

Date

Project No.: Project No.

Lessor
Street Address
City, State, Zip

Dear Lessor:

SEISMIC INDEPENDENT REVIEW REPORT

Current state policy dictates that all facilities considered for state lease must be evaluated for the ability to meet a reasonable level of seismic performance.

Our initial screening process indicates that a Seismic Independent Review Report -prepared by a structural engineer licensed by the State of California will be required for your facility. The report must be completed by the licensed professional and returned (with all appropriate supporting documentation) to this office to allow DGS technical review and approval prior to execution of a lease.

Please initiate action to obtain the above described report at the earliest possible date so we can proceed with leasing activity for your facility. All expenses incurred in obtaining the subject certification are to be borne by the lessor.

Should you have any questions regarding this policy as it relates to leasing, please contact me at Phone Number.

Sincerely,

Name
Title-Classification

cc:

Seismic Independent Review Report

An Independent Review Report of the entire building and of its critical nonstructural components shall be prepared by a structural engineer licensed by the State of California or the state in which the property is located and has no ownership interest in the property. As a matter of policy, all acquisitions by purchase or other title transfer require an Independent Review Report. The Department of General Services (DGS) will not approve for occupancy a newly leased building having earthquake damageability of Level V or poorer. See the attached table titled; *Earthquake Performance Levels for Existing Buildings*.

The Independent Review Report and its preparation shall include the following:

- A visit to the building to observe its condition and characteristics.
- A review of available design drawings and soil reports for original construction and subsequent modifications.
- A qualitative (and quantitative if needed) evaluation of the building's gravity and lateral load resisting structural systems.
- A qualitative (and quantitative if needed) evaluation of the likelihood of earthquake-induced site failure that could cause damage to the facility, that is, the building is in the vicinity of earthquake faults listed in the State of California Earthquake Zones Act of 1990 or liquefaction susceptibility zone as identified by the local jurisdiction, or the building site is subject to failure due to earthquake-induced landslide risk.
- A qualitative (and quantitative if needed) evaluation of the expected seismic performance of the building following the loading requirements of the current edition of the California Building Code, CCR Title 24 Part 2 Chapter 34 Existing State Buildings, for the building type, site location and physical conditions.
- Identification of any potential falling hazards in areas that will be occupied or common areas within the building that poses a life-safety threat to the building occupants during an earthquake.
- An evaluation of the earthquake damageability Level of the building using the definitions of the attached table, *Earthquake Damageability Levels for Existing Buildings*.
- A list of the documents, plans, and other materials examined.

For leases, if a landlord intends to complete modifications to bring a building into compliance with the required Level (minimum Level III) before occupancy occurs, then the landlord's structural engineer must;

- 1) Certify that the work to be completed will meet the requirements of this section.
- 2) Provide a description of the work in sufficient detail to allow the DGS technical review and approval.

Confirmation that the completed modifications meet the requirements described in this document shall be done by the landlord's structural engineer. *If not completed, the State has the right to terminate the lease.*

The Independent Review Report must be signed and stamped by the professional, who certifies that the evaluation was done by this person or under this person's direct supervision and has no ownership interest in the property. The Entity may have the Independent Review Report prepared to meet Section II requirements peer reviewed to confirm its technical reliability prior to acceptance of the report's conclusions and reliance upon it in execution of the real estate transaction.

Seismic Independent Review Report

Table: Earthquake Damageability Levels for Existing Buildings

| Rating Level ^{1,5} | Definitions based upon California Building Code (CBC) requirements for existing buildings ² | Implied Risk to Life ³ | Implied Seismic Damageability ⁴ |
|-----------------------------|--|-----------------------------------|--|
| I | A building evaluated as meeting or exceeding the requirements of CBC Chapter 34 for Occupancy Category IV performance criteria for a new building. | Negligible | 0% to 10% |
| II | A building evaluated as meeting or exceeding the requirements of CBC Chapter 34 for Occupancy Category IV performance criteria with BSE-R and BSE-C categories replacing those given in Chapter 34. | Insignificant | 0% to 10% |
| III | 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 categories replacing BSE-R and BSE-C as given in Chapter 34 ; alternatively a building meeting CBC requirements for a new building. | Slight | 5% to 20% |
| IV | A building evaluated as meeting or exceeding the requirements of CBC Chapter 34 for Occupancy Category I-III performance criteria. | Small | 10% to 30% |
| V | 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. | Serious | 20% to 50% |
| VI | A building evaluated as not meeting the minimum requirements for Level V designation and not requiring a Level VII designation. | Severe | 40% to 100% |
| VII | 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. | 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 and are undefined. These assignments were prepared by a task force of state agency technical personnel, including CSU, UC, DGS, DSA, and AOC. The ratings apply to structural and non-structural elements of the building as contained in Chapter 34 , CBC requirements.
 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:
 - BSE-2, the 2,475-year return period earthquake ground motion, or the lesser of the Maximum Capable Earthquake for the site under certain limiting conditions.
 - BSE-C the 1,000-year return period earthquake ground motion.
 - BSE-1, two-thirds of BSE-2 value, nominally, the 475-year return period earthquake ground motion.
 - BSE-R the 225-year return period earthquake ground motion.
 3. *Implied Risk To Life* is a subjective measure of the threat of a life threatening injury or death that is expected for an average building in compliance with 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 compliance with the indicated technical requirements when a BSE-2 level earthquake occurs. Damage is measured as the ratio of the cost to repair the structure divided by the current cost to reconstruct the structure from scratch. Such assessments are to be completed to the requirements of ASTM E-2026, where the damage ratio is the SEL evaluated at Level 1 or higher in order to be considered appropriate.
 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 level 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 Section 3420, 2007 CBC.

Seismic Independent Review Report

Earthquake Performance Levels For Existing Buildings

Determination of expected seismic performance based on level of current CBC structural compliance:

| Definitions based upon California Building Code (CBC) requirements for seismic evaluation of buildings using performance criteria in CBC Table 3415.5 ² | Rating Level ¹ | |
|--|-----------------------------|--------------------------|
| | 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 | 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 ⁵ |
| 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 ⁵ |
| 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 |

Indications of Implied Risk to Life and Implied Seismic Damageability

| Rating Level ^{1,5} | Historic Risk Levels of ⁶ | | Implied Risk to Life ³ | Implied Seismic Damageability ⁴ |
|-----------------------------|--------------------------------------|-----------|-----------------------------------|--|
| | DSA/SSC | UC | | |
| I | I | | Negligible | 0% to 10% |
| II | II | | Insignificant | 0% to 15% |
| III | III | 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 | | 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 California State University, University of California, Department of General Services, Division of the State Architect, and 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.
 6. 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 the 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.

Seismic Independent Review Report

Occupancy Category is defined in the CBC Table 1604.5. 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, structures containing highly toxic materials where the quantities exceed the maximum allowed quantities, among others. Occupancy categories I-III include all other building uses that include most state owned buildings.

7. *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.
8. *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. Damage is measured as the ratio of the cost to repair the structure divided by the current cost to reconstruct the structure from scratch. Such assessments are to be completed to the requirements of ASTM E-2026, where the damage ratio is the *Scenario Expected Loss* (SEL) in the BSE-1 earthquake ground motion evaluated at Level 1 or higher in order to be considered appropriate.
9. 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.
10. 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 is approximate; the former rating procedures did not specify specific performance levels as is done herein, but were sentence fragments for qualitative performance. For reference the historically used Division of the State Architect and Seismic Safety Commission levels correspond approximately to the new numerical values.