Department of Labor and Industry

Proposed Expedited Permanent Rules Regulating Window Cleaning Methods

1305.3114 SECTION 3114, WINDOW CLEANING ~~ANCHORS~~ METHODS.

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

SECTION 3114

WINDOW CLEANING ~~ANCHORS~~ METHODS

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

~~**Exceptions:**~~

~~1. Buildings without windows.~~

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

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

Windows shall be provided with a safe window cleaning method in accordance with ANSI/IWCA I-14.1 and with building and site development features applicable to that safe cleaning method as required by sections 3114.2 through 3114.9.

Exception: Windows with tilt or pivot functions designed so that they can be completely cleaned from the building interior. Windows shall be operated to the

cleaning position and provided with a compliant working surface within the range of extension devices in accordance with section 3114.2.

3114.1.1 Existing buildings. Existing buildings undergoing alterations shall be required to comply with this section where both of the following conditions are met:

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

(2) the proposed work area being altered can include a method for safe window cleaning and building and site development features applicable to that method.

3114.2 Window cleaning methods using extension devices, direct hand washing, and portable ladders. Use of extension devices, direct hand washing, or portable ladders shall be permitted as a safe window cleaning method where a working surface and building features are provided in accordance with this section.

3114.2.1 Working surface. A working surface for standing or positioning of ladders shall be provided at each window location where direct hand washing, extension devices, or portable ladders will be used as a method for safe window cleaning. Each working surface shall be not less than 30 inches by 30 inches measured horizontally. The slope of a working surface shall not be greater than 3:12 or 25 percent. The irregularity of a working surface shall be not more than class 5 gravel.

3114.2.1.1 Fall restraint. Fall restraint anchorage connector devices compliant with ANSI/ASSE Z 359.1 shall be installed where working surfaces are 10 feet or less from a roof edge or a fall hazard greater than 30 vertical inches.

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

3114.2.2 Extension devices. The use of an extension device as a method of safe window cleaning shall be permitted where the top of the highest window is no more than 50 feet vertically above the working surface required by this section.

3114.2.2.1 Working surface location for use of extension devices. The working surface for use of an extension device shall comply with section 3114.2.1 and shall be located in front of the window and extend to within 36 inches of each window edge.

3114.2.3 Direct hand washing. Where direct hand washing is used as a method of safe window cleaning, a working surface shall be provided in compliance with section 3114.2.1 and shall be located in front of the window and extend to within 36 inches of each window edge.

3114.2.4 Portable ladders. The use of portable ladders as a method of safe window cleaning shall be permitted where the windows are no higher than 38 feet above the ladder landing working surface and a ladder landing working surface and building features are provided in accordance with this section

3114.2.4.1 Ladder landing working surface location. A ladder landing working surface in compliance with section 3114.2.1 shall be provided at the side of each window position where portable ladders will be used as a method for safe window cleaning. The leading edge of the ladder landing working surface shall be located not closer than 25 percent of the windowsill height and not farther than 25 percent of the window head height to the landing working surface plane.

3114.2.4.2 Ladder landing access to windows. Glazing to be cleaned using a ladder shall be located within 36 inches of the window edge.

3114.2.4.4 Building support. The building support for the top ladder position shall be rigid and support not less than 65 pounds of lateral force. The building surface shall be even to support the ladder rails perpendicular to the wall.

3114.3 Manually propelled mobile scaffolds and mobile elevating work platforms. Manually propelled mobile scaffolds and mobile elevating work platforms shall comply with the equipment manufacturer's recommendations for height limitations, working surface, and equipment access.

3114.3.1 Access and support. The working surfaces at the window cleaning location and the access to the working surfaces shall have the structural capacity to support the live load of the equipment.

3114.4 Roof anchorage, wall anchorage, and anchor points at structural members for use of manual swinging scaffolds, boatswain's chairs, and rope descent systems. Buildings where safe window cleaning methods use swinging scaffolds, boatswain's chairs, and rope descent systems shall be equipped with roof anchors, wall anchors, or anchor points at structural members in compliance with this section.

3114.4.1 Anchor point working surface. Each anchor location shall be provided with an anchor point working surface not less than 30 inches deep and 30 inches wide, with a slope not greater than 4 units vertical in 12 units horizontal and a vertical clearance of not less than 80 inches

3114.4.1.2 Access to anchor point working surface. An accessway that is continuous from the public way to the anchor point working surface shall be provided that consists of one or both of the following components:

1. An accessway with solid flooring that shall not be less than 6 feet in height and 24 inches in width for its entire length. Where the slope of the

accessway is greater than 4 units vertical in 12 units horizontal, fall restraint shall be provided in accordance with section 3114.4.2.

