

(3) *Reporting Requirements:* For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*), the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

#### Related Information

(j) Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2010-0018, dated February 4, 2010; and Airbus Mandatory Service Bulletin A330-28-3111, Revision 02, dated March 24, 2010; for related information.

Issued in Renton, Washington, on June 29, 2010.

Ali Bahrami,

Manager, Transport Airplane Directorate,  
Aircraft Certification Service.

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## DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

### 24 CFR Part 3280

[Docket No. FR-5221-P-01]

RIN 2502-A171

### Manufactured Home Construction and Safety Standards

**AGENCY:** Office of the Assistant Secretary for Housing—Federal Housing Commissioner, HUD.

**ACTION:** Proposed rule.

**SUMMARY:** This proposed rule would amend the Federal Manufactured Home Construction and Safety Standards by adopting certain recommendations made to HUD by the Manufactured Housing Consensus Committee (MHCC). The National Manufactured Housing Construction and Safety Standards Act of 1974 (the Act) requires HUD to publish in the **Federal Register** all proposed revised construction and safety standards (Construction and Safety Standards, or Standards) submitted by the MHCC. The MHCC has prepared and submitted to HUD its second group of recommendations to improve various aspects of the Construction and Safety Standards. HUD has reviewed those proposals and has made several editorial revisions to the proposals, and those revisions have been reviewed and accepted by the MHCC.

**DATES:** *Comment Due Date:* September 13, 2010.

**ADDRESSES:** Interested persons are invited to submit comments regarding this rule to the Regulations Division, Office of General Counsel, Department

of Housing and Urban Development, 451 7th Street, SW., Room 10276, Washington, DC 20410-0500.

Communications must refer to the above docket number and title. There are two methods for submitting public comments. All submissions must refer to the above docket number and title.

1. *Submission of Comments by Mail.* Comments may be submitted by mail to the Regulations Division, Office of General Counsel, Department of Housing and Urban Development, 451 7th Street, SW., Room 10276, Washington, DC 20410-0001.

2. *Electronic Submission of Comments.* Interested persons may submit comments electronically through the Federal eRulemaking Portal at [www.regulations.gov](http://www.regulations.gov). HUD strongly encourages commenters to submit comments electronically. Electronic submission of comments allows the commenter maximum time to prepare and submit a comment, ensures timely receipt by HUD, and enables HUD to make them immediately available to the public. Comments submitted electronically through the [www.regulations.gov](http://www.regulations.gov) Web site can be viewed by other commenters and interested members of the public. Commenters should follow the instructions provided on that site to submit comments electronically.

**Note:** To receive consideration as public comments, comments must be submitted through one of the two methods specified above. Again, all submissions must refer to the docket number and title of the rule.

*No Facsimile Comments.* Facsimile (FAX) comments are not acceptable.

*Public Inspection of Public Comments.* All properly submitted comments and communications submitted to HUD will be available for public inspection and copying between 8 a.m. and 5 p.m. weekdays at the above address. Due to security measures at the HUD Headquarters building, an advance appointment to review the public comments must be scheduled by calling the Regulations Division at 202-708-3055 (this is not a toll-free number). Individuals with speech or hearing impairments may access this number through TTY by calling the Federal Information Relay Service at 800-877-8339. Copies of all comments submitted are available for inspection and downloading at [www.regulations.gov](http://www.regulations.gov).

**FOR FURTHER INFORMATION CONTACT:** The Office of Regulatory Affairs and Manufactured Housing, Office of Housing, Department of Housing and Urban Development, 451 7th Street, SW., Room 9164, Washington, DC 20410; telephone number 202-708-6401

(this is not a toll-free number). Persons with hearing or speech impairments may access this number through TTY by calling the toll-free Federal Information Relay Service at 800-877-8339.

#### SUPPLEMENTARY INFORMATION:

##### I. Background

The National Manufactured Housing Construction and Safety Standards Act of 1974 (42 U.S.C. 5401-5426) (the Act) authorizes HUD to establish and amend the Federal Manufactured Home Construction and Safety Standards (the Construction and Safety Standards, or Standards) codified in 24 CFR part 3280. The Act was amended in 2000 by the Manufactured Housing Improvement Act of 2000 (Pub. L. 106-569), by expanding its purposes and creating the Manufactured Housing Consensus Committee (MHCC).

As amended, the purposes of the Act (enumerated at 42 U.S.C. 5401) are: “(1) to protect the quality, durability, safety, and affordability of manufactured homes; (2) to facilitate the availability of affordable manufactured homes and to increase homeownership for all Americans; (3) to provide for the establishment of practical, uniform, and, to the extent possible, performance-based Federal construction standards for manufactured homes; (4) to encourage innovative and cost-effective construction techniques for manufactured homes; (5) to protect residents of manufactured homes with respect to personal injuries and the amount of insurance costs and property damages in manufactured housing consistent with the other purposes of this section; (6) to establish a balanced consensus process for the development, revision, and interpretation of Federal construction and safety standards for manufactured homes and related regulations for the enforcement of such standards; (7) to ensure uniform and effective enforcement of Federal construction and safety standards for manufactured homes; and (8) to ensure that the public interest in, and need for, affordable manufactured housing is duly considered in all determinations relating to the Federal standards and their enforcement.”

In addition, the amended Act generally requires HUD to establish Construction and Safety Standards that are reasonable and practical, meet high standards of protection, are performance-based, and are objectively stated. Congress specifically established the MHCC to develop proposed revisions to the Construction and Safety Standards. The Act provides specific procedures (42 U.S.C. 5403) for the MHCC process.

After the passage of amendments to the Act in 2000, HUD, in accordance with the mandate of the Act, issued a request for proposals to interested organizations to be the "Administering Organization" that would serve as secretariat to the MHCC and therefore support the Construction and Safety Standards development process. After evaluating the bids received, HUD selected the National Fire Protection Association (NFPA) to be the MHCC's Administering Organization. Thereafter, NFPA assisted HUD in selecting the 21 voting members provided for by statute for appointment to the MHCC, seven in each of the following three statutory categories: Producers, Users, and General Interest and Public Officials. The Act also provides for one nonvoting member to represent HUD.

The MHCC held its first meeting in August 2002 and began work on reviewing possible revisions to the Construction and Safety Standards. The MHCC developed its own priorities for preparing proposed revisions for HUD to consider. As the MHCC proceeded, proposed revisions to the Construction and Safety Standards were divided into sets. On November 30, 2005, at 70 FR 72024, HUD published a final rule to amend various sections of the Construction and Safety Standards that was based on the first set of revisions the MHCC had proposed. This proposed rule is based on the second set of MHCC proposals to revise the Construction and Safety Standards. The MHCC proposals and recommendations can be viewed using the following link: <http://www.nfpa.org/assets/files/PDF/CodesStandards/MHCCHUD/MHCCPart2ChangesShown1105.pdf>.

HUD has reviewed those proposals and has made certain editorial revisions. HUD believes this proposed rule represents revisions that HUD and the MHCC have agreed upon.

## II. Proposed Changes

The proposed rule would revise the following sections of the Construction and Safety Standards and also revise the incorporated reference standards, where indicated. Most of the proposed changes would codify existing building practices or conform HUD standards to HUD interpretive bulletins or existing building codes. As noted elsewhere in this preamble, HUD has identified only two standards in this proposed rule that would have an economic impact on the production costs of manufactured homes: The requirement that shower and bath valves use anti-scald mixing valves, and the increase in minimum insulation levels for cross-under ducts. HUD is requesting comment, however,

on whether any of the other proposed changes would have an economic impact or impose additional costs on the production of manufactured housing and specifically seeks comments on the analysis supporting this proposed rule and on the assumptions used.

The following is a discussion of the specific revisions to the Construction and Safety Standards that are proposed by this rule.

### A. Incorporation by Reference

The proposed rule would amend § 3280.4, by allowing the manufacturer to select which reference standard to incorporate into its designs and construction, where two or more reference standards are incorporated by reference for the same application or requirement. The existing practice is that if more than one reference standard exists, manufacturers must comply with the most restrictive aspects of each standard in their designs and construction. While this change reflects a relaxation of current requirements, by providing manufacturers with more flexibility in selecting materials, components, etc., to utilize in their production of homes, it is not actually a significant change. Currently, the areas in which there are duplicate reference standards are very few and, for those that do exist, HUD believes the degree of differences in performance and safety between the reference standards (*i.e.*, the restrictive and less restrictive) are not significant. However, the Department is specifically interested in receiving comments from the public as to whether the use of any of the duplicate reference standards for materials or equipment would result in reduced safety or performance levels for manufactured home occupants.

