



Safe Work Practices / Procedures / Instruction

GUARDRAILS / TOE BOARDS / HANDRAILS

Temporary Removal of Guardrails

If a guardrail must be removed to accommodate work:

- Only that portion of the guardrail necessary to allow the work to be done may be removed, and
- Workers exposed to a fall hazard must be protected by another fall protection system when the guardrail is absent

The guardrail must be replaced:

- When the unguarded area is left unattended, and
- After the work is completed if the circumstances still require guardrails.

The building of, inspection of or disassembling of guardrails will be done in a manner where fall protection is maintained at all times.

Physical Characteristics

- Guardrails must be 40"-44" high.
- Guardrails must have an intermediate rail (approx 20"-22")
- Railings must be attached to the inner sides of support posts or stanchions.
- Posts or stanchions must be placed less than 8 ft. apart, except a scaffold may have posts spaced not more than 3 m (10 ft) apart.
- Toe boards are required if people are working or accessing below the working area above, or where required and noted within WorkSafeBC Regulations.
- Unless otherwise permitted by Part 4 of WorkSafeBC OHS Regulation, guardrails must be installed to withstand a load applied horizontally and normal to the span of the rail, of 550 N (125 lbs) applied at any point along the rail, and a vertical, downward load of 1.5 kN per m (100 lbs per ft) along the top rail, but the horizontal and vertical loads need not be considered to act simultaneously.
- Wooden top rails must be at least 2 in. x 4 in. lumber for a span of up to 8 ft. between supports, and at least 2 in x 6 in. lumber for a span of 10 ft. between supports.
- Wooden mid-rails must be 1 in. x 6 in. or 38 mm x 89 mm (2 in. x 4 in. nominal) lumber.
- Wooden guardrail posts must be at least 38 mm x 89 mm (2 in. x 4 in. nominal) lumber, and must be installed with the narrow dimension facing the open edge.



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A formal inspection of guardrails will be completed daily by the Site Safety Officer.

NO OPENING SHALL BE LEFT UNGUARDED AT ANY TIME

Ensure when building an elevated deck that the guardrails are installed *at least* immediately after the joists and sheathing are set. This method will require the use of a fall protection method. Where practicable, guardrails shall be installed on the exterior walls before standing and bracing them. The guardrail posts must extend at least 3 ft. below the elevated deck and adequately nailed to ensure strength.

Where it is not feasible to have guardrails to protect workers in the danger area "Fall Restraint"/Fall Arrest" equipment must be used.

Guardrail Locations

An area accessible to workers must have guards or guardrails installed in any of the following circumstances:

- If a raised floor, open-sided floor, mezzanine, gallery, balcony, work platform, ramp, walkway, or runway is 122 cm (4 ft) or more above the adjacent floor or grade level;
- On both sides of any walkway over or adjacent to any substance which is a hazard if a worker fell in, or on it, or which is over machinery or work areas;
- Around the perimeter of any open container or containment area such as an open vat, bin, tank or pit which is 122 cm (4 ft) or more in depth and which has sides that do not extend at least as high as required for a guardrail above the adjacent grade or work surface;
- If a stairway ends in direct proximity to dangerous traffic or other hazard to prevent inadvertent entry into the dangerous area.

Exception

Guardrail locations do not apply during the construction, demolition, renovation or modification of a work area provided that:

- Access is restricted only to the workers involved in the activity; and
- The requirements of Part 11 of WorkSafeBC OHS Regulation are followed.



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Toe Boards

- Floor openings, elevated walkways and platforms must have toe boards if there is a danger from tools, materials, equipment and debris falling off the edge of the work surface, or there is a danger of slipping off the work surface due to the environment or work practices being used.
- The top of a toe board must be at least 10 cm (4 in) above the floor or platform, and the space between the bottom of the toe board and the floor or platform must not exceed 13 mm (1/2 in).
- If material is stacked or stored on a platform or walkway, or near a floor opening, toe boards must be increased in height or solid or mesh panels of appropriate height must be installed to prevent the material from falling.

Handrails on Stairways

- Stairs with more than 4 risers must have continuous handrails on:
 - a) any open side of the stairway;
 - b) one side of enclosed stairways 112 cm (44 in) or less in width; and
 - c) both sides of enclosed stairways over 112 cm (44 in) wide.
- The top of a handrail must be 76 cm to 92 cm (30 in to 36 in) above the stair tread, measured vertically from the nose of the tread, and the height must not vary on any flight or succession of flights of stairs.
- A handrail on an open side of a stairway must have a mid rail located approximately midway between the top of the handrail and the nose of the stair tread.
- A handrail must be able to withstand a load of 1.3 kN (300 lbs) applied vertically or horizontally at any point along the handrail.