



Figure 509-1

SECTION 509 — GUARDRAILS

In this section, the code provides for guardrail protection for unenclosed floor and roof openings, open and glazed sides of stairways, landings and ramps, and porches, which are more than 30 inches (762 mm) above grade or a floor or other surface below. Also, the protection is required for roofs which are used other than for service of the building and thus are subject to use by individuals walking on the roof. The need for guardrails in these circumstances is evident, although the arbitrary limit of 30 inches (762 mm) above grade or floor below is subject to conjecture. Nonetheless, in the case of the U.B.C., it is assumed that the height of 30 inches (762 mm) does not create a significant safety hazard.⁵

The guardrail must be of adequate height to prevent someone from falling over the edge of the protected areas and be designed to prevent someone, including small children, from falling through under the top rail. Therefore, the code establishes 42 inches (1067 mm) as the minimum height which is recognized nationally as the proper height for guardrail protection. The code also requires that for open-type rails, intermediate members be provided so that a sphere 4 inches (102 mm) in diameter cannot pass through between the intermediate members, a requirement which prevents small children from falling through the guardrail assembly. See Figure 509-1. The code also lessens the height for open sides of stairs; they may be protected with a guardrail hav-

ing a height the same as for stair railings as provided for in Section 1006.9. There are several more exceptions to the requirements for guardrails, as follows:

- Guardrails are not required on the loading side of docks or along vehicle service pits not accessible to the public for obvious reasons.
- Guardrails are required to be only 36 inches (914 mm) high in dwellings, Group U Occupancies, and within individual apartments or guest rooms in Group R, Division 1 Occupancies. This lower height is based on the good experience that has been exhibited in these uses; for several decades, the guardrail height in them has been no higher than 36 inches (914 mm).
- In commercial and industrial uses where the public is not invited (therefore, the guardrail is not subject to small children falling through), guardrails may have intermediate members spaced so that a 12-inch (305 mm) diameter sphere cannot pass through.
- In order to provide for proper viewing in theaters, a guardrail in front of the first row of fixed seats, and which is not at the end of an aisle, may be 26 inches (660 mm) in height.
- Again for obvious reasons, guardrails are not required on the auditorium side of a stage or enclosed platform.