



GUARDRAIL TRAINING GUIDE

On average, over 140 people visit a residential job-site during a building project. This includes construction workers, as well as homeowners, real estate agents, and children. Proper installation of a guardrail takes only a couple of minutes, yet it can be the difference between life and death.

Builders Mutual wants to empower everyone on the job-site to protect workers and visitors alike. We encourage you to stress the importance of guardrails with your team and encourage them to speak up if guardrails are missing. We have compiled a series of easy-to-use resources to help you build your expertise and train your workers.

Suggested Training Resources

1. Review this **Guardrail Training Guide** and the **Guardrail Safety Infographic** with all workers.
2. Share the **Guardrail Checklist** with all workers, contractors and planned visitors. Make sure the checklist is reviewed before beginning work and at the end of each day.
3. Read the **Guardrail Article Series** to build your guardrail expertise. The articles include an introduction to guardrail safety, 10 important OSHA provisions, an incident case study, and the cost of missing guardrails.
4. Discuss the importance of guardrails in a monthly safety meeting with the **Guardrail Toolbox Talk**.

Key Training Topics

WHEN TO INSTALL GUARDRAILS:

Guardrails should be installed as the job progresses and the hazards are created. You should not wait until the entire house is framed, and then go back and install guardrails. Do it as you go.

WHERE TO INSTALL GUARDRAILS:

- Any walking working surface with a fall to the next level of 6 feet or more
- Window openings
- Stairway Landings (handrails in stairways with 3 risers or more)
- Walkways
- Elevator openings (pre-installation)
- Floor decks above 6 feet

- Scaffolding over 10 feet in height (follow scaffolding standard or manufacturer's requirements)
- Around any holes or hoisting areas
- Holes used as access/open stairwells prior to installation of risers and treads (gate or offset rails must be installed)
- Ramps or Runways

WHAT MATERIAL TO USE:

Guardrail systems shall be so surfaced as to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing. Standard materials include a 2"x4" or wire rope.

PROPER HEIGHT:

Guardrails shall be installed such that there are no openings in the guardrail system that are more than 19 inches wide. The top rail should be 42" +/- 3", with a mid rail at 21" +/- 3" and a toe board of at least a 2"x4".

When employees are using stilts, the top edge height of the top rail, or equivalent member, shall be increased an amount equal to the height of the stilts.

TOE BOARDS:

Toe boards must be installed to prevent materials and/or tools from falling to lower levels.

Screens and mesh must extend from the top rail to the walking/working level and along the entire opening between rail supports if material is stacked above the toe board height.

STRENGTH:

Guardrail systems shall be capable of withstanding, without failure, a force of 200 pounds applied to the top rail, 150 pounds applied to the mid rail, and 50 pounds applied to the toe board. This force may be applied within 2 inches of the top edge, in any outward or downward direction, at any point along the top edge.

RESPONSIBILITY:

The responsibility for guardrail installation may lie with the General Contractor or the Trade Contractors. It's important to know that OSHA can cite multiple employers on the same job-site for guardrail violations. If guardrails are not in place, legal issues can arise. If there is an incident it may involve all contractors on the job-site.