



## Playground Installation

According to the National Program for Playground Safety (NPPS), between 2001 – 2008 approximately 218,851 preschool and elementary children received emergency room care for injuries that occurred on playground equipment. There were 40 deaths during that same time period; of those deaths 27 were the result of hangings or other asphyxiations. It is critical to ensure that your playground equipment is properly installed by a third-party expert and that the installation design satisfies current NPPS safety standards. What follows is a series of installation guidelines to assist your organization in meeting these standards.

### State Regulations

Lawmakers have passed legislation mandating playground safety. States that have adopted all or parts of Consumer Product Safety Commission or American Society for Testing and Materials include Arkansas, California, Connecticut, Florida, Illinois, Michigan, New Jersey, North Carolina, Oklahoma, Oregon, Rhode Island, Tennessee, Texas, Utah, Virginia, and Wyoming.

### Selecting a Site

Consideration should be given to the following when choosing a location:

- If there are hazards (ponds, nearby roads, cliffs, roads with traffic), a dense hedge or fence will contain children and avoid serious injury or death.
- Consider proper drainage for loose fill material during heavy rain storms.
- Sun exposure to bare metal slides or other surfaces may be hot enough to burn children. Place these items out of direct sunlight or provide warnings on the equipment.

### Surface Material and Depth

- Concrete, asphalt, tightly packed dirt, CCA treated wood mulch or gravel should not be used on playgrounds. Install surfaces that are made of softer material such as sand, wood chips, pea gravel, wood mulch (not CCA treated) or shredded rubber mulch. (Grass should not be used as a soft material since it can be hardened by weather conditions.)
- The depth of the loose-fill material should be at least 12 inches when the fall height is four or more feet high. If synthetic surfaces are used, consult the manufacturer for the recommended depth of their surfaces. More information on compressed loose-fill surfacing depths may be found at this link: <http://www.cpsc.gov/PageFiles/122149/325.pdf> (page 11)
- There should always be cushioned surfacing under any equipment from which a child could fall. This surfacing should extend from such equipment at least 6ft in all directions.



## Elevated Equipment

- Platforms that are more than 2<sup>1/2</sup> feet above ground level should be protected with walls or balusters at least 30 to 38 inches high.
- Climbing areas should be no higher than:
  - 5ft for children aging between 2-5
  - 7ft for school children aging between 5-12

## Swings

- Swings should be installed at least 24 inches apart from each other.
- No more than two swings should be suspended in the same direction.
- Swings should not be installed on multi-activity equipment.
- Swings should be made out of rubber or canvas, not wood.
- There should be at least 12 inches of space between the swing seat and ground level.

## Pinching, Crushing, and Entanglement Hazards

- All hooks (S and C-hooks) should be closed tightly to minimize risks of children's clothes being caught. If there is no gap greater than .04 inches (thickness of a dime), a hook is considered closed.
- Spacing between railings, balusters, and guardrails should be no more than 4 inches wide.
- Ensure that there is no space between the slide and the slide platform.
- Projections, such as bolts, should not expose more than 2 threads beyond the end of the nut.
- No equipment should contain sharp edges, rust, chipped paint, large gaps, splinters, or other types of damage or deterioration.

## Signage

- Fencing should be installed around playgrounds that are located near traffic areas or pools.
- If children of various age groups are using the playground, post signage that indicates which playground equipment is designated for which age group. (Equipment should be divided for age groups of 2-5 and 5-12.).
- Signs should be installed that indicate the appropriate use of equipment, emergency phone numbers (e.g. 911), and how to report potential hazards.

## Supervision

- Do not install crawl spaces on the playground where children cannot be seen. Equipment should allow for visibility of children by supervisors at all locations.

## Unsafe Equipment

- The following equipment is considered unsafe and should not be installed:
  - Metal slides
  - Trampolines, animal figure swings, and other equipment with springs
  - Monkey bars (from a height > 4 feet)
  - Freely swinging ropes
  - Swinging Gates
  - Giant Strides
  - Swinging exercise rings and trapeze bars



## Trip Hazards

- Ensure that there are no holes or abrupt changes in elevation on surface.
- Clear away all exposed tree roots and loose rocks from playground area.



## Rungs and Ladders

- Spacing on climbing equipment should either be less than 3 ½ inches wide to prevent children from falling through or larger than 9 inches to prevent children from getting stuck (where appropriate).
- Spacing should be consistent on ladders.
- Rungs and handrails should be round (never square) about 1 to 1 ½ inches in diameter.

Source: Consumer Product Safety Commission, *Public Playground Safety Handbook*. For more detailed information on playground installation and safety: <http://www.cpsc.gov/PageFiles/122149/325.pdf>

ADA Guidelines: <http://www.access-board.gov/play/index.htm>

*This Alliant Risk Control Consulting fact sheet is not intended to be exhaustive. The discussion and best practices suggested herein should not be regarded as legal advice. Readers should pursue legal counsel or contact their insurance providers to gain more exhaustive advice.*

**For more information on this topic, please contact Alliant Risk Control Consulting at (949) 260-5042 or [riskcontrol@alliant.com](mailto:riskcontrol@alliant.com)**

Alliant Insurance Services, Inc. • 1301 Dove Street • Suite 200 • Newport Beach, CA 92660  
PHONE (888) 737-4752 • [www.alliant.com](http://www.alliant.com)