



Youth Camp Bunk Bed Guardrail Requirement

Background:

Using the National Electronic Injury Surveillance System database a 2007 study¹ of cases of nonfatal bunk bed–related injuries treated in US emergency departments from 1990 through 2005 found an estimated 572,580 children and adolescents aged ≤21 years were treated in US emergency departments for bunk bed–related injuries. The 16-year study period, yielded an average of 35,790 cases annually. Lacerations were the most common type of injury, followed by contusions and abrasions and fractures. The body parts most frequently injured were the head and neck. Falls were the most common mechanism of injury.

¹<http://pediatrics.aappublications.org/content/121/6/e1696.full>

Since June 19, 2000, the United States Consumer Product Safety Commission (CPSC) has required all new bunk beds that are manufactured for non-institutional use to have guardrails that comply with CPSC Safety Standard for Bunk Beds.

A review of the children’s camps injury reports submitted to other state departments of health has shown that falls from bunk beds have resulted in serious injuries to youth campers of all age groups. While the CPSC design standards are effective at preventing injuries from falls, the standards do not apply to bunk beds manufactured prior to June 19, 2000 or to those manufactured for institutional use.

In order to provide for the safety of children and counselors at youth camps in the State of Indiana, guardrails that are manufactured and maintained in accordance with the CPSC Safety Standard for Bunk Beds are considered to be in compliance with 410 IAC 6-7.2. All other bunk beds used by campers and staff will require the operator of the youth camp to complete an evaluation of the upper bed to determine compliance with the following requirements. The beds that do not meet these requirements will need to be retrofitted with acceptable guardrails or replaced with beds that comply with this requirement or the CPSC Safety Standard for Bunk Beds.

Definitions:

Foundation is the base or support on which a mattress or, when provided, a box spring rests.

Guardrail is a rail or guard on the side of a bed to prevent an occupant from falling or rolling out of the bed.

End structure means an upright unit at the head or foot of the bed that spans the width of the bed.

Requirements:

- Upper bunk beds shall have a guardrail on each side of the bed. When a bed is secured against a wall that spans the length of the bed with no gap between the wall and bed frame and the bed cannot be removed from the wall without use of tools, an equivalent level of safety is provided by installation of a guardrail only on the non-wall side of the bed.
- The upper edge of the guardrails shall be no less than 5 inches above the top surface of the mattress.
- The guardrails must be attached so that they can only be removed by either:



1. Intentionally releasing a fastening device; or
 2. Applying forces sequentially in two different directions (e.g., up and over or vice-versa).
- Guardrails may terminate before reaching the bed's end structures as follows:
 1. The opening between a guardrail and the end structure at the head of a bed shall be no more than 15 inches. An opening between 3½ and 9 inches should be avoided because of the danger of entrapment.
 2. The maximum permissible opening size between a guardrail and the end structure at the foot of the bed to allow access to the bed from a side ladder is based on the bed occupant's age as follows:

<u>Occupant age²</u>	<u>Permissible Opening Size</u>
6 years old	No more than 22 inches
7 years old	No more than 23 inches
8 years old	No more than 24 inches
over 8 years old	Cannot exceed 25 inches

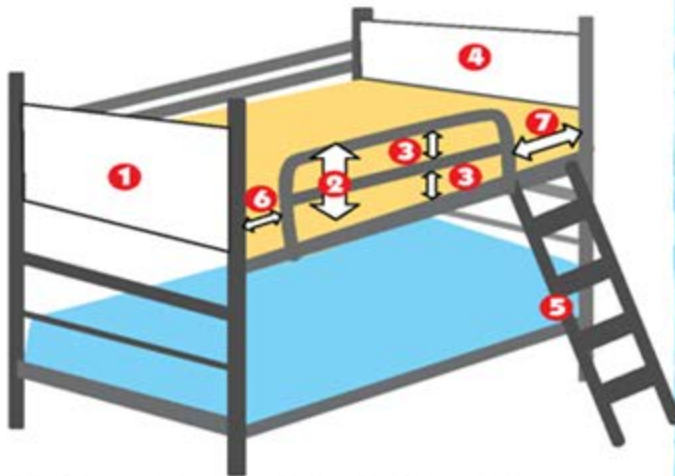
² The CPSC recommends that children under 6 years old should not use the upper bed in a bunk bed