### B. Planning Considerations

The proposed rule would amend § 3280.105(a)(2), by clarifying the method to be used when measuring the travel distance from the bedroom door to an exit door, a distance that must not exceed 35 feet. The proposed rule would clarify how the natural and unobstructed path is to be measured from the center of the bedroom door to the center of the exit door. Currently, there is no standardized method for making the travel distance measurement identified in the Standards. This proposed change would codify the method that is currently being used by manufacturers to make the 35-foot measurement to determine compliance with the Standards.

The proposed rule would also amend the provisions for exit facilities/exit doors in § 3280.105(b), by permitting

door seals to reduce the minimum required exterior door opening by one inch. This proposed change would not change current construction requirements for exterior passage doors. Rather, it would codify an existing practice that has been previously permitted under Interpretative Bulletin B-1-76.

The proposed rule would make editorial revisions and amend the provisions for toilet requirements in § 3280.111, by adding an additional minimum clearance dimension from the centerline of a toilet to any adjacent wall of at least 15 inches. This proposed revision is consistent with current design practice in manufactured homes and is consistent with the requirements in residential building codes as well.

The proposed rule would modify and expand current § 3280.113, that sets requirements as to where safety glazing materials are to be located and how they are to be tested to determine if they can be considered safety glazing materials. The rule would also make the existing requirements for location and testing of safety glazing materials consistent with other model building codes and residential construction practices. Under the proposed revisions, safety glazing materials would be considered to be any glazing material capable of meeting the requirements of the Consumer Product Safety Commission (CPSC) or the Safety Performance Specifications and Methods of Test in ANSI Z97.1-1984.

### C. Fire Safety

The proposed rule would add an alternative means of complying with the kitchen cabinet protection requirements in § 3280.204, by allowing the metal hood,  $\frac{5}{16}$ -inch gypsum board, and  $\frac{3}{8}$ -inch air space required by this section to be omitted when a microwave oven certified as conforming to Underwriters Laboratories Standard UL 923-2002 is installed between the cabinet and the range. Since the microwave oven would protect only combustible kitchen cabinet materials over the cooking range, all exposed surfaces along the bottom and sides of the cabinet would still be required to be protected by at least  $\frac{5}{16}$ -inch gypsum board or the equivalent, in accordance with paragraph (a) of this section.

The proposed rule would also add and expand upon fire safety and performance requirements for all types of thermal insulating materials under proposed new section § 3280.207, Requirements for Thermal Insulating Materials. This is consistent with the requirements for evaluation of fire performance characteristics of

insulating materials used in residential building codes. HUD's existing regulation requires evaluation of fire performance characteristics of foam plastic insulating materials. Because thermal insulation materials used in manufactured homes are the same type of insulation materials used in residential building codes, they would already comply with the fire resistive properties being recommended by this proposed rule.

#### D. Body and Frame Requirements

The proposed rule would amend § 3280.305(c)(1)(i) by clarifying that the net uplift roof load must not be reduced by the dead load of the roof structure for the purposes of preparing engineering calculations or in performing structural load testing. This proposed change for roof uplift design would make no change to current engineering design practices. Rather, it would merely codify the current practices permitted under Interpretative Bulletin D-4-76.

The proposed rule would make editorial revisions and also clarify existing provisions in § 3280.305(c) that address areas where state or local building codes requirements exceed the provisions for design roof loads and wind loads required by the Standards. For consideration of state or local requirements for wind loads, the proposed rule would clarify that wind mapping data or records would need to indicate that higher design loads are necessary. The proposed rule would also change the title of each section to Consideration of Local Requirements.

The proposed rule would modify the existing requirements for control of formaldehyde emissions in § 3280.308, by lowering the maximum emission levels (as measured in the air chamber test specified in § 3280.406) for particleboard materials used in flooring applications from 0.3 parts per million (ppm) to 0.2 ppm; by limiting formaldehyde emissions from other uses of particleboard materials to 0.3 ppm; and by adding new formaldehyde emission controls for medium density fiberboard materials (MDF) of 0.3 ppm. These changes recommended by the MHCC, which are available on-line at [www.regulations.gov](http://www.regulations.gov), would be consistent with formaldehyde emission requirements in prior voluntary consensus standards for particleboard (ANSI-A208.1-1999) and MDF (ANSI A208.2-2004) and would require no change in existing technology for either product to achieve the proposed reduced formaldehyde levels or to meet the new requirements. However, the current national voluntary consensus standards for particleboard (ANSI A-

208.1-2009) and MDF (ANSI A-208.2-2009) further reduces formaldehyde emission limits from those levels being proposed by HUD and were recently revised to harmonize with the formaldehyde emission standards established by the California Air Resource Board's Airborne Toxic Control Measure (CARB ACTM). The CARB ACTM standard for formaldehyde emissions for particleboard is 0.18ppm, but will become 0.09ppm on January 1, 2011. The CARB ACTM standard for MDF is currently 0.21ppm, but will become 0.11ppm for regular MDF on January 1, 2011, and 0.13ppm for thin MDF on January 1, 2012. The Environmental Protection Agency (EPA) is also currently investigating formaldehyde emissions from pressed wood products, including particleboard and MDF. Under a petition filed under the Toxic Substances Control Act,<sup>1</sup> EPA is being asked to extend the CARB ACTM formaldehyde emission limits nationally and to apply those limits to manufactured housing.<sup>2</sup> HUD is seeking comments from the public on whether the CARB ACTM and voluntary consensus standards limits for formaldehyde emissions from particleboard and MDF products should be the subject of future rulemaking.

#### E. Testing

A conforming amendment would be made to § 3280.403, for the testing of skylights consistent with the revisions to § 3280.305(c)(3)(iv) of the Construction and Safety Standards published in the **Federal Register** on November 30, 2005. The conforming amendment provides for skylights to be certified as complying with the AAMA/WDMA Voluntary Specifications for Skylights.

Section 3280.404(c)(2) of the proposed rule would prohibit any window that requires the removal of a sash to meet the egress size provisions of the Manufactured Home Construction and Safety Standards from being classified as an egress window. This proposed change would enhance egress and occupant safety in the event of an emergency.

#### F. Subpart F

The proposed rule would add new section § 3280.504(c) to allow the use of liquid-applied vapor retarders, so long as a nationally recognized testing

agency has approved its use on the specific substrate to which it is to be applied. This addition would codify the current practice of accepting liquid-applied vapor retarders as an alternative to other conventional vapor retarder materials required by this section.

Section 3280.506(c) would be revised to clarify that interior-mounted storm window frames must be sealed in Thermal Uo Value Zone 3. This would reduce air infiltration and heat loss for interior-mounted-type storm windows and improve overall energy efficiency for manufactured homes designed to be located in the most restrictive climatic regions of the country.

Section 3280.509(c) would be amended by replacing the graph for determining the effective R values of compressed insulation with a table that allows for more precisely determining the effects on R values of non-uniform and uniform insulation compression for batt and blown insulation. This proposal would provide a more accurate method for determining effective R value requirements when insulation is compressed or used in sloping roof cavities and would result in more accurate projections of heat loss and heat gain for manufactured homes than would be determined by the current graphical method.

The proposed rule would amend § 3280.510(c), by eliminating the requirement to determine and report the optimal outdoor winter certification temperature for operating economy and energy conservation on the heating certificate. The requirement is being eliminated because this information has been found to be too technical and is not a basis often relied upon by consumers in determining sites for installing their homes.

However, in view of the renewed interest in improving energy conservation, HUD is requesting comments from the public regarding any other information that could be provided on the heating certificate that could be more useful to consumers in this regard. In addition, the information on the comfort cooling certificates required by this section would be amended to refer to the 1997 edition of the ASHRAE Handbook of Fundamentals.

#### G. Plumbing Systems

The proposed rule would make a conforming amendment to § 3280.603(a)(2) on water conservation to limit each water closet to 1.6 gallons of water per flush. Section 3280.607(b)(2)(iii) was amended in the final rule published in the **Federal Register** on November 30, 2005, by

<sup>1</sup> See, Formaldehyde Emissions from Composite Wood Products; Disposition of TSCA Section 21 Petition, 73 FR 36504 (June 27, 2008).

<sup>2</sup> See, Formaldehyde Emissions from Pressed Wood Products, Advance Notice of Proposed Rulemaking and Notice of Public Meetings, 73 FR 73620 (December 3, 2008).

requiring all water closets to be low consumption (1.6 gallons per flush) closets. This conforming amendment would conserve water and help assure the continued availability of adequate water supplies, as well as reduce wastewater flows.

