

and the auditorium. Openings shall be provided with glass or other *approved* material, so as to close completely the opening.

**409.3 Projection room and equipment ventilation.** *Ventilation* shall be provided in accordance with the *International Mechanical Code*.

**409.3.1 Supply air.** Each projection room shall be provided with adequate air supply inlets so arranged as to provide well-distributed air throughout the room. Air inlet ducts shall provide an amount of air equivalent to the amount of air being exhausted by projection equipment. Air is permitted to be taken from the outside; from adjacent spaces within the building, provided that the volume and infiltration rate are sufficient; or from the building air-conditioning system, provided that it is so arranged as to provide sufficient air when other systems are not in operation.

**409.3.2 Exhaust air.** Projection rooms are permitted to be exhausted through the lamp exhaust system. The lamp exhaust system shall be positively interconnected with the lamp so that the lamp will not operate unless there is the required airflow. Exhaust air ducts shall terminate at the exterior of the building in such a location that the exhaust air cannot be readily recirculated into any air supply system. The projection room *ventilation* system is permitted to also serve appurtenant rooms, such as the generator and rewind rooms.

**409.3.3 Projection machines.** Each projection machine shall be provided with an exhaust duct that will draw air from each lamp and exhaust it directly to the outside of the building. The lamp exhaust is permitted to serve to exhaust air from the projection room to provide room air circulation. Such ducts shall be of rigid materials, except for a flexible connector *approved* for the purpose. The projection lamp or projection room exhaust system, or both, is permitted to be combined but shall not be interconnected with any other exhaust or return system, or both, within the building.

**409.4 Lighting control.** Provisions shall be made for control of the auditorium lighting and the *means of egress* lighting systems of theaters from inside the projection room and from not less than one other convenient point in the building.

**409.5 Miscellaneous equipment.** Each projection room shall be provided with rewind and film storage facilities.

## SECTION 410 STAGES, PLATFORMS AND TECHNICAL PRODUCTION AREAS

**410.1 Applicability.** The provisions of Sections 410.1 through 410.7 shall apply to all parts of buildings and structures that contain *stages* or *platforms* and similar appurtenances as herein defined.

**410.2 Stages.** *Stage* construction shall comply with Sections 410.2.1 through 410.2.7.

**410.2.1 Stage construction.** *Stages* shall be constructed of materials as required for floors for the type of construction of the building in which such *stages* are located.

**Exception:** *Stages* need not be constructed of the same materials as required for the type of construction provided that the construction complies with one of the following:

1. *Stages* of Type IIB or IV construction with a nominal 2-inch (51 mm) wood deck, provided that the *stage* is separated from other areas in accordance with Section 410.2.4.
2. In buildings of Type IIA, IIIA and VA construction, a fire-resistance-rated floor is not required, provided that the space below the *stage* is equipped with an *automatic sprinkler system* or *fire-extinguishing system* in accordance with Section 903 or 904.
3. In all types of construction, the finished floor shall be constructed of wood or *approved* non-combustible materials. Openings through *stage* floors shall be equipped with tight-fitting, solid wood trap doors with *approved* safety locks.

**410.2.1.1 Stage height and area.** *Stage* areas shall be measured to include the entire performance area and adjacent backstage and support areas not separated from the performance area by fire-resistance-rated construction. *Stage* height shall be measured from the lowest point on the *stage* floor to the highest point of the roof or floor deck above the *stage*.

**410.2.2 Technical production areas: galleries, gridirons and catwalks.** Beams designed only for the attachment of portable or fixed theater equipment, gridirons, galleries and catwalks shall be constructed of *approved* materials consistent with the requirements for the type of construction of the building; and a *fire-resistance rating* shall not be required. These areas shall not be considered to be floors, *stories*, *mezzanines* or levels in applying this code.

**Exception:** Floors of fly galleries and catwalks shall be constructed of any *approved* material.

**410.2.3 Exterior stage doors.** Where protection of openings is required, exterior *exit* doors shall be protected with *fire door assemblies* that comply with Section 716. Exterior openings that are located on the *stage* for *means of egress* or loading and unloading purposes, and that are likely to be open during occupancy of the theater, shall be constructed with vestibules to prevent air drafts into the auditorium.

**410.2.4 Proscenium wall.** Where the *stage* height is greater than 50 feet (15 240 mm), all portions of the *stage* shall be completely separated from the seating area by a proscenium wall with not less than a 2-hour *fire-resistance rating* extending continuously from the foundation to the roof.