

March 21, 2015

Ms. Joanne Williams UCLA Real Estate 10920 Wilshire Boulevard, Suite 810 Los Angeles, California 90024

Subject: 5220 Pacific Concourse, Los Angeles, CA

Seismic Screening Report

JLA Job #15110-02

Dear Ms. Williams,

Per your request, John Labib + Associates Structural Engineers (JLA) performed a seismic screening of the existing buildings located at Pacific Concourse Drive in Los Angeles, California. The scope included an evaluation of the existing structural systems of the building.

Building Seismic Rating Summary

Seismic rating: IV.

Building Descriptions

Structural drawings were available for review and are the basis of this report. The drawings were prepared by Ajit Randhava & Associates and are dated May 25, 1988.

The buildings are three story building that are roughly hexagonal in plan. The building foot print is approximately $125' \times 270'$ with a height of 45'. The perimeter walls consist of tilt-up concrete walls with windows.





Figure 1 – Elevation of 5220 Pacific Concourse Drive, Los Angeles, CA.

Building Structure

Gravity Systems

Roof - The roof is wood panelized roof system with 1/2" plywood sheathing. The sub-purlins are $2\times 6 \otimes 16$ " o.c., the purlins are either $4\times$ sawn lumber of 3 1/8" glulams, and the girders are 5 1/8" glulams.

Floors - The first and second floors consist 2 1/2" lightweight concrete fill over 3" metal deck (5 1/2" total thickness) supported by steel wide flange beams, girders and wide flange or tube steel columns.

Foundation - The first floor at grade level consists of a 5" thick concrete slab on grade. The foundations below the first floor are reinforced concrete footings at the columns and tilt-up concrete walls.

Walls - The exterior walls are concrete tilt-up walls that are used as bearing walls and shear walls. The typical thickness of a wall is 10". The walls consist of segments continuous to the foundation and segments with window openings.



Lateral Load Resisting Systems

The horizontal lateral load resisting system consists of a wood diaphragm at the roof and concrete over metal deck diaphragms at the floors. The horizontal lateral systems transfer seismic inertial loads to the vertical lateral load resisting systems, which consists of tilt-up concrete shear walls.

Seismic Evaluation Criteria

The structure was generally evaluated based on the University of California Seismic Safety Policy dated September 15, 2014. The seismic policy provides seven (7) seismic performance ratings: I through VII. Please see attached Appendix A for info on Seismic Safety Policy and Rating.

Seismic Evaluation

General

- I. The building were evaluated based on the requirements of CBC chapter 34 for Occupancy Category I-III performance criteria (i.e. seismic rating IV criteria). These performance criteria are S-3 at BSE-R and S-5 at BSE-C. This corresponds to an evaluation per ASCE-41 with a Life Safety performance objective at BSE-IE and a Collapse Prevention performance object at BSE-2E.
- 2. In general, the structure has a complete load path to transfer seismic forces to the foundations.
- 3. The roof and floor diaphragms are continuous without major openings.
- 4. The evaluation was based on the existing structural drawings, including material properties and configuration contained in them.
- 5. Based on our evaluation of the lateral-load resisting system, the concrete tilt-up walls meet the requirements for a seismic rating of IV for the given size, configuration, and age of the buildings.
- 6. Based on our evaluation, the out-of-plane anchors at the wood-framed roof, which positively connect the Flexible wood-framed roof to the Rigid tilt-up concrete walls, meet the requirements for a seismic rating of IV for the given size, configuration, and age of the buildings.



Limitations

This limited seismic screening was based on the general review noted above. Services were performed by JLA in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions. The structural observations and recommendations represent an opinion and are not intended to preempt the responsibility of the original design consultants in any way. No other warranty, expressed or implied, is made.

If you have any questions, please do not hesitate to call us.

Yours truly,

John Labib & Associates

John Labib, S.E. Principal



APPENDIX A

Earthquake Performance Levels For Existing Buildings

This series of definitions was developed by the California State University, the University of California, the California Department of General Services, and the Administrative Office of the Courts from 1995 through 2009.