The proposed rule would amend § 3280.603(b)(4), by adding a requirement that the installation instructions required by § 3280.306(b)(4) include a statement that any heat tape or pipe heating cable used be listed for use in manufactured homes. The proposed rule would further amend this section with regard to the requirements for the receptacle outlet for connection of the heat tape or pipe heating cable to conform with the amended provisions of § 3280.806(d).

The proposed rule would amend the table in 3280.604(b)(2), by incorporating standards for the installation of cross-linked polyethylene (PEX) plastic cold and hot water systems. This proposal would permit the use of PEX plastic piping as an alternate piping material to other materials that may currently be used to supply hot and cold water systems.

A new provision would be added in § 3280.607(b)(v) to require that shower, bath, and tub-shower combination valves be either balanced pressure, thermostatic, or a combination of mixing valves that conforms to the requirements of ASSE 1016–1996, Performance Requirements for Individual Thermostatic Pressure-Balancing and Combination Control for Bathing Facilities. These valves would be required to have handle position stops that are adjustable to a maximum setting of 120 °F to prevent scalding and burn injuries to occupants from very hot water. This proposed change would reduce the number of injuries and deaths resulting from tap water scald burns. Further, the Centers for Disease Control (CDC) and other organizations report that a majority of scald burn victims are young children whose injuries may have been prevented by the use of an anti-scald valve.<sup>3</sup> In addition, this proposed change would be consistent with International Residential Code requirements for Single and Two Family Dwellings.

The proposed rule would amend § 3280.607(b)(5)(ii) for the standpipe height required for laundry tubs from 30 inches to 42 inches above its trap and would require the standpipe to terminate in an accessible location no

lower than the top of the clothes washing machine. This increase in standpipe height would be consistent with the International Residential Code requirements for Single and Two Family Dwellings and would prevent backflow and improve operation of clothes washers installed in manufactured homes.

The proposed rule would amend § 3280.609(a)(2), by allowing a two or three compartment sink, up to three individual sinks or up to three lavatories to be connected to one “P” trap, to be considered as a single fixture for the purposes of drainage and ventilation under certain circumstances. This proposal would allow more fixtures to be connected to one “P” trap than is currently permitted by the Standards and would be consistent with other residential model plumbing codes for similar three fixture configurations.

The proposed rule would amend § 3280.610(e), by permitting fixture drains that serve only a single lavatory fixture to be 1¼ inches in diameter. This proposed reduction in drain size for a single lavatory is not significant and would provide adequate drainage flow and venting for individual lavatory fixtures.

The proposed rule would amend the existing requirements for anti-siphon trap vent devices in § 3280.611(d), by redefining these devices as mechanical vents (see § 3280.602) and by expanding the requirements to also include gravity-operated mechanical vents (also known as air admittance valves). This proposal would allow manufacturers to use either type of mechanical vent (anti-siphon vent or air admittance valve) for venting of certain plumbing fixtures. The current standard allows the use of anti-siphon type vents only. In addition, paragraph (f) of this section would be expanded to permit vent terminals either through wall extensions or into mechanical vent devices.

#### H. Heating, Cooling, and Fuel Burning Systems

The proposed rule would amend § 3280.705(b), by allowing the use of corrugated stainless steel tubing (CSST) systems for use in gas piping systems. The inclusion of CSST piping as a permissible alternate gas piping/tubing material is currently permitted to be used in all other residential construction as a gas piping system by the model codes and state and local building codes. The proposed rule would require that CSST gas piping be installed in accordance with the requirements of ANSI/IAS LC–1–1997, Gas Piping Systems Using Corrugated Stainless Steel Tubing. In addition, a

table for sizing CSST systems would be added in § 3280.705(d). Paragraph (h) of this section would also be amended by permitting CSST to be run inside walls, floors, partitions, and roofs under specified conditions.

Sections 3280.707(a) and (d) and 3280.714(a) would amend the energy efficiency and energy conservation requirements for comfort heating systems, water heaters, and cooling appliances so that they comply with the provisions of the National Appliance Energy Conservation Act of 1987, the current applicable requirements for these appliances.

Section 3280.715 would be amended by eliminating the use of Class 2 ducts and by deleting their definition from § 3280.703; by requiring manufacturers instructions to indicate that crossover ducts are not to be in contact with the ground and must be properly supported; and by requiring air supply crossover ducts in all Thermal Zones to have a minimal thermal resistance of R–8, unless installed in a basement. The proposed change to eliminate the use of Class 2 air handling ducts is consistent with the requirements of the International Residential Code for One and Two Family Dwellings, and would improve the fire safety and performance of air handling ducts by requiring the use of Class 0 or 1 ducts, which are more fire resistive than Class 2 ducts. In addition, HUD believes that Class 2 ducts are no longer being used in the production of manufactured homes. The proposal to increase the thermal resistance for crossover ducts would reduce heat loss and improve the energy efficiency of crossover ducts between sections of multi-section manufactured homes.

#### I. Electrical Systems

The proposed rule would amend § 3280.803 by indicating that a 1¼-inch maximum continuous raceway is to be used when installing a power supply cord within the wall from the bottom of the distribution panel to the underside of the floor. This proposed change and clarification is consistent with the current requirements of the National Electrical Code (NEC), NFPA 70–2005, which is currently incorporated by reference in the Manufactured Home Construction and Safety Standards. In addition, the requirements for installing service equipment in or on the home would be revised in paragraph (k)(3) of this section by referencing the appropriate articles of the NEC, NFPA 70–2005.

Section 3280.804(f) would be amended to require the distribution panelboard to be located in an

<sup>3</sup> Centers for Disease Control and Prevention and U.S. Department of Housing and Urban Development. *Healthy Housing Reference Manual*, Atlanta: U.S. Department of Health and Human Services, 2006.

accessible location and not located in a bathroom or clothes closet. This revision is consistent with requirements for acceptable locations for electrical distribution panels in residential model codes and the NEC.

The proposed rule would amend § 3280.805, by requiring all countertop outlets in the kitchen to be supplied by not less than two of the small appliance branch circuits. However, one or more of the small appliance branch circuits may also supply other receptacle outlets in the kitchen, pantry, dining room, and breakfast room. In addition, the proposed rule would amend paragraph (a)(3)(vi) of this section, by requiring that bathroom receptacle outlets be supplied by at least one 20 ampere branch circuit. While such circuits can have no other outlets, it is permissible

to place the outlet for a heat tape or pipe heating cable on a bathroom circuit, provided that all of the bathroom outlets are on the load side of the ground fault circuit interrupter. These proposed changes would be consistent with the requirements in residential model codes and the NEC.

Section 3280.806(d) would be amended by not including receptacle outlets in the floor that are 18 inches or more from the wall as part of the required receptacle outlets for the room; by permitting the heat tape or pipe heating cable outlet to be on the bathroom circuit, provided that all bathroom outlets are on the load side of the ground fault circuit interrupter; and by requiring receptacles in any countertop to not be in a face-up position. These proposed changes

would be consistent with the requirements in residential model codes and the NEC.

*J. Revisions to Standards Incorporated by Reference (Reference Standards)*

The following is a list of the standards incorporated by reference that would be revised by this proposed rule. Each reference standard is preceded with an indicator to identify the type of change being made. A new reference standard being added is indicated by the designation “N,” while a reference standard being updated is indicated by the designation “U.” The sections of the Construction and Safety Standards that would be amended by each modification are also shown on the right of each reference standard being added or updated.

