

1.1 **Department of Labor and Industry**

1.2 **Proposed Expedited Permanent Rules Regulating Window Cleaning Safety Features**

1.3 **1305.3114 SECTION 3114, WINDOW CLEANING ANCHORS SAFETY FEATURES.**

1.4 IBC chapter 31 is amended by adding a new section to the chapter:

1.5 SECTION 3114

1.6 WINDOW CLEANING ANCHORS SAFETY FEATURES

1.7 **3114.1 Window cleaning anchors safety features.** ~~Building anchors for window cleaning~~
1.8 ~~safety shall be provided for buildings four or more stories above grade plane. Building~~
1.9 ~~anchors for window cleaning safety shall be designed, installed, and located in accordance~~
1.10 ~~with the design criteria of ANSI/IWCA I-14.1-2001.~~

1.11 **Exceptions:**

1.12 ~~1. Buildings without windows.~~

1.13 ~~2. Existing buildings undergoing reconstruction, alteration, or repair that does not~~
1.14 ~~include the exposure of primary structural roof components.~~

1.15 ~~3. In accordance with Minnesota Statutes, section 326B.106, subdivision 4, paragraph~~
1.16 ~~(m), the commissioner of the Minnesota Department of Labor and Industry may waive~~
1.17 ~~all or a portion of the requirements for existing buildings if the installation of the~~
1.18 ~~dedicated anchorages would not result in significant safety improvements due to limits~~
1.19 ~~on the size of the project, or other factors as determined by the commissioner.~~

1.20 Windows shall be provided with a safe window cleaning method in accordance with
1.21 ANSI/IWCA I-14.1 and with building and site development features applicable to that safe
1.22 cleaning method.

2.1 **3114.1.1 Windows with glazing 38 feet or higher.** Windows with glazing 38 feet
2.2 or higher above an associated work surface shall be provided with equipment as
2.3 identified in sections 3114.3 or 3114.4

2.4 **Exception:** Buildings where the glazing in windows is located 60 feet or less
2.5 above an associated work surface and directly below a roof that has a slope
2.6 4 units vertical in 12 units horizontal or greater shall be permitted to comply
2.7 with section 3114.2.

2.8 **3114.1.2 Existing buildings with glazing 38 feet or higher.** Existing buildings
2.9 with glazing 38 feet or higher and undergoing alterations shall be required to
2.10 comply with this section where both of the following conditions are met:

2.11 (1) the existing building is not currently provided with a method for safe
2.12 window cleaning; and

2.13 (2) the alteration includes exposure of the primary structural frame of the roof.

2.14 **3114.2 Manually propelled mobile scaffolds and mobile elevating work platforms.**

2.15 Manually propelled mobile scaffolds and mobile elevating work platforms shall comply
2.16 with the equipment manufacturer's recommendations for height limitations, working surface,
2.17 and equipment access.

2.18 **3114.3 Roof anchorage, wall anchorage, and anchor points at structural members for**
2.19 **use of manual swinging scaffolds, boatswain's chairs, and rope descent systems.**

2.20 Buildings where safe window cleaning methods use swinging scaffolds, boatswain's chairs,
2.21 and rope descent systems shall be equipped with roof anchors, wall anchors, or anchor
2.22 points at structural members in compliance with this section.

2.23 **3114.3.1 Anchor point working surface.** Each anchor location shall be provided
2.24 with an anchor point working surface not less than 30 inches deep and 30 inches

3.1 wide, with a slope not greater than 4 units vertical in 12 units horizontal and a
3.2 vertical clearance of not less than 80 inches.

3.3 **3114.3.1.2 Access to anchor point working surface.** An accessway that is
3.4 continuous from the public way to the anchor point working surface shall be
3.5 provided that consists of one or both of the following components:

3.6 1. An accessway with solid flooring that shall not be less than 6 feet in
3.7 height and 24 inches in width for its entire length. Where the slope of the
3.8 accessway is greater than 4 units vertical in 12 units horizontal, fall
3.9 restraint shall be provided in accordance with section 3114.3.2.

3.10 **Exception to item 1:** A portion of an accessway may be reduced to
3.11 30 inches high and 22 inches wide with a slope not greater than 1
3.12 unit vertical in 12 units horizontal for a total distance not exceeding
3.13 20 feet in length.

3.14 2. Vertical access along the accessway shall comply with the requirements
3.15 for mechanical equipment and appliances on roofs or elevated structures
3.16 in Minnesota Rules, chapter 1346.

3.17 **3114.3.2 Fall restraint.** Fall restraint anchorage connector devices compliant with
3.18 ANSI/ASSE Z 359.1 shall be installed along the accessway to each anchor working
3.19 surface where the accessway is 10 feet or less from the roof edge or where the
3.20 slope of the accessway exceeds 4 units vertical in 12 units horizontal.

3.21 **Exception:** Where guards are installed extending not less than 6 feet beyond
3.22 the working surface on the fall hazard side.

3.23 **3114.3.3 Roof anchorage points.** Buildings shall be equipped with roof anchors
3.24 at each location where safe window cleaning methods use swinging scaffolds,
3.25 boatswain's chairs, and rope descent systems. Roof anchors shall conform to

4.1 ANSI/IWCA I14.1 Standard for Window Cleaning Safety, sections 9 and 17.

4.2 Anchor designs shall be certified by a licensed structural engineer.

4.3 **3114.3.3.1 Anchor point working surface access to working surface.** Each
4.4 anchor location shall be provided with an anchor point working surface in
4.5 accordance with section 3114.3.1.

