Krieger CTR - C

DATE: 10/27/2020
ASCE 41-17 Tier 1 Seismic Evaluation
Minimum Building Report Information

BUILDING DATA
Campus: UCLA
Building Name: Krieger CTR-C
CAAN ID: 4399
Auxiliary Building ID: 4399C
Address: 101 Bellagio Drive, Los Angeles 90024
Site location coordinates: Latitude 34.07556671 Longitudinal -118.4551378

ASCE 41-17 Model Building Type:
   a. Longitudinal Direction: S1a – Steel Moment Resisting Frame with Flexible Diaphragm
   b. Transverse Direction: S1a – Steel Moment Resisting Frame with Flexible Diaphragm

Site-specific Ground Motion Study? No
Seismic Design Acceleration Parameters of Interest (SXS and SX1):
   a. For BSE-1E   0.895g and 0.515g
   b. For BSE-2E   1.836g and 0.94g

Estimated Fundamental Period (seconds)
   a. Longitudinal: 0.1s
   b. Transverse: 0.1s
   c.
Gross Square Footage: 3,884
Number of stories above grade: 1
Number of basement stories below grade: 0

Year Original Building was Constructed: 1987
Original Building Design Code & Year: UBC-1985
Retrofit Building Design Code & Code (if applicable): N/A, N/A

SITE INFORMATION
Site Class: D (Measured) Basis: Geotechnologies, Inc., 10/21/2002, Pg. 15
Geologic Hazards:
Fault Rupture: No
Liquefaction: No
Landslide: No

BUILDING COMPLEX KEY PLAN
The Krieger CTR complex is composed of three buildings. Shown below is a key plan of the complex along with the distribution of Building ID’s at the complex.

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

BRIEF DESCRIPTION OF ANTICIPATED FAILURE MECHANISM

Building light gage modular construction. Drawings do not detail foundations or attachment, so rating has assumed no connection to the foundation which is a common deficiency for buildings of this type. Superstructure relies on moment frame action of light gage tubes and C-shape joists, which does not pass Tier 1 quick checks for moment frame drift. Building would rate V regardless of connection to foundation.
COMMENTS AND RECOMMENDATIONS
Building is unlikely to rate higher than V without retrofit based on light gage construction, so Tier 2 evaluation is not recommended. Connection to foundation should be investigated with more detailed field observations. Note that Tier 1 quick checks are based on Krieger CTR-B building, as buildings are highly similar in construction.

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.

Appendices

A. ASCE 41-17 Tier 1 Checklists
B. Quick Check Calculations