N—AAMA/WDMA 1600 I.S.7 .....	2000	Voluntary Specifications for Skylights .....	3280.403(b)
U—ANSI Z21.23 .....	1993	Gas Appliance Thermostats .....	3280.703
N—ANSI A208.2 .....	1999	Medium Density Fiberboard .....	3280.304(b)
N—ANSI/IAS LC-1 .....	1997	Gas Piping Systems Using Corrugated Stainless Steel Tubing.	3280.705(b)
U—APA S 812R .....	1998	Design and Fabrication of Glued Plywood Lumber Beams PDS supplement #2.	3280.304(b)
U—APA U 814 H .....	1993	Design and Fabrication of Plywood Sandwiched Panels.	3280.304(b)
U—APA U 813 L .....	1996	Design and Fabrication of Plywood Stressed Skin Panels, PDS supplement #3.	3280.304(b)
N—APA .....	2001	Engineered Wood Construction Guide .....	3280.304(b)
N—ASSE 1016 .....	1996	Performance Requirements for Individual Thermostatic Pressure Balancing and Combination Control for Bathing Facilities.	3280.607(b)
U—ASTM C564 .....	1997	Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings.	3280.611(d)
U—ASTM C920 .....	2002	Standard Specification for Elastomeric Joint Sealants	3280.611(d)
U—ASTM D3953 .....	1997	Standard Specification for Strapping, Flat Steel, and Seals.	3280.306(b), 3280.306(g), 3280.611(d)
U—ASTM D4635 .....	2001	Standard Specification for Polyethylene Films Made From Low-density Polyethylene for General Use and Packaging Applications.	
N—ASTM F876 .....	1993	Standard Specification for Crosslinked Polyethylene (PEX) Tubing.	3280.604(b)
N—ASTM F877 .....	1995	Standard Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems.	3280.604(b)
U—NFPA 31 .....	2001	Standard for the Installation of Oil Burning Equipment	3280.703
N—NFPA 253 .....	2000	Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Source.	3280.207(c)
U—PS 2-04 .....	2005	Voluntary Product Standard Performance Standard for Wood-Based Structural-Use Panels.	3280.304(b)
RADCO DS-010 .....	1991	Decorative Gas Appliances for Installation in Solid Fuel Burning Appliances.	3280.703
U—UL 181 .....	1998	Factory Made Air Ducts and Air Connectors .....	3280.703 3280.715(a)

*K. Accessibility Requirements for Persons With Disabilities*

In some situations, manufactured housing units which are subject to HUD’s Manufactured Home Construction and Safety Standards may be provided through a program or activity that receives federal financial assistance from HUD. When this is the

case, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and HUD’s implementing regulations at 24 CFR part 8 would be applicable, including the requirements at 24 CFR 8.22 that address accessibility in new construction. However, these requirements are not applicable to any individual or buyer that obtains Federal

Housing Administration financing when purchasing a manufactured housing unit. When working with a recipient of HUD funds, manufacturers must be prepared to produce manufactured housing units that meet the accessibility standards provided in 24 CFR part 8. There regulations currently incorporate

the Uniform Federal Accessibility Standards (UFAS) (see 24 CFR 8.32).

### III. Findings and Certifications

#### *Regulatory Planning and Review*

The Office of Management and Budget (OMB) reviewed this rule under Executive Order 12866, *Regulatory Planning and Review*. This rule has been determined to be a "significant regulatory action," as defined in section 3(f) of the Order (although not an economically significant regulatory action, as provided under section 3(f)(1) of the Order).

As the preamble highlights, this rule proposes to amend several construction and safety standards under the National Manufactured Housing and Construction and Safety Standards Act of 1974. However, most of the proposed changes would codify existing practices or conform HUD standards to existing building codes. Only two standards included in this rule would have an impact on the production cost of manufactured homes: the requirement that shower and bath valves use anti-scald mixing valves, and the increase in minimum insulation levels for cross-under ducts.

Currently, producers of manufactured housing may use non-pressure balanced mixing valves in bathtubs and showers. The cost of non-pressure balanced mixing valve generally totals \$30 per valve. If this proposed requirement is adopted in the final rule, the per-unit cost to producers to purchase pressure balanced/anti-scald mixing valve would be \$55, or an increase of \$25 per valve. The average number of mixing valves is one per single-section home and two per multi-section home. Thus, the cost is \$25 per single-section home and \$50 per multi-section home.

The number of placements annually since 1999 and the projected annualized aggregate placements from January 2009 through August 2009 have decreased considerably. This trend continues through the latest data, which indicates that the annual rate of placements through August 2009 was 58,100. Of these, 20,900 were single-section homes, 36,000 were double-section homes, and the remaining 1,200 had more than two sections. Although this trend is expected to continue, so that annual placements continue to decrease, this analysis assumes annual production of 58,100. In addition, this analysis assumes that the cost of requiring the use of an anti-scald valve at the point of production of the home is less than installation at some later time. This assumption is based on the fact that replacing a mixing valve with an anti-

scald valve at some later date would require the use of a licensed plumber for several hours to make the change and a higher cost to purchase the anti-scald valve(s) due to the volume purchasing power of manufacturers as compared to individual purchasers.

Accordingly, based on current annual placement rates, the total cost of the anti-scald valve requirement is \$523,000 (\$25 per home \* 20,900 single-section homes). For multi-section homes, the total cost is \$1.86 million (\$50 per home \* 37,000 multi-section homes). The combined cost totals \$2.383 million.

The second cost comes from the increase in the minimum insulation levels for cross-under ducts. These ducts are used in multi-section homes to carry heat from one section to another. Thus, there is no cost increase for single-section homes. The cost per square foot of insulation for multi-section homes would increase from \$1.25 per square foot of R-4 insulated cross-under duct to \$3.50 per square foot of R-8 insulated cross-under duct, or \$2.25 per square foot. On average there are 20 square feet of insulation needed per multi-section home. Thus, the total cost of increasing the minimum insulation level is \$2.615 million (\$2.25 per square foot \* 20 square feet per home \* 58,100 homes).

In estimating the benefits of these two requirements, HUD has considered that requiring anti-scald valves would reduce the number of injuries and deaths resulting from tap water scald burns. Although statistics specific to scald burns in manufactured homes are unavailable, according to Safe Kids, a nonprofit organization dedicated to preventing accidental childhood injury, hot tap water accounts for nearly 25 percent of all scald burns among children and is associated with more deaths and hospitalizations than any other hot liquid burns. Statistics reported by the CDC indicate that almost 3,000 people are hospitalized annually due to scald burns from tap water in the home.<sup>4</sup> The Safe Kids organization, however, reports that in 2002, 22,600 children received emergency room treatments for scald burns,<sup>5</sup> approximately 25 percent (5,560) coming from hot tap water. This analysis uses the CDC estimate of 3,000, which is a conservative estimate that

represents the lower bound of scald injuries prevented.

The Safe Kids organization estimates that hospital costs for admitted scald burn patients average \$22,700.<sup>6</sup> Although this estimate includes only children under the age of 14, this group comprises a large percentage of scald burn injuries. Finally, based on the number of occupied housing units in the 2007 American Housing Survey (AHS),<sup>7</sup> newly placed manufactured housing accounts for 0.05% of occupied housing units. If tap water scalds are evenly distributed across all housing units,<sup>8</sup> then 1.5 burns (3,000 total scald burns \* 0.05% in newly-placed manufactured housing) could be prevented annually for annual savings of \$35,744 (3,000 burn victims \* 0.05% in manufactured homes \* \$22,700 in hospital costs).<sup>9</sup> OMB Circular A-94, which provides guidance on economic analyses required under Executive Order 12866, requires the present discounted value of annual benefits using alternative discount rates 3 percent and 7 percent. The discounted present value of savings from the use of anti-scald valves totals \$1.227 million using the 3 percent rate and \$0.546 million using the 7 percent rate. Note that using the Safe Kids estimate of 5,560 would increase these amounts to almost 3 scald burns and \$66,246 in hospital care avoided annually. The discounted present value of savings assuming the higher estimate of burns totals \$2.274 million using the 3 percent discount rate and \$1.013 million using the 7 percent discount rate.

In addition to prevented injuries and hospitalizations, the anti-scald valve requirement will also reduce the number of deaths resulting from scald burns. Aside from the 3,000 to 5,560 scald burns occurring each year, the National Coalition to Prevent Childhood Injury estimates that approximately 100 deaths result from scald burns annually. As explained above, newly placed manufactured housing represents 0.05 percent of occupied housing units. Thus, if tap water scalds are evenly

<sup>6</sup>National SAFE KIDS Campaign (NSKC). Burn Injury Fact Sheet. Washington (DC): NSKC, 2004.

<sup>7</sup>See 2007 AHS, Table 2-1.

<sup>8</sup>If state and local codes that regulate traditional "stick-built" housing predominantly require anti-scald valves, then this distribution may not be even across housing types. For this reason, manufactured homes may account for a larger than proportionate share of scald burns.

<sup>9</sup>Anti-scald valves decrease the maximum water temperature to 120 degrees. At this temperature, it would take 8 minutes of exposure to receive second-degree burns and 10 minutes for third-degree burns. While this does not completely eliminate the risk of scald burns, this risk does not need to be completely eliminated for benefits to be realized.

<sup>4</sup>Centers for Disease Control and Prevention and U.S. Department of Housing and Urban Development. *Healthy Housing Reference Manual*. Atlanta: U.S. Department of Health and Human Services, 2006.

