SECTION 503 ALTERATIONS

503.1 General. Except as provided by Section 302.4, 302.5 or this section, alterations to any building or structure shall comply with the requirements of the *California Building Code* or *California Residential Code*, as applicable, for new construction. Alterations shall be such that the existing building or structure is not less complying with the provisions of the *California Building Code* or *California Residential Code*, as applicable, than the existing building or structure was prior to the alteration.

Exceptions:

- 1. An existing stairway shall not be required to comply with the requirements of Section 1011 of the *California Building Code* where the existing space and construction does not allow a reduction in pitch or slope.
- 2. Handrails otherwise required to comply with Section 1011.11 of the *California Building Code* shall not be required to comply with the requirements of Section 1014.6 of the *California Building Code* regarding full extension of the handrails where such extensions would be hazardous because of plan configuration.
- 3. Where provided in below-grade transportation stations, existing and new escalators shall have a clear width of less than 32 inches (815 mm).
- 4. [BSC] For state-owned buildings, including those owned by the University of California and the California State University and the judicial council, the requirements of Sections 503.3 through 503.4 are replaced by the requirements of Sections 317 through 322.

[BS] 503.2 Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612.3 of the *California Building Code*, or Section R322 of the *California Residential Code*, as applicable, any alteration that constitutes substantial improvement of the existing structure shall comply with the flood design requirements for new construction, and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in flood hazard areas established in Section 1612.3 of the *California Building Code*, or Section R322 of the *California Residential Code*, as applicable, any alterations that do not constitute substantial improvement of the existing structure are not required to comply with the flood design requirements for new construction.

[BS] 503.3 Existing structural elements carrying gravity load. Any existing gravity load-carrying structural element for which an alteration causes an increase in design dead, live or snow load, including snow drift effects, of more than 5 percent shall be replaced or altered as needed to carry the gravity loads required by the *California Building Code* for new structures. Any existing gravity load-carrying structural element whose gravity load-carrying capacity is decreased as part of the alteration shall be shown to have the capacity to resist the applicable design dead, live and snow loads includ-

ing snow drift effects required by the California Building Code for new structures.

Exceptions:

- Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes where the altered building complies with the conventional light-frame construction methods of the *California Building Code* or the provisions of the *California Residential Code*.
- 2. Buildings in which the increased dead load is due entirely to the addition of a second layer of roof covering weighing 3 pounds per square foot (0.1437 kN/m²) or less over an existing single layer of roof covering. [DSA-SS, DSA-SS/CC] Exception 2 is not permitted.

[BS] 503.4 Existing structural elements carrying lateral load. Except as permitted by CEBC Section 503.13, where the alteration increases design lateral loads in accordance with CBC Section 1609 or 1613, or where the alteration results in a prohibited structural irregularity as defined in ASCE 7, or where the alteration decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall be shown to meet the requirements of CBC Sections 1609 and 1613. Reduced seismic loads shall be permitted providing the reduced seismic load is not less than the original building permitted seismic loads. For purposes of CEBC Section 503, compliance with ASCE 41, using the performance objective in CEBC Table 303.3.1 for the applicable risk category, shall be deemed to meet the requirements of CBC Section 1613, and using the performance objective in CEBC Table 303.3.2 for the applicable risk category, shall be deemed to meet the requirements of reduced seismic loads, with procedures established by the Department.

Exceptions:

1. Except for Unreinforced Masonry (URM) buildings, any existing lateral load-carrying structural element whose demand-capacity ratio with the alteration considered is no more than 10 percent greater than its demand-capacity ratio with the alteration ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with CBC Sections 1609 and 1613. For purposes of this exception, comparisons of demand-capacity ratios and calculations of design lateral loads, forces and capacities shall account for the cumulative effects of additions and alterations since original construction.

Unreinforced Masonry (URM) Buildings:

Any existing lateral load-carrying structural element on an URM building whose demand-capacity ratio with the addition considered less than 10 percent greater than its demand-capacity ratio with the addition, must comply with CEBC Appendix Chapter A1. When the demand-capacity ratio with the addition considered is 10 percent or greater than its