Year: UBC-1964
14) Retrofit Building Design Code & Year (if applicable):
15) Cost Range to Retrofit (if applicable): (Low, Medium, High or Very High): Medium



Comments: Deficient moment frame connections. The building is supported by the Boelter Hall Annex.



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	1.631 and 0.827
For BSE-1E	0.897 and 0.517

19) Estimated Fundamental Period (seconds)

- (a) Longitudinal: **0.99**
- (b) Transverse: **0.99**

20) Falling Hazards Assessment Summary: **None noted.**

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, frame beam/column connection deficiency noted
- (b) Load Path: **No deficiency noted**
- (c) Adjacent Buildings: **Yes, deficiency noted. The gap provided between the main structure of Addition and South Wing is 6" while the gap required per Tier 1 checklist is around 12".**
- (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): **Not Applicable**
- (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

Moment frame connection failure due to deficient detailing. Potential uplift or sliding off at the base.

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

Strengthen the moment frame connections. Provide more anchors at the base of the frames to the existing concrete structure below.

Building Report Appendices

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

- B) Quick Check Calculations