<sup>5</sup>Safe Kids Web site: [http://www.usa.safekids.org/tier3\\_cd.cfm?folder\\_id=540&content\\_item\\_id=1011](http://www.usa.safekids.org/tier3_cd.cfm?folder_id=540&content_item_id=1011).

distributed across all housing units, then 0.05 burns annually, or one death every 20 years, would be prevented. Government estimates of the value of a human life range from \$5 million used by the Consumer Product Safety Commission to \$7.22 million used by the Environmental Protection Agency (EPA). Using the lower estimate of \$5 million, the discounted present value of prevented deaths from the use of anti-scald valves totals \$9.010 million using

the 3 percent rate and \$4.012 million using the 7 percent rate.

The insulation requirement will increase the energy efficiency of manufactured homes, which will decrease annual energy costs for homeowners. Based on estimates from the Department of Energy's Energy Gauge model, owners of multi-section homes, to which this requirement applies, would save approximately \$3 in energy costs annually. Thus, the total annual benefit of this provision is

\$111,600 (\$3 per home \* 37,200 homes). Calculating the present value of the stream of benefits into the future yields a discounted present value of \$3.832 million in energy savings using the 3 percent discount rate and \$1.706 million using the 7 percent discount rate.

A summary of HUD's calculation of benefits from the anti-scald valve and insulation requirements follows:

**BILLING CODE 4210-67-P**

## Benefits of Proposed Rule

**Benefits of Anti-Scald Valve Requirement*****Value of Injuries Prevented***

Annual hospitalizations due to scald burns from tap water	3,000
New manufactured housing share of total occupied housing units	0.05%
Average Cost of Scald Burn Victim	22,700
<b>Annual Value of Benefits</b>	<b>\$35,744</b>
<b>Discounted Present Value (3% Discount Rate)</b>	<b>\$1,227,178</b>
<b>Discounted Present Value (7% Discount Rate)</b>	<b>\$546,358</b>

***Value of Deaths Prevented***

Annual deaths due to scald burns from tap water	100
New manufactured housing share of total occupied housing units	0.05%
Value of life	5,000,000
<b>Value of Benefits</b>	<b>\$262,438</b>
<b>Discounted Present Value (3% Discount Rate)</b>	<b>\$9,010,323</b>
<b>Discounted Present Value (7% Discount Rate)</b>	<b>\$4,011,532</b>

**Benefits of Insulation Requirement**

	Single	Multi	Total
Number of Homes	20,900	37,200	58,100
Annual Savings per Home	0.00	3.00	
<b>Annual Value of Benefits</b>	<b>\$0</b>	<b>\$111,600</b>	<b>\$111,600</b>
<b>Discounted Present Value (3% Discount Rate)</b>			<b>\$3,831,566</b>
<b>Discounted Present Value (7% Discount Rate)</b>			<b>\$1,705,872</b>

**Discounted Present Value of Benefits of Rule**

	Discount Rate	
	3%	7%
Anti-Scald Valve Requirement	\$10,237,502	\$4,557,890
<i>Injuries Prevented</i>	<i>1,227,178</i>	<i>546,358</i>
<i>Deaths Prevented</i>	<i>9,010,323</i>	<i>4,011,532</i>
Insulation Requirement	3,831,566	1,705,872
<b>Discounted Present Value of Benefits</b>	<b>\$14,069,068</b>	<b>\$6,263,762</b>

**sources:**<sup>1</sup>American Burn Association.<sup>2</sup>American Housing Survey (AHS), U.S. Department of Housing and Urban Development.<sup>3</sup>National Safe Kids Campaign.

In summary, this proposed rule would impose costs equaling \$4.057 million and create discounted present value of benefits totaling \$6.264 million to \$14.069 million, depending on the discount rate. Thus, the total impact of this rule, the sum of the total costs and benefits, equals between \$10.321 million and \$18.126 million annually. Consequently, the rule was determined not economically significant within the meaning of the Executive Order.

The docket file is available for public inspection in the Regulations Division, Office of General Counsel, Department of Housing and Urban Development, 451 7th Street, SW., Washington, DC 20410-0500. Due to security measures at the HUD Headquarters building, an advance appointment to review the public comments must be scheduled by calling the Regulations Division at 202-402-3055 (this is not a toll-free number). Individuals with speech or hearing impairments may access this number through TTY by calling the Federal Information Relay Service at 800-877-8339.

#### *Paperwork Reduction Act*

The proposed modified information collection requirements contained in this proposed rule, at §§ 3280.510, 3280.511, 3280.804, and 3280.813, have been submitted to the Office of Management and Budget (OMB) for review under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501-3520). In accordance with the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information, unless the collection displays a currently valid OMB control number. OMB has issued HUD the control number 2502-0253 for the information collection requirements under the current Manufactured Housing Construction and Safety Standards Program.

The public reporting burden for this modified collection of information is estimated to include the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. These proposed modifications to the existing heating and cooling certificates and two labels would result in no additional burden hours for completing the information collection currently accepted under control number 2502-0253.

In accordance with 5 CFR 1320.8(d)(1), HUD is soliciting comments from members of the public and affected agencies concerning the proposed collection of information to:

(1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated collection techniques or other forms of information technology, *e.g.*, permitting electronic submission of responses.

Interested persons are invited to submit comments regarding the information collection requirements in this proposal. Comments must refer to the proposal by name and docket number (FR-5221-P-01) and must be sent to:

HUD Desk Officer, Office of Management and Budget, New Executive Office Building, Washington, DC 20503; and Reports Liaison Officer, Office of the Assistant Secretary for Housing—Federal Housing Commissioner, Department of Housing and Urban Development, 451 7th Street, SW., Room 9116, Washington, DC 20410-8000.

#### *Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 establishes requirements for federal agencies to assess the effects of their regulatory actions on state, local, and tribal governments and the private sector. This rule will not impose any federal mandates on any state, local, or tribal government or the private sector within the meaning of the Unfunded Mandates Reform Act of 1995.

#### *Environmental Review*

A Finding of No Significant Impact with respect to the environment has been made in accordance with HUD regulations at 24 CFR part 50, which implement section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)(C)). The Finding of No Significant Impact is available for public inspection between the hours of 8 a.m. and 5 p.m. weekdays in the Regulations Division, Office of General Counsel, Department of Housing and Urban Development, 451 7th Street, SW., Room 10276, Washington, DC 20410-0500. Due to security measures at the HUD Headquarters building, please schedule

an appointment to review the finding by calling the Regulations Division at 202-402-3055 (this is not a toll-free number). Individuals with speech or hearing impairments may access this number through TTY by calling the Federal Information Relay Service at 800-877-8339.

#### *Regulatory Flexibility Act*

The Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements, unless the agency certifies that the rule would not have a significant economic impact on a substantial number of small entities. This rule would regulate establishments primarily engaged in making manufactured homes (NAICS 32991). The Small Business Administration's size standards define an establishment primarily engaged in making manufactured homes as small if it does not exceed 500 employees. Of the 222 firms included under this NAICS definition, 198 are small manufacturers that fall below the small business threshold of 500 employees. The proposed rule will apply to all of the manufacturers. The rule would thus affect a substantial number of small entities, but would not have a significant economic impact on these small entities.

Based on an analysis of the costs and the fact that a small manufacturer would just as likely produce homes at the higher end of the cost spectrum as would a major producer, evaluating the effect of the increase is not discernible based on the size of the manufacturing operation. For the reasons stated below, HUD knows of no instance of a manufacturer with fewer than 500 employees that would be economically affected significantly by this rule. As the preamble discusses, the overwhelming majority of the revisions to the Construction and Safety Standards proposed by this rule are directed to relieving burden on all manufacturers by having the Standards be consistent with current design and construction standards or state and local codes. Reducing the differences between the federal standards for design and construction of manufactured homes with current industry standards reduces burden for all manufacturers.

As discussed under the "Regulatory Planning and Review" section of this preamble, the annual economic impact of this rule is not significant, since the changes made by this rule are largely changes conforming to current industry practices and current building codes.

This assessment shows that this does not represent a significant economic effect on either an industry-wide or per-unit basis.

The relatively small increase in cost for the manufacturer associated with this proposed rule would not impose a significant burden on a small business for manufacturing homes that can cost the purchaser between \$40,000 and \$100,000. Therefore, although this rule would affect a substantial number of small entities, it would not have a significant economic impact on them. Therefore, the undersigned certifies that this rule will not have a significant impact on a substantial number of small entities.

