

## PROPOSED CHANGE

NBC05-DivB-09.08.08.06.-replace-UE-HSB-climbable\_guards\_v2\_ed.doc

## MODIFICATION PROPOSÉE

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### Comment

### Commentaires

Document	NBC 2005 CNB	Document
Provision	9.8.8.6.	Exigence
Committee	Use and Egress • Usage et moyens d'évacuation des bâtiments Housing and Small Buildings • Maisons et petits bâtiments	Comité
Minutes	UE 2005; HSB 2005-06.6.12.; EC 30b	Procès-verbaux

### EXISTING PROVISION

#### 9.8.8.6. Design to Prevent Climbing

(See Appendix A.)

- 1) Guards required by Article 9.8.8.1., except those in *industrial occupancies* and where it can be shown that the location and size of openings do not represent a hazard, shall be designed so that no member, attachment or opening will facilitate climbing.
- 2) Guards shall be deemed to comply with Sentence (1) where any elements protruding from the vertical and located within the area between 140 mm and 900 mm above the floor or walking surface protected by the guard
  - a) are located more than 450 mm horizontally and vertically from each other,
  - b) provide not more than 15 mm horizontal offset,
  - c) do not provide a toe-space more than 45 mm horizontally and 20 mm vertically, or
  - d) present more than a 1-in-2 slope on the offset.

### PROPOSED CHANGE

Replace Article 9.8.8.6. as follows:

Other Code Provisions Affected: None

#### 9.8.8.6. Design to ~~Prevent~~ Not Facilitate Climbing

(See Appendix A.)

- 1) Except as provided in Sentence (2), ~~G~~guards required by Article 9.8.8.1. ~~except those in industrial occupancies and where it can be shown that the location and size of openings do not represent a hazard;~~ shall be designed so that no member, attachment or opening will facilitate climbing.
- 2) The requirements for guards described in Sentence (1) need not apply
  - a) where it can be shown that the location and size of openings do not ~~re~~present a hazard to young children (see A-3.3.1.18.(4)(a)-2010 in Appendix A),
  - b) in industrial occupancies,
  - c) within the interior portion of dwelling units, or
  - d) where guards serve locations where the difference in elevation is less than 1 800 mm between the upper and lower adjacent surfaces.
- ~~2) Guards shall be deemed to comply with Sentence (1) where any elements protruding from the vertical and located within the area between 140 mm and 900 mm above the floor or walking surface protected by the guard~~
  - ~~a) are located more than 450 mm horizontally and vertically from each other;~~
  - ~~b) provide not more than 15 mm horizontal offset;~~
  - ~~c) do not provide a toe space more than 45 mm horizontally and 20 mm vertically, or~~
  - ~~d) present more than a 1-in-2 slope on the offset.~~

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### RATIONALE

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#### Problem

##### Article Title

Code requirements cannot prevent events from occurring.

##### Sentence (1)

The current requirement for guards to be designed not to facilitate climbing is deemed to be unjustifiably restrictive on the industry. This requirement has been shown to create an economic hardship on the ornamental railing design manufacturers.

##### Sentence (2)

The prescriptive requirements of the current Sentence (2) have caused enforcement and interpretation problems for authorities and designers.

#### Justification - Explanation

##### Background

Changes to the requirements for climbable guards have been introduced in Part 9 for the following reasons:

- Statistical data in areas where climbability requirements are not mandated do not seem to indicate a problem with children climbing guards and falling. There were no climbability requirements in the U.S. for several decades (exception was 2003-2006).
- The introduction of climbability requirements in 1970 was not based on any scientific data or statistics.
- There is general confusion among designers and regulators as to how to interpret the current climbability requirements in Part 9.
- NAHB study does not support the need for climbability requirements on guards.
- As balconies are generally not supervised as often as one would supervise a child within a building, the TG was not convinced that the requirements could be relaxed for exterior balconies.
- Reports of children falling off exterior balconies are inconclusive at this point as to what exactly contributed to the fall, i.e. climbing onto an object (e.g. chair) or using the guards themselves.
- Manufacturers have indicated that their industry is experiencing economic hardship.
- Allowing climbable guard designs at locations where the difference in levels presents limited risk of injury was viewed as acceptable when considered in conjunction with the factors above.

##### Proposed changes

The proposed wording reflects a balanced position and a reasonable consensus between the two diverging opinions on the subject: one position proposed to delete any requirement related to the design of guards not to facilitate climbing, and the other position claimed that climbable guards are a health and safety hazard and that the public has the right to be protected.

##### Article Title

The wording “prevent climbing” is replaced with “to not facilitate climbing” in recognition of the fact that Code requirements can only reduce the likelihood of events occurring.

##### Sentence (1)

The wording in Sentence (1)-2010 retains the existing performance requirements for guards to be designed not to facilitate climbing.

##### Sentence (2)

The current Sentence (2) prescriptive requirements were not based on any scientific research and have been very difficult to both enforce and interpret.

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The proposed wording for Sentence (2):

- does not retain the current prescriptive requirements for the design of non-climbable guards and the recommendations in A-9.9.8.6. are deleted, because such requirements were considered overly stringent without any conclusive research to back them up and because they unjustifiably limit the design choices for guards;
- adds an exception for any location where the difference in elevation between adjacent floor levels is less than 1.8 m;
- adds an exception for guards located inside dwelling units, because children are generally familiar with the environment and are generally supervised; the requirement for guards on exterior balconies to be designed so as to not facilitate the climbing of guards by young children remains.

Based on the CCBFC Executive Committee deliberations, the supervision requirements of Clause (2)(a) have been qualified to state “where... location and size of opening do not present a hazard to young children.” The reference to the Part 3 Appendix Note further clarifies which areas are generally not intended to be occupied by young children such as casinos, high schools, colleges, etc.

### Cost implications

#### Clarity

The lack of clarity of the existing wording is reported to have cost some companies tens of thousands of dollars in lost sales and time spent in discussion with building officials rather than selling.

#### Application

The application of these requirements has been limited to exterior guards on surfaces 1.8 metres or more above adjacent surfaces. There is no cost associated with this requirement as the choice of type of ornamental guard is up to the user.

### Enforcement implications

Can be enforced by the currently available infrastructure without an increase in resources.

### Who is affected

Designers, builders and Code officials.

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### OBJECTIVE-BASED ANALYSIS OF NEW OR CHANGED PROVISION

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Provision: **9.8.8.6.(1)**

Analysis:

Attributions

[F30-OS3.1]

Objective

OS3 Safety in Use

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### OBJECTIVE-BASED ANALYSIS OF NEW OR CHANGED PROVISION

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Provision: **9.8.8.6.(2)-2010**

Analysis: **New**

Attributions

N/A

Objective

N/A

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[Commentaires](#)