4.6 **3114.3.3.2 Access to anchor point working surface.** Access to the anchor
4.7 point working surface shall be provided in accordance with section 3114.3.1.2.

4.8 **3114.3.3.3 Fall restraint.** Fall restraint anchorage connector devices shall
4.9 comply with section 3114.3.2.

4.10 **3114.3.4 Wall anchorage.** Wall anchors shall comply with sections 3114.3.4.1
4.11 through 3114.3.4.4.

4.12 **3114.3.4.1 Capacity.** Anchorages shall be capable of sustaining a 5000 pound
4.13 (2268 kg) minimum load or a minimum 4-to-1 safety factor, whichever is
4.14 greater, in any direction that a load may be applied.

4.15 **3114.3.4.2 Adhered fasteners.** Anchorages using adhesive fasteners (epoxy
4.16 anchors) to a structure shall have a minimum of two fasteners per anchorage.

4.17 **3114.3.4.3 Materials or finishes.** Anchorages which have a surface
4.18 permanently concealed from view shall be made of corrosion resistant steel
4.19 or of an approved noncorrosive, nonmetallic material constructed to withstand
4.20 equipment impact loads and physical abrasion.

4.21 **3114.3.4.4 Positioning.** Anchorages shall be unobstructed and located behind
4.22 and in line with the equipment or portion of the building they are intended to
4.23 service and shall be free of sharp edges to prevent damage to appurtenances
4.24 attached to them.

5.1 **3114.3.4.5 Anchor point working surface.** Each anchor location shall be
5.2 provided with an anchor point working surface in accordance with section
5.3 3114.3.1.

5.4 **3114.3.4.6 Access to anchor point working surface.** Access to the anchor
5.5 point working surface shall be provided in accordance with section 3114.3.1.2.

5.6 **3114.3.4.7 Fall restraint.** Fall restraint anchorage connector devices shall
5.7 comply with section 3114.3.2.

5.8 **3114.3.5 Anchorage to certified structural members.** Anchor points at structural
5.9 members shall comply with sections 3114.3.5.1 through 3114.3.5.4. The structural
5.10 member where an anchor point is installed shall be certified by a licensed structural
5.11 engineer for anchor use.

5.12 **3114.3.5.1 Anchorage points.** Anchorage points at certified structural
5.13 members at locations where safe window cleaning methods use swinging
5.14 scaffolds, boatswain's chairs, and rope descent systems shall be designed to
5.15 comply with ANSI/IWCA I14.1 Standard for Window Cleaning Safety. The
5.16 anchor points at structural members and anchor designs shall be certified by
5.17 a licensed structural engineer.

5.18 **3114.3.5.2 Anchor point working surface.** Each anchor location shall be
5.19 provided with an anchor point working surface in accordance with section
5.20 3114.3.1.

5.21 **3314.3.5.3 Access to anchor point working surface.** Access to the anchor
5.22 point working surface shall be provided in accordance with section 3114.3.1.2.

5.23 **3114.3.5.4 Fall restraint.** Fall restraint anchorage connector devices shall
5.24 comply with section 3114.3.2.

6.1 **3114.4 Permanently installed powered platforms.** Buildings where safe window cleaning
6.2 methods use permanently installed powered platforms shall comply with this section. The
6.3 installation shall be certified by a licensed structural engineer.

6.4 **3114.4.1 Working surface.** Each powered platform location shall be provided
6.5 with a working surface not less than 30 inches wide and not less than the service
6.6 length of the powered platform. The slope of the working surface shall not be
6.7 greater than 1 unit vertical in 12 units horizontal and a vertical clearance of not
6.8 less than 80 inches.

6.9 **3114.4.2 Access.** An accessway that is continuous from the public way to each
6.10 powered platform working surface shall be provided that consists of one or both
6.11 of the following components:

6.12 **1. An accessway with solid flooring that shall be not less than 6 feet high and**
6.13 **24 inches wide for its entire length. Where the slope of the accessway is greater**
6.14 **than 4 units vertical in 12 units horizontal, fall restraint shall be provided in**
6.15 **accordance with section 3114.4.3.**

6.16 **Exception to item 1:** A portion of an accessway may be reduced to less
6.17 than 30 inches high and 22 inches wide with a slope not greater than 1
6.18 unit vertical in 12 units horizontal for a total distance not exceeding 20
6.19 feet in length.

6.20 **2. Vertical access along the accessway shall comply with the requirements**
6.21 **for mechanical equipment and appliances on roofs or elevated structures in**
6.22 **Minnesota Rules, chapter 1346.**

6.23 **3114.4.3 Fall restraint.** Fall restraint anchorage connector devices compliant with
6.24 ANSI/ASSE Z 359.1 shall be installed along the accessway to each powered
6.25 platform working surface where the accessway is 10 feet or less from the roof edge

- 7.1 or where the slope of the accessway exceeds 4 units vertical in 12 units horizontal,
- 7.2 or guards shall be installed extending not less than 6 feet beyond the working
- 7.3 surface on the fall hazard side.