Notwithstanding HUD's view that this rule will not have a significant economic effect on a substantial number of small entities, HUD specifically invites comments regarding this certification and any less burdensome alternatives to this rule that will meet HUD's objectives, as described in this preamble.

#### *Executive Order 13132, Federalism*

Executive Order 13132 (entitled "Federalism") prohibits an agency from publishing any rule that has federalism implications if the rule either: (i) Imposes substantial direct compliance costs on state and local governments and is not required by statute, or (2) preempts state law, unless the agency meets the consultation and funding requirements of section 6 of the Order. This proposed rule does not have federalism implications, within the meaning of the Executive Orders, and would not impose substantial direct compliance costs on state and local governments nor preempt state law within the meaning of the Order.

#### **IV. Incorporation by Reference**

Before HUD issues a final rule, these reference standards will be approved by the Director of the Federal Register for incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of these standards may be obtained from the following organizations:

- AAMA—American Architectural Manufacturers Association, 1540 East Sundee Road, Palatine, Illinois 60067. <http://www.aamanet.org>.
- ANSI—American National Standards Institute, 11 West 42nd Street, New York, New York 10036, (212) 642-4900, fax number (212) 398-0023, <http://www.ansi.org>.
- APA—The Engineered Wood Association, 7011 South 19th Street, Tacoma, Washington 98411, (253)

565-6600, fax number (253) 565-7265, <http://www.apawood.org>.

ASSE—American Society of Sanitary Engineering, PO Box 40362, Bay Village, Ohio 44140, (216) 835-3040, fax number (216) 835-3488, <http://www.asse-plumbing.org>.

ASTM—American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428, (610) 832-9500, fax number (610) 832-9555, <http://www.astm.org>.

CSA (IAS)—CSA International (formerly International Approval Services), 8501 East Pleasant Valley Road, Cleveland, Ohio 44131, (216) 524-4990, fax number (216) 642-3463, <http://www.csa-international.org>.

NFPA—National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269, (617) 770-3000, fax number (617) 770-0700, <http://www.nfpa.org>.

PS—National Institute of Standards and Technology, Voluntary Product Standards, Gaithersburg, Maryland 20810, (301) 975-2000, fax number (301) 926-1559, <http://www.nist.gov>.

RADCO—Resources, Applications, Designs, & Controls, Inc., 3220 East 59th Street, Long Beach, California 90805, <http://www.radcoinc.com>.

UL—Underwriters Laboratories, 333 Pfingsten Road, Northbrook, Illinois 60062, (847) 272-8800, fax number (847) 509-6257, <http://www.ul.com>.

WDMA—Window & Door Manufacturers Association, 1400 East Touhy Avenue, Des Plaines, Illinois 60018, (847) 299-5200, fax number (847) 299-1286, <http://www.wdma.com>.

#### **List of Subjects in 24 CFR Part 3280**

Housing standards, Manufactured homes.

#### **Catalog of Federal Domestic Assistance**

The Catalog of Federal Domestic Assistance number for Manufactured Housing Construction and Safety Standards is 14.171.

Accordingly, for the reasons stated in the preamble, HUD proposes to amend 24 CFR part 3280 as follows:

#### **PART 3280—MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS**

1. The authority citation for part 3280 continues to read as follows:

**Authority:** 42 U.S.C. 3535(d), 5403, and 5424.

2. In § 3280.4, revise paragraph (a) and add a reference to RADCO in alphabetical order under paragraph (b) to read as follows:

#### **§ 3280.4 Incorporation by reference.**

(a) The specifications, standards, and codes of the following organizations are incorporated by reference. Reference standards have the same force and effect as the standards in this part. Where two or more referenced standards are equivalent in application, the manufacturer has the option to incorporate into the manufactured home design and construction the referenced standard of its choosing. When reference standards and the standards in this part are inconsistent, however, the requirements of this part must prevail to the extent of the inconsistency.

(b) \* \* \*  
RADCO—Resources, Applications, Designs, & Controls, 3220 East 59th Street, Long Beach, California 90805.  
\* \* \* \* \*

3. In § 3280.105, revise paragraphs (a)(2)(iv) and (b)(2) to read as follows:

#### **§ 3280.105 Exit facilities; exterior doors.**

(a) \* \* \*  
(2) \* \* \*

(iv) One of the required exit doors must be accessible from the doorway of each bedroom without traveling more than 35 feet. The travel distance to the exit door must be measured on the floor or other walking surface along the center-line of the natural and unobstructed path of travel starting at the center of the bedroom door, curving around any corners or permanent obstructions with a one foot clearance from, and ending at, the center of the exit door.

(b) \* \* \*

(2) All exterior swinging doors must provide a minimum 28-inch wide x 74-inch high clear opening. Door seals are permitted to reduce the opening, either vertically or horizontally, a maximum of one inch. All exterior sliding glass doors must provide a minimum 28-inch wide x 72-inch high clear opening.

\* \* \* \* \*

4. Revise § 3280.111 to read as follows:

#### **§ 3280.111 Toilet compartments.**

Each toilet compartment must have a minimum width of 30 inches, with a minimum clear space of 21 inches in front of each toilet. A toilet located adjacent to a wall must have the center-line of the toilet located a minimum of 15 inches from the wall. A toilet located adjacent to a tub must have the center-line of the toilet located a minimum of 12 inches from the outside edge of the tub.

5. Amend § 3280.113 by revising paragraph (b) and adding new paragraphs (c) and (d) to read as follows:

**§ 3280.113 Glass and glazed openings.**

\* \* \* \* \*

(b) *Hazardous locations requiring safety glazing.* Except as provided in paragraph (d) of this section, the following locations and areas require the use of safety glazing conforming to the requirements of paragraph (c) of this section:

- (1) Glazing in all entrance or exit doors;
- (2) Glazing in fixed and sliding panels of sliding glass doors;
- (3) Glazing in storm type doors;
- (4) Glazing in unframed side-hinged swinging doors;
- (5) Glazing in doors and fixed panels less than 60 inches above the room floor level that enclose bathtubs, showers, hydromassage tubs, hot tubs, whirlpools, saunas;
- (6) Glazing within 12 inches horizontally, as measured from the edge of the door in the closed position, and 60 inches vertically as measured from the room floor level, adjacent to and in the same plane of a door;
- (7) Glazing within 36 inches of an interior room walking surface when the glazing meets all of the following:
  - (i) Individual glazed panels exceed 9 square feet in area in an exposed surface area;
  - (ii) The bottom edge of the exposed glazing is less than 19 inches above the room floor level; and
  - (iii) The top edge of the exposed glazing is greater than 36 inches above the room floor level.
- (8) Glazing in rails and guardrails; and
- (9) Glazing in unbacked mirrored wardrobe doors (*i.e.*, mirrors that are not secured to a backing that is capable of being the door itself).

(c) Safety glazing material is considered to be any glazing material capable of meeting the requirements of CPSC 16 CFR part 1201, or the Safety Performance Specifications and Methods of Test for Safety Glazing Materials Used in Buildings, ANSI Z97.1–1984.

(d) Glazing in the following locations is not required to meet the requirements in paragraph (b) of this section:

- (1) Openings in doors through which a 3-inch sphere is unable to pass;
- (2) Leaded and decorative glazed panels;
- (3) Glazing in jalousie type doors;
- (4) Glazing as described in paragraph (b)(6) of this section when an intervening wall or other permanent barrier exists between the door and the glazing;
- (5) Glazing as described in paragraph (b)(7) of this section when a protective bar or member is installed horizontally between 34 inches and 38 inches above

the room floor level, as long as the bar or member is a minimum of 1½ inches in height and capable of resisting a horizontal load of 50 pounds per lineal foot; and

(6) Mirrors mounted on a flush door surface or solid wall surface.

6. In § 3280.204, revise paragraph (c) to read as follows:

**§ 3280.204 Kitchen cabinet protection.**

\* \* \* \* \*

(c) *Alternative compliance.* When all exposed surfaces along the bottoms and sides of combustible kitchen cabinets are protected as described in paragraph (a) of this section, the metal hood, the 5/16-inch thick gypsum board or equivalent material, and the 3/8-inch airspace required by paragraph (a) of this section can be omitted, provided that:

- (1) A microwave oven is installed between the cabinet and the range; and
- (2) The microwave oven is equivalent in fire protection to the metal range hood required by paragraph (a) of this section; and
- (3) The microwave oven is certified to be in conformance with Microwave Cooking Appliances, UL 923–2002.

