

UC Seismic Evaluation – Stanford Street Medical Records Building

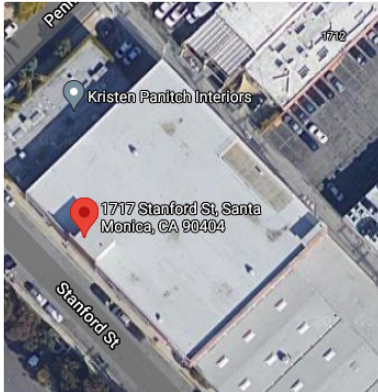
Date: 05/03/2021
UC Campus: UCLA
Building Name: Stanford Street Medical Records Building
Building Address: 1717 Stanford St, Santa Monica, CA 90404
CAAN ID: 4341
Auxiliary Building ID¹: N/A



Summary of information provided by Evaluator:
 Nabih Youssef Associates Structural Engineers

UCOP Seismic Performance Level² (or “Rating”) based on ASCE 41-17 Tier 1 evaluation findings: V

Plan Image or Aerial Photo



Exterior Elevation Photo



Site location coordinates (decimal):

Latitude: 34.0324365
 Longitude: -118.4651567

Is this a “Partial” Building (i.e., a single structure in a complex building? (Y or N): N

ASCE 41-17 Model Building Type³:

Longitudinal Direction: C2 – Concrete Shear Walls with Stiff Diaphragms
 RM2 – Reinforced Masonry Bearing Walls with Stiff Diaphragms
 Transverse Direction: C2 – Concrete Shear Walls with Stiff Diaphragms
 RM2 – Reinforced Masonry Bearing Walls with Stiff Diaphragms

¹ Applicable only for individual buildings that are structurally separate units within a building complex. Each auxiliary building shall be designated with the main building CAAN ID with a decimal number suffix (i.e. main building CAAN ID 5534; auxiliary building CAAN ID 5534.1). Auxiliary building ID is null for a single building or the main building in a building complex.

² The designated Seismic Performance Level shall be a Roman numeral associated with the most applicable performance description from Table A.1 in Appendix A of the UC Seismic Safety Policy.

³ If a building has multiple building types in one story, the model building type should be designated based on engineering judgement as the lateral system that would have the most predominantly negative effect on the seismic behavior of the building in that respective direction.

Number of stories:

Above grade: 2

Below grade: 0

Original Building Design Code and Year: Uniform Building Code 1964 Edition

Retrofit Building Design Code and Year: Uniform Building Code 1994 Edition

Cost Range to Retrofit (if applicable)⁴: Low

“Low” cost-range corresponds to a complete retrofit cost less than \$50 per square foot (sf), “Medium” cost-range corresponds to a complete retrofit cost greater than \$50 per sf and less than \$200 per sf, “High” cost-range corresponds to a complete retrofit cost greater than \$200 per sf and less than \$400 per sf, and “Very High” cost-range corresponds to a complete retrofit cost greater than \$400 per sf.

Building information used in this evaluation:

Structural drawings by David Taubman Consulting Civil Engineers “Industrial Bldg for Plastiglide Corp.” dated 12/16/1966

Structural drawings by Sato & Boppana Consulting Engineers “Stanford Medical Records Building Seismic Repair”, dated 09/10/1998

Scope for completing this form:

Reviewed structural drawings for original construction and seismic retrofit, walked through building to visually observe general condition and configuration of building, and performed ASCE 41-17 Tier 1 evaluation.

Brief description of structure:

The Stanford Street Medical Records Building is a 2-story concrete structure with perimeter masonry walls of approximately 46,600 square feet and was constructed in 1967. The building has undergone a seismic retrofit in 1998 that added new shotcrete shear walls.

The building is rectangular in shape with overall dimensions of 170 feet by 137 feet and contains a parking ramp along the west perimeter wall from the ground floor to the second floor, and along the north perimeter wall from the second floor to the roof. The building is separated from the buildings to the east and west with a gap of approximately 3 to 3-1/2 inches in width.

Foundation System: The foundation system consists of concrete piles and pile caps connected by concrete tie beams. There are concrete grade beams that support the perimeter masonry walls and shotcrete walls that span between pile caps. A 5 inch thick concrete slab on grade forms the ground level of the building.

Structural System for Vertical (gravity) loads: The second floor and roof consist of concrete slabs spanning to concrete girders. The concrete girders at both the second floor and roof are supported by concrete columns and masonry walls that are continuous to the foundation.

Structural System for Lateral (seismic/wind) loads: The concrete slabs at the second floor and roof act as structural diaphragms that transfer seismic forces to the shear walls. The shear walls include original masonry walls located around the perimeter of the building and shotcrete walls, added as part of the 1998 retrofit, located at the perimeter masonry walls, and along the east side of the lower level parking ramp.

BACKGROUND INFORMATION

Site Information:

Site Class (A-F): D; Default

Geologic Hazards (Y or N):

- Fault Rupture: N; EZRIM Beverly Hills
- Liquefaction: N; EZRIM Beverly Hills
- Landslide: N; EZRIM Beverly Hills

Site-specific Ground Motion Study? N

Site-modified Spectral Response (0.2s), Hazard Level BSE-2E, S_{XS} : 1.791

Site-modified Spectral Response (1.0s), Hazard Level BSE-2E, S_{X1} : 0.922

Estimated Fundamental Period (seconds):

- Longitudinal Direction: 0.27s
- Transverse Direction: 0.27s

Falling Hazards Assessment Summary: None observed.

Summary of 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)
- 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 Flexible 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: Concrete shear walls in shear, diaphragm continuity at the upper level parking ramp, and uplift at pile caps.

Comments and Additional Deficiencies:

LSP analysis and Tier 1 quick checks were performed. The results indicate that the shotcrete shear walls do not meet the shear limits in the tier 1 quick check. The parking ramp along the north side of the building, between the second floor and roof, creates a discontinuity in the roof diaphragm adjacent to the northern shear wall. The pile caps do not contain top reinforcement to resist uplift forces.

Seismic Retrofit Concept Sketches/Description (only if above-listed rating is V or greater): It is recommended that a Tier 2 evaluation be performed to further investigate the shear stresses in the shotcrete shear walls, the diaphragm discontinuity, and the overturning stresses in the pile caps to determine if a lower rating can be justified.

Appendices:

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