Table A.1. Determination of Expected Seismic Performance Based on Structural Compliance with the 2010 Edition, California Code of Regulations, Part 2, California Building Code (CBC)

Definitions based upon California Building Code (CBC) requirements for seismic evaluation of buildings using Occupancy Categories of CBC	Rating Level ¹	
Table 1604A.5, depending on which applies, and performance criteria in CBC Table 3417.5 ²	No Peer Review ⁵	Peer Review ⁵
A building evaluated as meeting or exceeding the requirements of CBC Chapter 34 for Occupancy Category IV performance criteria with BSE-1 and BSE-2 hazard levels replacing BSE-R and BSE-C as given in Chapter 34.	I	_
A building evaluated as meeting or exceeding the requirements of CBC Chapter 34 for Occupancy Category IV performance criteria.	II	II
A building evaluated as meeting or exceeding the requirements of CBC Chapter 34 for Occupancy Category I-III performance criteria with BSE-1 and BSE-2 hazard levels replacing BSE-R and BSE-C respectively as given in Chapter 34; alternatively, a building meeting CBC requirements for a new building.	III	II ⁵
A building evaluated as meeting or exceeding the requirements of CBC Chapter 34 for Occupancy Category I-III performance criteria.	IV	III°
A building evaluated as meeting or exceeding the requirements of CBC Chapter 34 for Occupancy Category I-III performance criteria only if the BSE-R and BSE-C values are reduced to 2/3 of those specified for the site.	V	IV°
A building evaluated as not meeting the minimum requirements for Level V designation and not requiring a Level VII designation.	VI	VI
A building evaluated as posing an immediate life-safety hazard to its occupants under gravity loads. The building should be evacuated and posted as dangerous until remedial actions are taken to assure the building can support CBC prescribed dead and live loads.	VII	VII

For Notes, see page 14

Table A.2. Indications of Implied Risk to Life and Implied Seismic Damageability

	Historic Risk Ratings of ^{6,7}			
Rating Level 1,5	DSA/SSC ⁷	UC ⁶	Implied Risk to Life 3	Implied Seismic Damageability ⁴
I	1		Negligible	0% to 10%
II	11		Insignificant	0% to 15%
III	111	Good	Slight	5% to 20%
IV	IV	Fair	Small	10% to 30%
V	V	Poor	Serious	20% to 50%
VI	VI	Very Poor	Severe	40% to 100%
VII	VII	Very Poor	Dangerous	100%

Notes:

- 1. Earthquake damageability levels are indicated by Roman numerals I through VII. Assignments are to be made following a professional assessment of the building's expected seismic performance as measured by the referenced technical standard and earthquake ground motions. Equivalent Arabic numerals, fractional values, or plus or minus values are not to be used. These assignments were prepared by a task force of state agency technical personnel, including the California State University, the University of California, the California Department of General Services, the Division of the State Architect, and the Administrative Office of the Courts. The ratings apply to structural and non-structural elements of the building as contained in Chapter 34, CBC requirements. These definitions replace those previously used by these agencies.
- 2. Chapter 34 of the California Building Code, current edition, regulates existing buildings. It uses and references the American Society of Civil Engineers Standard Seismic Rehabilitation of Existing Buildings, ASCE-41. All earthquake ground motion criteria are specific to the site of the evaluated building. The CBC definitions for earthquake ground motions to be assessed are paraphrased below for convenience:

BSE-2, the 2,475-year return period earthquake ground motion, or 150% of the Maximum Considered Earthquake ground motion for the site.

BSE-C, the 975-year return period earthquake ground motion.

BSE-1, two-thirds of the BSE-2, nominally, the 475-year return period earthquake ground motion.

BSE-R, the 225-year return period earthquake ground motion.