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

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

3114.4.2 Fall restraint. Fall restraint anchorage connector devices compliant with ANSI/ASSE Z 359.1 shall be installed along the accessway to each anchor working surface where the accessway is 10 feet or less from the roof edge or where the slope of the accessway exceeds 4 units vertical in 12 units horizontal.

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

3114.4.3 Roof anchorage points. Buildings shall be equipped with roof anchors at each location where safe window cleaning methods use swinging scaffolds, boatswain's chairs, and rope descent systems. Roof anchors shall conform to ANSI/IWCA I14.1 Standard for Window Cleaning Safety, sections 9 and 17. Anchor designs shall be certified by a licensed structural engineer.

3114.4.3.1 Anchor point working surface access to working surface. Each anchor location shall be provided with an anchor point working surface in accordance with section 3114.4.1.

3114.4.3.2 Access to anchor point working surface. Access to the anchor point working surface shall be provided in accordance with section 3114.4.1.2.

3114.4.3.3 Fall restraint. Fall restraint anchorage connector devices shall comply with section 3114.4.2.

3114.4.4 Wall anchorage. Wall anchors shall comply with sections 3114.4.4.1 through 3114.4.4.4.

3114.4.4.1 Capacity. Anchorages shall be capable of sustaining a 5000 pound (2268 kg) minimum load or a minimum 4-to-1 safety factor, whichever is greater, in any direction that a load may be applied.

3114.4.4.2 Adhered fasteners. Anchorages using adhesive fasteners (epoxy anchors) to a structure shall have a minimum of two fasteners per anchorage.

3114.4.4.3 Materials or finishes. Anchorages which have a surface permanently concealed from view shall be made of corrosion resistant steel or of an approved noncorrosive, nonmetallic material constructed to withstand equipment impact loads and physical abrasion.

3114.4.4.4 Positioning. Anchorages shall be unobstructed and located behind and in line with the equipment or portion of the building they are intended to service and shall be free of sharp edges to prevent damage to appurtenances attached to them.

3114.4.4.5 Anchor point working surface. Each anchor location shall be provided with an anchor point working surface in accordance with section 3114.4.1.

3114.4.4.6 Access to anchor point working surface. Access to the anchor point working surface shall be provided in accordance with section 3114.4.1.2.

3114.4.4.7 Fall restraint. Fall restraint anchorage connector devices shall comply with section 3114.4.2.

3114.4.5 Anchorage to certified structural members. Anchor points at structural members shall comply with sections 3114.4.5.1 through 3114.4.5.4. The structural member where an anchor point is installed shall be certified by a licensed structural engineer for anchor use.

3114.4.5.1 Anchorage points. Anchorage points at certified structural members at locations where safe window cleaning methods use swinging scaffolds, boatswain's chairs, and rope descent systems shall be designed to comply with ANSI/IWCA I14.1 Standard for Window Cleaning Safety. The anchor points at structural members and anchor designs shall be certified by a licensed structural engineer.

3114.4.5.2 Anchor point working surface. Each anchor location shall be provided with an anchor point working surface in accordance with section 3114.4.1.

3314.4.5.3 Access to anchor point working surface. Access to the anchor point working surface shall be provided in accordance with section 3114.4.1.2.

3114.4.5.4 Fall restraint. Fall restraint anchorage connector devices shall comply with section 3114.4.2.

3114.5 Permanently installed powered platforms. Buildings where safe window cleaning methods use permanently installed powered platforms shall comply with this section. The installation shall be certified by a licensed structural engineer.

3114.5.1 Working surface. Each powered platform location shall be provided with a working surface not less than 30 inches wide and not less than the service length of the powered platform. The slope of the working surface shall not be greater than 1 unit vertical in 12 units horizontal and a vertical clearance of not less than 80 inches.

3114.5.2 Access. An accessway that is continuous from the public way to each powered platform working surface shall be provided that consists of one or both of the following components:

1. An accessway with solid flooring that shall be not less than 6 feet high and 24 inches wide for its entire length. Where the slope of the accessway is greater than 4 units vertical in 12 units horizontal, fall restraint shall be provided in accordance with section 3114.5.3.

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

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

3114.5.3 Fall restraint. Fall restraint anchorage connector devices compliant with ANSI/ASSE Z 359.1 shall be installed along the accessway to each powered platform working surface where the accessway is 10 feet or less from the roof edge or where the slope of the accessway exceeds 4 units vertical in 12 units horizontal, or guards shall be installed extending not less than 6 feet beyond the working surface on the fall hazard side.