3. When a bed is not accessed from a side ladder, to prevent the danger of entrapment, an opening between the guardrail and end structures should be less than 3½ inches or greater than 9 inches.
- Guardrails for bunk beds, which are not secured against a wall, should span the entire length of the bed on the side that does not have the access ladder.
 - To prevent entrapment and strangulation, openings between each guardrail and between the guardrails and the bed foundation or frame shall not be more than 3½ inches as illustrated in the attached diagram.
 - Guardrails must be structurally sound and attached so that they cannot be removed without the use of tools or by intentionally releasing a fastening device.
 - Ladders, if provided, shall be structurally sound and are to be securely attached to the bunk beds.
 - Mattress foundations must be securely placed or fastened to prevent dislodgment.

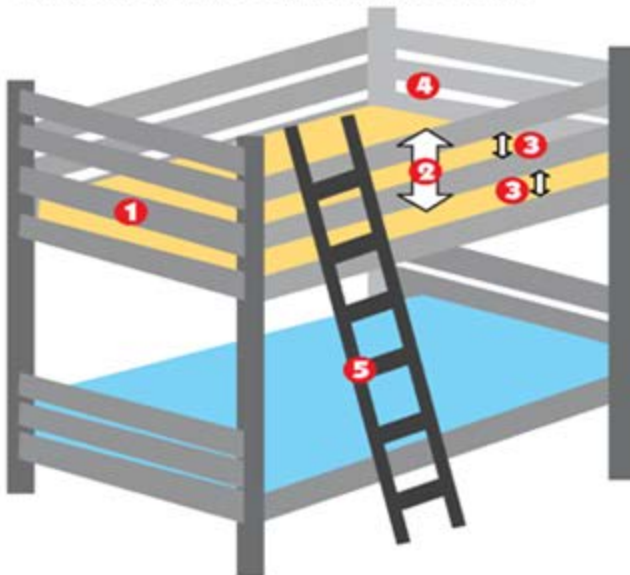


Bunk Bed Guardrail Illustration³

Non-Continuous (Open) Guardrail Bed Style



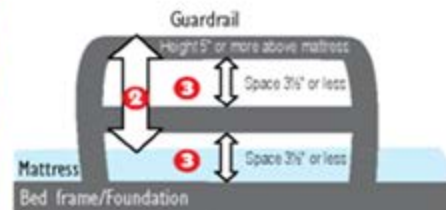
Continuous (Connected) Guardrail Bed Style



Note: Guardrail requirements apply to both sides of the bed when the bed is not secured against a wall.

³ Courtesy of New York State Department of Health

- 1 End structure at the head of the bed
- 2 Guardrail height must be 5 inches or more above the mattress
- 3 Vertical spacing between rails and between the lowest rail and the mattress foundation or bed frame may not exceed 3½ inches



- 4 End structure at the foot of the bed
- 5 Ladder
- 6 An opening between the guardrail and the end structure at the head of the bed must be 15 inches or less
- 7 An opening between a guardrail and an end structure at the foot of the bed is based on the occupant's age (see chart below for restrictions):

AGE*	OPENING
6 years old	No more than 22 inches wide
7 years old	No more than 23 inches wide
8 years old	No more than 24 inches wide
over 8 years old	No more than 25 inches wide

* Children less than 6 years old should not use the upper bed of bunk beds. Openings must be 22 inches or less to allow use by any age group 6 years and older. Beds designed for a younger age group may be used by older campers and staff.