Occupancy Category is defined in the CBC Table 1604A.5. The occupancy category sets the level of required seismic building performance under the CBC. Occupancy Category IV includes acute care hospitals, fire, rescue and police stations and emergency vehicle garages, designated emergency shelters, emergency operations centers, and structures containing highly toxic materials where the quantities exceed the maximum allowed quantities, among others. Occupancy categories I-III includes all other building uses that include most state owned buildings.

- 3. Implied Risk to Life is a subjective measure of the threat of a life threatening injury or death that is expected to occur in an average building in each rank following the indicated technical requirements. The terms negligible through dangerous are not specifically defined, but are linguistic indications of the relative degree of hazard posed to an individual occupant.
- 4. Implied Damageability is the level of damage expected to the average building in each rank following the indicated technical requirements when a BSE-1 level earthquake occurs. The damage includes both the structural and non-structural systems, but does not consider furnishing and tenant contents. Damage is measured as the ratio of the cost to repair the building divided by the current cost to reconstruct the building from scratch. Such assessments are to be completed to the requirements of ASTM E-2026 at ASTM Level 1 or higher in order to be considered appropriate, where the damage ratio is the Scenario Expected Loss (SEL) in the BSE-1 earthquake ground motion evaluated. ASTM E2026 is the standard for evaluating the seismic damageability of buildings for financial transactions.
- 5. In those cases where the engineer making the assessment using the requirements for a given Rating Level concludes that the expected seismic performance is consistent with a one-level higher or lower rating, this alternative Rating Level may be assigned if and only if an independent technical peer reviewer concurs in the evaluation. The peer review must be completed consistent with the requirements of Chapter 34 of the CBC. It is

anticipated that most projects that are independently peer reviewed from the initiation of the evaluation and/or design process will qualify for a higher Rating than those buildings, which have not been so reviewed at all. The second column under Peer Review the Ratings have been assigned when this occurs. Note that peer review is unlikely to improve buildings rated as VI or VII because they have fundamental seismic system flaws. The ratings for I and II are not changed because the performance increment between levels is so large.

6. Historically the University of California has used the terms good, fair, poor and very poor to distinguish the relative seismic performance of buildings. The concordance of values in the table above is approximate. The former rating procedures did not provide specific performance levels as is done herein, but were sentence fragments for qualitative performance and are recalled below for historical purposes only:

A *Good* seismic performance rating would apply to buildings and other structures whose performance during a major seismic disturbance is anticipated to result in some structural and/or nonstructural damage and/or falling hazards that would not /significantly/ jeopardize life. Buildings and other structures with a *Good* rating would have a level of seismic resistance such that funds need not be spent to improve their seismic resistance to gain greater life safety, and would represent an acceptable level of earthquake safety.

A *Fair* seismic performance rating would apply to buildings and other structures whose performance during a major seismic disturbance is anticipated to result in structural and nonstructural damage and/or falling hazards that would represent /low/ life hazards. Buildings and other structures with a *Fair* seismic performance rating would be given a low priority for expenditures to improve their seismic resistance and/or to reduce falling hazards so that the building could be reclassified *Good*.

A *Poor* seismic performance rating would apply to buildings and other structures whose performance during a major seismic disturbance is anticipated to result in significant structural and nonstructural damage and/or falling hazards that would represent appreciable life hazards. Such buildings or structures either would be given a high priority for expenditures to improve their seismic resistance and/or to reduce falling hazards so that the building could be reclassified as *Good*, or would be considered for other abatement programs, such as reduction of occupancy.

A *Very Poor* seismic performance rating would apply to buildings and other structures whose performance during a major seismic disturbance is anticipated to result in /extensive/ structural and nonstructural damage, potential structural collapse, and/or falling hazards that would represent /high/ life hazards. Such buildings or structures either would be given the highest priority for expenditures to improve their seismic resistance and/or to reduce falling hazards so that the building could be reclassified *Good*, or would be considered for other abatement programs such as reduction of occupancy.

7. For reference, the historically used Division of the State Architect and Seismic Safety Commission levels corresponds approximately to the new Performance Level numerical values in this table.