

(2) An alternative foundation system or anchoring system is employed, including designs for basements and perimeter support foundation systems, whether or not it is included in the installation instructions; or

(3) Materials such as metal piers or alternatives to concrete footing materials are required by the installation instructions; or

(4) Foundation support and anchoring systems are designed for use in areas subject to freezing or for use in areas subject to flood damage or high seismic risk; or

(5) Foundations support and anchoring systems are designed to be used in special snow load conditions or in severe wind design areas; or

(6) Site conditions do not allow the use of the manufacturer's installation instructions; or

(7) There are any other circumstances in which the manufacturer's installation instructions would not permit the home to be installed in conformance with the Installation Standards or the MHCSS.

(c) *Variations to installation instructions.* (1) Before an installer provides support or anchorage that are different than those methods specified in the manufacturer's installation instructions, or when the installer encounters site or other conditions (such as areas that are subject to flood damage or high seismic risk) that prevent the use of the instructions, the installer must:

(i) First attempt to obtain DAPIA-approved designs and instructions prepared by the manufacturer; or

(ii) If designs and instructions are not available from the manufacturer, obtain an alternate design prepared and certified by a registered professional engineer or registered architect for the support and anchorage of the manufactured home that is consistent with the manufactured home design, conforms to the requirements of the MHCSS, and has been approved by the manufacturer and the DAPIA.

(2) The manufacturer's installation instructions must include an explanation of the requirement in paragraph (c)(1) of this section.

(d) *Installer certification.* In making the certification of the installation required under part 3286 of this chapter,

upon effect, an installer must certify that it completed the installation in compliance with either the manufacturer's instructions or with an alternate installation design and instructions that have been prepared by the manufacturer or prepared in compliance with paragraph (c) of this section.

(e) *Temporary storage.* The installation instructions must provide at least one method for temporarily supporting each transportable section of a manufactured home, to prevent structural and other damage to the structure, when those section(s) are temporarily sited at the manufacturer's facility, retailer's lot, or the home site.

§ 3285.3 Alterations during initial installation.

Additions, modifications, or replacement or removal of any equipment that affects the installation of the home made by the manufacturer, retailer, or installer prior to completion of the installation by an installer must equal or exceed the protections and requirements of these Model Installation Standards, the MHCSS (24 CFR part 3280) and the Manufactured Home Procedural and Enforcement Regulations (24 CFR part 3282). An alteration, as defined in § 3282.7 of this chapter, must not affect the ability of the basic manufactured home to comply with the MHCSS, and the alteration must not impose additional loads to the manufactured home or its foundation, unless the alteration is included in the manufacturer's DAPIA-approved designs and installation instructions, or is designed by a registered professional engineer or architect consistent with the manufacturer's design and that conforms to the requirements of the MHCSS.

§ 3285.4 Incorporation by reference (IBR).

(a) The materials listed in this section are incorporated by reference in the corresponding sections noted. These incorporations by reference were approved by the Director of the Federal Register, in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. The materials are available for purchase at the corresponding addresses noted below, and all are available for inspection at the

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Office of Manufactured Housing Programs, U.S. Department of Housing and Urban Development, 451 Seventh Street, SW., Room 9164, Washington, DC 20410; or the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

(b) The materials listed below are available for purchase from the Air Conditioning Contractors of America (ACCA), 2800 Shirlington Road, Suite 300, Arlington, Virginia 22206.

(1) ACCA Manual J, Residential Load Calculation, 8th Edition, IBR approved for § 3285.503(a)(1)(i)(A).

(2) [Reserved]

(c) The materials listed below are available for purchase from APA—The Engineered Wood Association, 7011 South 19th Street, Tacoma, Washington 98411, telephone number (253) 565-6600, fax number (253) 565-7265.

(1) PS1-95, Construction and Industrial Plywood (with typical APA trademarks), 1995 edition, IBR approved for § 3285.312(a)(2)(i).

(2) [Reserved]

(d) The materials listed below are available for purchase from American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), 1791 Tullie Circle, NE., Atlanta, Georgia 30329-2305.

(1) ASHRAE Handbook of Fundamentals, 1997 Inch-Pound Edition, IBR approved for § 3285.503(a)(1)(i)(A).

(2) [Reserved]

(e) The materials listed below are available for purchase from American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959.

(1) ASTM C 90-02a, Standard Specification for Loadbearing Concrete Masonry Units, 2002, IBR approved for § 3285.312(a)(1)(i).

(2) ASTM D 1586-99, Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils, 1999, IBR approved for the table at § 3285.202(c).

(3) ASTM D 2487-00, Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System), 2000, IBR approved for the table at § 3285.202(c).

(4) ASTM D 2488-00, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), 2000, IBR approved for the table at § 3285.202(c).

(5) ASTM D 3953-97, Standard Specification for Strapping, Flat Steel and Seals, 1997, IBR approved for § 3285.402(b)(2) and Note 10 to Table 1 to § 3285.402.