\* \* \* \* \*

**§§ 3280.207 through 3280.209****[Redesignated as §§ 3280.208 through 3280.210]**

7. Redesignate §§ 3280.207 through 3280.209 as §§ 3280.208 through 3280.210, respectively.

8. Add a new § 3280.207 to read as follows:

**§ 3280.207 Requirements for thermal insulating materials.**

(a) *General.* Except for foam plastic materials and as provided in this section, exposed and concealed thermal insulating materials, including any facings, must be tested in accordance with NFPA 255–96, Standard Method of Test of Surface Burning Characteristics of Building Materials, and must have a flame spread index of 25 or less and a smoke developed index of 450 or less. The flame spread and smoke developed limitations do not apply to:

(1) Coverings and facings of insulation batts or blankets installed in concealed spaces when the facings are in substantial contact with the unexposed surface of wall, floor, or ceiling finish; or

(2) Cellulose loose-fill insulation that complies with paragraph (b) of this section.

(b) *Loose-fill insulation.* (1) Cellulose loose-fill insulation that is not spray applied or self-supporting must comply with, and each package must be labeled

in accordance with, the Consumer Product Safety Commission requirements in 16 CFR parts 1209 and 1404.

(2) Other loose-fill insulation that cannot be mounted in the NFPA 255–96 test apparatus without a screen or other artificial support must be tested in accordance with CAN/ULC–S102.2–M88, Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Covering, and Miscellaneous Materials and Assemblies, and must have a flame spread index of 25 or less and a smoke developed index of 450 or less.

(c) *Attic locations.* Exposed insulation installed on the floor or ceiling forming the lower boundary of the attic must be tested in accordance with NFPA 253–2000, Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source, and must have a critical radiant flux of not less than 0.12 watt/cm<sup>2</sup>.

9. Revise § 3280.301 to read as follows:

**§ 3280.301 Scope.**

This subpart covers the minimum requirements for materials, products, equipment, and workmanship needed to assure that the manufactured home will provide the following:

- (a) Structural strength and rigidity;
- (b) Protection against corrosion, decay, insects, rodents, and other similar destructive forces;
- (c) Protection against wind hazards;
- (d) Resistance to the elements; and
- (e) Durability and economy of maintenance.

10. In § 3280.304(b)(1), in the list under the undesignated heading “Wood and Wood Products”:

a. Revise the references to “Design and Fabrication of Glued Plywood-Lumber Beams,” “Design and Fabrication of Plywood Sandwich Panels,” and “Design and Fabrication of Plywood Stressed Skin Panels;”

b. Remove the reference to “Voluntary Product Standards, Performance Standard for Wood-Based Structural Use Panels,” and add in its place a reference to “Performance Standards for Wood-Based Structural Use Panels”; and

c. Add new reference standards for “Engineered Wood Construction Guide” and for “Medium Density Fiberboard (MDF),” immediately preceding the undesignated heading “Other”.

The revisions and additions read as follows:

**§ 3280.304 Materials.**

\* \* \* \* \*

(b)(1) \* \* \*

Wood and Wood Products

\* \* \* \* \*

Design and Fabrication of Glued Plywood-Lumber Beams, Suppl. 2—APA—S 812R, 1998.

Design and Fabrication of Plywood Sandwich Panels—APA—U814 H, 1993. Performance Standard for Wood-Based Structural Use Panels—PS 2—04, 2005.

Design and Fabrication of Plywood Stressed-Skin Panels, Suppl. 3—APA—U 813L, 1996.

Engineered Wood Construction Guide—APA, 2001.

Medium Density Fiberboard (MDF)—ANSI A208.2—1999.

11. In § 3280.305, revise paragraphs (c)(1)(i), (c)(2)(iv), and (c)(3)(ii) to read as follows:

§ 3280.305 Structural design requirements.

- (c) \* \* \* (1) \* \* \*

(i) Standard wind loads (Zone I). When a manufactured home is not designed to resist the wind loads for high wind areas (Zone II or Zone III) specified in paragraph (c)(1)(ii) of this section, the manufactured home and each of its wind-resisting parts and portions must be designed for horizontal wind loads of not less than 15 psf and a net uplift roof load of not less than 9 psf. The net uplift roof load must not be reduced by the dead load of the roof structure for the purposes of engineering design or structural load testing.

- (2) \* \* \*

(iv) Consideration of Local Requirements. For areas where wind mapping data or records or the requirements of the State or local authority indicate wind speeds in excess of those identified in this section, the Department may establish, through rulemaking, more stringent requirements for manufactured homes to be installed in such areas.

- (3) \* \* \*

(ii) Consideration of Local Requirements. For exposures in areas (mountainous or other) where recognized snow records, wind records, or the requirements of the State or local authority indicate significant differences from the loads stated in this paragraph (c)(3), the Department may establish, through rulemaking, more stringent requirements for manufactured homes to be installed in such areas. For snow loads, such requirements must be based on a roof snow load of 0.6 of the ground snow load for areas exposed to wind

and a roof snow load of 0.8 of the ground snow load for sheltered areas.

12. In § 3280.306, revise paragraphs (b)(2)(v) and (g)(2) to read as follows:

§ 3280.306 Windstorm protection.

- (b) \* \* \* (2) \* \* \*

(v) That anchoring equipment should be certified by a registered professional engineer or architect to resist these specified forces in accordance with testing procedures in ASTM D3953, Standard Specification for Strapping, Flat Steel and Seals, 1997.

- (g) \* \* \*

(2) Type 1, Finish B, Grade 1 steel strapping, 1¼ inches wide and 0.035 inches in thickness, certified by a registered professional engineer or architect as conforming with ASTM D3953, Standard Specification for Strapping, Flat Steel and Seals, 1997.

13. In § 3280.308, revise paragraph (a)(2), and add paragraphs (a)(3) and (a)(4) to read as follows:

§ 3280.308 Formaldehyde emission controls for certain wood products.

- (a) \* \* \*

(2) Particleboard used as flooring materials must not emit formaldehyde in excess of 0.20 parts per million (ppm), as measured by the air chamber test specified in § 3280.406.

(3) Particleboard materials used in applications other than flooring must not emit formaldehyde in excess of 0.30 ppm, as measured by the air chamber test specified in § 3280.406.

(4) Medium Density Fiberboard (MDF) must not emit formaldehyde in excess of 0.3 ppm, as measured by the air chamber test specified in § 3280.406.

14. In § 3280.403, revise the section heading, revise paragraph (a), redesignate paragraph (b) as (b)(1), add paragraph (b)(2), revise paragraph (c), and add paragraph (e)(3) to read as follows:

§ 3280.403 Requirements for windows, sliding glass doors, and skylights.

(a) Scope. This section establishes the requirements for prime windows and sliding glass doors, except that windows used in an entry door are components of the door and are excluded from these requirements.

- (b) \* \* \*

(2) All skylights must comply with AAMA/WDMA 1600/I.S 7–00, Voluntary Specifications for Skylights. Skylights must withstand the roof loads for the applicable Roof Load Zone specified in § 3280.305(c)(3), and the following wind loads:

(i) For Wind Zone I, the wind loads specified in § 3280.305(c)(1)(i); and

(ii) For Wind Zones II and III, the wind loads specified for exterior roof coverings, sheathing, and fastenings in § 3280.305(c)(1)(ii).

(c) Installation. All primary windows, sliding glass doors, and skylights must be installed in a manner that allows proper operation and provides protection against the elements, as required by § 3280.307.

- (e) \* \* \*

(3) All skylights installed in manufactured homes must be certified as complying with AAMA/WDMA 1600/I.S 7–00, Voluntary Specifications for Skylights. This certification must be based on applicable loads specified in paragraph (b) of this section.

15. In § 3280.404, revise paragraph (c)(2) and add paragraph (c)(3) to read as follows:

§ 3280.404 Standard for egress windows and devices for use in manufactured homes.

- (c) \* \* \*

(2) An operational check of each installed egress window or device must be made at the manufactured home factory. All egress windows and devices must be capable of being opened to the minimum required dimensions by normal operation of the window without binding or requiring the use of tools. Any window or device failing this check must be repaired or replaced. A repaired window must conform to its certification. Any repaired or replaced window or device must pass the operational check.

(3) Windows that require the removal of the sash to meet egress size requirements are prohibited.

16. Revise § 3280.503 to read as follows:

§ 3280.503 Materials.

Materials used for insulation and the thermal and pressure envelopes must be of proven effectiveness and adequate durability to ensure that required design conditions concerning thermal transmission and energy conservation are attained.

17. In § 3280.504, redesignate existing paragraph (c) as paragraph (d) and add new paragraph (c) to read as follows:

§ 3280.504 Condensation control and installation of vapor retarders.

