



Coffee Break Training - Fire Protection Series

Means of Egress: Assembly Seat Spacing

No. FP-2011-10 March 8, 2011

Learning Objective: The student shall be able to identify the requirements for seat spacing in places of assembly with fixed seating rows.

Timely evacuation of large numbers of persons from sports, theater, and other entertainment venues is an essential requirement for life safety, and is influenced by the configuration of seats and aisle accessways in the means of egress. The aisle “accessway” is that portion of the means of egress that leads to an aisle: in this case the space in front of the seats.

According to the model fire and building codes, where seating rows have 14 or fewer seats, the minimum clear aisle accessway width must be 12 inches (305 mm) measured as the “clear horizontal distance from the back of the row ahead and the nearest projection on the row behind.” This wordy description simply means measure in a straight line from one seat back to the armrest or seat in the next row.



Aisle width for this large assembly occupancy is determined by the number of seats in the row.

Where chairs have automatic or self-rising seats—like those illustrated—the measurement is made with the seat in the upright or raised position as shown here. If any chair in the row does not have an automatic or self-rising seat, the measurement is taken with the seat in the down position.

Although not entirely clear in today’s picture, these seating rows have aisles at both ends. If the row of seats has aisles or doors at both ends, there may be up to 100 seats in the row between the aisles. The place of assembly in this photograph has 25 seats per row between aisles.

When an aisle accessway serves more than 14 seats, it must be widened to accommodate the larger occupant load. The minimum clear width of 12 inches (305 mm) between rows must be increased by 0.3 inches (7.6 mm) for every additional seat beyond 14, to a maximum 22 inches (559 mm).

In this example, with 25 seats per row, the number of seats beyond 14 equals 11. Eleven seats times 0.3 inches (7.6 mm) equals 3.3 additional inches (83.6 mm) of required width that must be added to the 12-inch (305 mm) minimum. Therefore, the minimum width of the aisle accessway in today’s picture is 15.3 inches (389 mm).

For additional information, refer to NFPA® 30, *Flammable and Combustible Liquids Code*, Chapter 5, *International Fire Code*®, Chapter 10, NFPA® 1, *Uniform Fire Code*®, Chapter 20, or NFPA 101, *Life Safety Code*®, Chapters 12 and 13.



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