(f) The materials listed below are available for purchase from American Wood-Preservers' Association (AWPA), P.O. Box 388, Selma, Alabama 36702.

(1) AWPA M4-02, Standard for the Care of Preservative-Treated Wood Products, 2002, IBR approved for § 3285.312(a)(2)(iii).

(2) AWPA U1-04, Use Category System; User Specification for Treated Wood, 2004, IBR approved for §§ 3285.303(b)(1), 3285.312(a)(2)(ii), and 3285.504(c).

(g) The materials listed below are available for purchase from the Federal Emergency Management Administration (FEMA), 500 C Street, SW., Washington, DC 20472.

(1) FEMA 85/September 1985, Manufactured Home Installation in Flood Hazard Areas, 1985, IBR approved for § 3285.102(d)(3).

(2) [Reserved]

(h) The materials listed below are available for purchase from the National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, Massachusetts 02169-7471.

(1) NFPA 31, Standard for the Installation of Oil Burning Equipment, 2001 edition, IBR approved for §§ 3285.905(a) and 3285.905(d)(3).

(2) NFPA 70, National Electrical Code, 2005 edition, IBR approved for §§ 3285.702(e)(1) and 3285.906.

(3) NFPA 501A, Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities, 2003 edition, IBR approved for § 3285.101.

(i) The materials listed below are available for purchase from the Structural Engineering Institute/American Society of Civil Engineers (SEI/ASCE), 1801 Alexander Bell Drive, Reston, Virginia 20191.

(1) SEI/ASCE 32-01, Design and Construction of Frost-Protected Shallow Foundations, 2001, IBR approved for §§ 3285.312(b)(2)(ii) and 3285.312(b)(3)(ii).

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(2) [Reserved]

(j) The materials listed below are available for purchase from Underwriters Laboratories (UL), 333 Pfingsten Road, Northbrook, Illinois 60062.

(1) UL 181A, Closure Systems for Use With Rigid Air Ducts and Air Connectors, 1994, with 1998 revisions, IBR approved for § 3285.606(a).

(2) UL 181B, Closure Systems for Use With Flexible Air Ducts and Air Connectors, 1995, with 1998 revisions, IBR approved for § 3285.606(a).

§ 3285.5 Definitions.

The definitions contained in this section apply to the terms used in these Model Installation Standards. Where terms are not included, common usage of the terms applies. The definitions are as follows:

Act. The National Manufactured Housing Construction and Safety Standards Act of 1974, 42 U.S.C. 5401–5426.

Anchor assembly. Any device or other means designed to transfer home anchoring loads to the ground.

Anchoring equipment. Ties, straps, cables, turnbuckles, chains, and other approved components, including tensioning devices that are used to secure a manufactured home to anchor assemblies.

Anchoring system. A combination of anchoring equipment and anchor assemblies that will, when properly designed and installed, resist the uplift, overturning, and lateral forces on the manufactured home and on its support and foundation system.

Approved. When used in connection with any material, appliance or construction, means complying with the requirements of the Department of Housing and Urban Development.

Arid region. An area subject to 15 inches or less of annual rainfall.

Attached accessory building or structure means any awning, cabana, deck, ramada, storage cabinet, carport, windbreak, garage, or porch for which the attachment of such is designed by the home manufacturer to be structurally supported by the manufactured home.

Base flood. The flood having a one percent chance of being equaled or exceeded in any given year.

Base flood elevation (BFE). The elevation of the base flood, including wave height, relative to the datum specified on a LAHJ's flood hazard map.

Comfort cooling certificate. A certificate permanently affixed to an interior surface of the home specifying the factory design and preparations for air conditioning the manufactured home.

Crossovers. Utility interconnections in multi-section homes that are located where the sections are joined. Crossover connections include heating and cooling ducts, electrical circuits, water pipes, drain plumbing, and gas lines.

Design Approval Primary Inspection Agency (DAPIA). A state or private organization that has been accepted by the Secretary in accordance with the requirements of Part 3282, Subpart H of this chapter, which evaluates and approves or disapproves manufactured home designs and quality control procedures.

Diagonal tie. A tie intended to resist horizontal or shear forces, but which may resist vertical, uplift, and overturning forces.

Flood hazard area. The greater of either: The special flood hazard area shown on the flood insurance rate map; or the area subject to flooding during the design flood and shown on a LAHJ's flood hazard map, or otherwise legally designated.

Flood hazard map. A map delineating the flood hazard area and adopted by a LAHJ.

Footing. That portion of the support system that transmits loads directly to the soil.

Foundation system. A system of support that is capable of transferring all design loads to the ground, including elements of the support system, as defined in this section, or a site-built permanent foundation that meets the requirements of 24 CFR 3282.12.

Ground anchor. A specific anchoring assembly device designed to transfer home anchoring loads to the ground.

Installation instructions. DAPIA-approved instructions provided by the home manufacturer that accompany each new manufactured home and detail the home manufacturer requirements for support and anchoring systems, and other work completed at the