

# K-12 OCCUPANCY CLASSIFICATION AND OCCUPANT LOAD FACTORS

**Disciplines:** Fire and Life Safety

**History:**

Revised 05/30/19

Revised 07/02/09

Revised 05/21/18

Issued 06/22/09

Revised 04/18/12

Revised in its entirety 06/22/11

**PURPOSE:** To provide clarification on occupancy classifications and occupant load factors for Kindergarten through grade 12 (K-12) school projects under the jurisdiction of the Division of the State Architect (DSA).

**BACKGROUND:** The building code analysis for the project must reflect the occupancy classifications assigned and justify the construction types and use of areas shown. For the purposes of applying the mixed use and occupancy provisions of Section 508, occupancies may include:

- Accessory uses
- Non separated uses
- Separated uses, or
- A combination of the above
- Incidental use

(For definitions of “net” and “gross” used in occupant load factors per CBC Chapters 2 and 10)

## 1. OCCUPANCIES AND OCCUPANT LOAD FACTORS:

- 1.1 General Education Classrooms:** Shall be classified as a Group “E” occupancy with an occupant load factor of 20 (net).
- 1.2 Science Lab Classrooms:** Where exempt amounts of hazardous materials are used or stored as identified in the CBC Table 307.1(1) and 307.1(2), the room shall be classified as a Group “E” occupancy, with an occupant load factor of 50 (net).
- 1.3 Laboratories:** The Group “L” occupancy classification for “Laboratories” is an optional design approach for multi-story buildings containing multiple laboratories that will most likely not occur on public school (K-12) campuses.
- 1.4 Libraries:** Classified as Group “A-3” occupancy. The reading areas shall use the occupant load factor of 50 (net) and the book stack areas 100 (gross).
- 1.5 Shops for Woodworking, Auto, Metal, Welding, and Similar Vocational Uses:** Shall be classified as Group “E” occupancies where hazardous materials do not exceed the exempt quantities indicated on Tables 307.1(1) and 307.1(2), with an occupant load factor of 50 (net).
- 1.6 Consumer Home Economics and Laboratory (aka: Culinary Arts Classrooms):** Classrooms containing cooking equipment which reflects current home food preparation practices and/or commercial food preparation simulation shall be classified as a Group “E” occupancy, and an occupant load factor of 50 (net) applied. Where cooking equipment includes deep fryers, charbroilers, griddles, salamanders or similar high heat grease producing appliances, a Type I exhaust hood and ducts installed per the California Mechanical Code shall be provided, inclusive of an approved automatic fire-extinguishing system to protect the appliances, exhaust hood and exhaust duct system.

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- 1.7 Exercise Rooms:** Rooms such as weight rooms, aerobics rooms, and gymnasiums that do not have other uses or spectator seating: The occupancy classification shall be Group “E” occupancy when the occupant is 49 or less persons, and Group “A-3” when occupant load is 50 or more persons. An occupant load factor of 50 (gross) shall be used.
- 1.8 Locker Rooms:** Shall be classified as Group “E” occupancy with an occupant load factor of 50 (gross).
- 1.9 Multi-Use Gymnasiums or Rooms:**
- 1.9.1** The occupancy classification of gymnasiums or assembly rooms proposed with multiple uses (functions) shall be based on the most restrictive use.
- 1.9.2** Where bleachers (telescoping or fixed) are installed, the occupancy classification shall be Group “A-4”, and the occupant load shall be based on the number of bleacher seats available as determined per CBC section 1004.4 and ICC-300. The open area(s) beyond the bleachers without fixed seating shall use an occupant load factor of 7 (net).
- 1.9.3** Raised platforms and stages shall use an occupant load factor of 15 (net) to determine the occupant load and exiting requirements. When two or more exits or exit access doorways are required, at least one exit or exit access doorway shall be provided from each side of the platform or stage. Fire safety curtains or movable partitions shall not obstruct the required exits from platforms or stages.
- 1.9.4** “Green” rooms, storage rooms, scenery fabrication and storage, and similar uses adjacent to platforms shall be separated from the platform area and adjacent uses by 1-hour horizontal and vertical fire barriers.
- 1.10 Kitchen:**
- 1.10.1** Kitchens associated with dedicated dining areas shall be classified as part of the Group ‘A-2’ occupancy. An occupancy separation will not be required.
- 1.10.2** Kitchens associated with gymnasiums or multi-use rooms for re-warming food that is not distributed to other campuses or sites shall be classified as a Group ‘B’ occupancy and be separated from adjacent spaces by approved fire barriers. Kitchens with floor areas less than 10% of the total building floor area may be assessed as an “accessory space” to the adjacent occupancy. Kitchen floor areas shall include related spaces such as walk-in refrigerator, walk-in freezer, storage, etc. Commercial or noncommercial equipment is permitted.
- 1.10.3** If the kitchen area is designed as non-separated use per CBC 508.3, the most restrictive code requirements for all uses included in the space would apply.
- 1.10.4** If the kitchen floor area is greater than 2,500-s.f. and is used for selling or distributing cooked food to other campuses, it will be classified as a Group “F-1” occupancy (High hazard), and a fire barrier separation wall will be required per CBC Table 508.4.
- Note:** A Type I kitchen hood and grease exhaust system protected by a listed and approved automatic fire suppression system is required in kitchens where grease laden vapors are produced.
- 1.11 Theaters and Auditoriums:**
- 1.11.1** An Occupancy Classification of “A-1” shall be assigned where fixed seating is provided. The occupant load shall be determined by counting the number of fixed seats.

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- 1.11.2** Auditorium areas without fixed seating shall use an occupant load factor of 7 (net) to determine the occupant load and exiting requirements.
- 1.12 Cafeterias:** Cafeterias shall be classified as a Group “A-2” occupancy and shall have the occupant load calculated per CBC Sections 1004.1.2 and 1004.4.
- 1.13 Day Care:**
- 1.13.1** Buildings, rooms and/or areas used for child day care purposes and meeting the requirements of Section 305.2 shall be classified as a Group “E” occupancy.
- 1.13.2** Per the State Fire Marshal’s amendment to CBC Section 305.2, day care facilities with more than six (6) children two years of age or older, *“where the occupants are not capable of responding to an emergency situation without physical assistance from the staff, shall be classified as an ‘I-4 occupancy.’*” Facilities dedicated to children as noted shall be subject to CBC Section 436 for exiting and other requirements.
- 1.13.3** The occupant load factor used to calculate the occupant load shall be 35 (net) for both a Group “E” Day Care and Group “I-4” occupancy.
- 1.13.4** In some instances, the DSA plan reviewer may question the group “E” occupancy designation, in which case the architect will be required to obtain a letter from the school district (Superintendent or Facilities Director), to provide more information for the DSA plan reviewer about facility occupants. Information to be provided shall include,
- Age groups,
  - Whether custodial or personal care is provided,
  - Ability of occupants to evacuate the building unassisted.

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**REFERENCES:**

California Code of Regulations (CCR), Title 24  
Part 1, California Administrative Code (CAC)  
2007, 2010, 2013, 2016 CAC, Sections 303 and 304  
Part 2, California Building Code (CBC)  
2007, 2010, 2013, and 2016 editions

This IR is intended for use by the DSA staff and by design professionals to promote statewide consistency for review and approval of plans and specifications as well as construction oversight of projects within the jurisdiction of DSA, which includes State of California public schools (K–12), community colleges and state-owned or state-leased essential services buildings. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

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