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Krieger CTR - D

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

BUILDING DATA

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

	
Aerial Photo	Exterior Elevation

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 (S_{XS} and S_{X1}):

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: 3,356
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 Basis: Referenced Geotechnical Report
Liquefaction: No Basis: Referenced Geotechnical Report
Landslide: No Basis: Referenced Geotechnical Report

BUILDING COMPLEX KEY PLAN

The Kriger 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.

Figure 1 Key Plan of the Krieger CTR 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