- (c) Liquid Applied Vapor Retarders.

Each liquid applied vapor retarder must

be tested by a nationally recognized testing agency for use on the specific substrate to which it is applied. The test report must include the perm rating, as measured by ASTM E 96–95, Standard Test Methods for Water Vapor Transmission of Materials, and associated application rate for each specific substrate.

\* \* \* \* \*

18. In § 3280.505, revise paragraph (a) to read as follows:

**§ 3280.505 Air infiltration.**

(a) *Envelope air infiltration.* The pressure envelope must be designed and constructed to limit air infiltration to the living area of the home. Any design, material, method, or combination thereof that accomplishes this goal may be used. The goals of the infiltration control criteria are to reduce heat loss/heat gain due to infiltration, limit moisture transfer that causes condensation, and reduce draft that causes comfort problems.

\* \* \* \* \*

19. In § 3280.506, revise paragraph (c) to read as follows:

**§ 3280.506 Heat loss/heat gain.**

\* \* \* \* \*

(c) Manufactured homes designed for Uo Value Zone 3 must be factory-equipped with storm windows or insulating glass. Interior mounted storm window frames must be sealed.

20. In § 3280.508, revise paragraph (c) to read as follows:

**§ 3280.508 Heat loss, heat gain, and cooling load calculations.**

\* \* \* \* \*

(c) Areas where the insulation does not fully cover a surface or is compressed must be accounted for in the U-calculation. (See § 3280.506.) The effect of framing on the U-value must be included in the Uo calculation. Other low-R-value heat-flow paths (“thermal shorts”) must be explicitly accounted for in the calculation of the transmission heat loss coefficient if, in the aggregate, all types of low-R-value paths amount to

more than one percent of the total exterior surface area, or 40 square feet, whichever is less. Areas will be considered low-R-value heat-flow paths if both of the following apply:

(1) They separate conditioned and unconditioned space; and

(2) They are not insulated to a level that is at least one-half the nominal insulation level of the surrounding building component.

\* \* \* \* \*

21. In § 3280.509, revise paragraph (c) to read as follows:

**§ 3280.509 Criteria in absence of specific data.**

\* \* \* \* \*

(c) *Insulation compression.* Insulation compressed to less than nominal thickness and loose-fill insulation in sloping cavities must have its nominal R-values reduced in compressed areas in accordance with the following table:

TABLE TO § 3280.509(C)—EFFECT OF INSULATION COMPRESSION AND RESTRICTION ON R-VALUES

Original thickness %	Non-uniform (a) restriction		Uniform (b) compression Batt (%)	Original thickness %	Non-uniform (a) restriction		Uniform (b) compression Batt (%)
	Batt (%)	Blown (%)			Batt (%)	Blown (%)	
0	20	15	0				
1	26	21	1	51	81	73	62
2	32	25	2	52	81	73	63
3	36	28	4	53	82	74	64
4	38	30	5	54	82	75	65
5	41	32	7	55	83	75	65
6	43	33	8	56	83	76	66
7	45	35	10	57	84	76	67
8	46	36	11	58	84	77	68
9	48	38	13	59	84	78	69
10	49	39	14	60	85	78	70
11	51	40	15	61	85	79	71
12	52	42	17	62	86	79	72
13	53	43	18	63	86	80	73
14	54	44	20	64	87	81	74
15	55	45	21	65	87	81	74
16	57	46	22	66	88	82	75
17	58	47	24	67	88	82	76
18	59	48	25	68	88	83	77
19	59	49	26	69	89	84	78
20	60	50	28	70	89	84	78
21	61	51	29	71	90	85	79
22	62	52	30	72	90	85	80
23	63	52	31	73	90	86	81
24	64	53	33	74	91	86	82
25	65	54	34	75	91	87	82
26	65	55	35	76	92	87	83
27	66	56	36	77	92	88	84
28	67	57	37	78	92	89	85
29	68	57	39	79	93	89	85
30	68	58	40	80	93	90	86
31	69	59	41	81	93	90	87
32	70	60	42	82	94	91	88
33	70	60	43	83	94	91	88
34	71	61	44	84	95	92	89
35	72	62	45	85	95	92	90
36	72	63	47	86	95	93	91

TABLE TO § 3280.509(C)—EFFECT OF INSULATION COMPRESSION AND RESTRICTION ON R-VALUES—Continued

Original thickness %	Non-uniform (a) restriction		Uniform (b) compression Batt (%)	Original thickness %	Non-uniform (a) restriction		Uniform (b) compression Batt (%)
	Batt (%)	Blown (%)			Batt (%)	Blown (%)	
37	73	63	48	87	96	93	91
38	74	64	49	88	96	94	92
39	74	65	50	89	96	94	93
40	75	65	51	90	97	95	93
41	75	66	52	91	97	95	94
42	76	67	53	92	97	96	95
43	76	68	54	93	98	96	95
44	77	68	55	94	98	97	96
45	78	69	56	95	98	97	97
46	78	70	57	96	99	98	97
47	79	70	58	97	99	98	98
48	79	71	59	98	99	99	99
49	80	71	60	99	100	99	99
50	80	72	61	100	100	100	100

Note: To use this table, first compute the restricted insulation thickness as a fraction of the uncompressed (full) insulation thickness. Then look up the R-value remaining from the appropriate column (Non-uniform Restriction, Batt Non-uniform Restriction, Blown or Uniform Compression, Batt). Example: Assume a section of loose-fill ceiling insulation went from R-25 insulation at a height of 10 inches to a minimum height of 2 inches at the edge of the ceiling. The ratio of minimum to full thickness is 0.20 (2 divided by 10). Look up 0.20 (20 percent), read across to column 3 (Non-uniform Restriction, Blown), and read 50 percent. Therefore, the R-value of the loose-fill insulation over the restricted area would be R-12.5 (50 percent of 25).

- (a) Non-uniform restriction is that which occurs between non-parallel planes, such as in the ceiling near the eaves.
- (b) Uniform compression is compression between parallel planes, such as that which occurs in a wall.

\* \* \* \* \*

22. In § 3280.510, revise paragraphs (b) and (c) to read as follows:

**§ 3280.510 Heat loss certificate.**

\* \* \* \* \*

(b) *Outdoor temperature.* The heating certificate must indicate the lowest outdoor temperature at which the installed heating equipment will maintain a 70°F temperature inside the home.

(c) *Text of certificate.*

**HEATING CERTIFICATE**

Home Manufacturer \_\_\_\_\_  
 Plant Location \_\_\_\_\_  
 Home Model \_\_\_\_\_

(Include Uo Value Zone Map)

This manufactured home has been thermally insulated to conform with the requirements of the Federal Manufactured Home Construction and Safety Standards for all locations within Uo Value.

Zone. \_\_\_\_\_  
 Heating Equipment Manufacturer \_\_\_\_\_  
 Heating Equipment Model \_\_\_\_\_

The above heating equipment has the capacity to maintain an average 70 °F temperature in this home at outdoor temperatures of \_\_\_\_\_ °F.

\* \* \* \* \*

23. In § 3280.511, revise paragraphs (a)(1) and (a)(2) to read as follows:

**§ 3280.511 Comfort cooling certificate and information.**

(a) \* \* \*

(1) *Alternative 1.* If a central air conditioning system is provided by the home manufacturer, the heat gain calculation necessary to properly size

the air conditioning equipment must be made in accordance with the procedures outlined in Chapter 27 of the 1997 ASHRAE Handbook of Fundamentals, with an assumed location and orientation. The following must be supplied in the Comfort Cooling Certificate:

Air Conditioner Manufacturer \_\_\_\_\_  
 Air Conditioner Model \_\_\_\_\_  
 Certified Capacity \_\_\_\_\_, BTU/hour in accordance with the appropriate Air Conditioning and Refrigeration Institute Standards.

The central air conditioning system provided with this home has been sized, assuming an orientation of the front (hitch end) of the home facing \_\_\_\_\_, and is designed on the basis of a 75 °F indoor temperature and an outdoor temperature of \_\_\_\_\_ °F dry bulb and \_\_\_\_\_ °F wet bulb.

**Alternative 1**

**Comfort Cooling Certificate Example**  
 Manufactured Home Manufacturer: \_\_\_\_\_  
 Plant Location: \_\_\_\_\_  
 Manufactured Home Model: \_\_\_\_\_  
 Air Conditioner Manufacturer: \_\_\_\_\_

Certified capacity \_\_\_\_\_ BTU/hour, in accordance with the appropriate Air Conditioning and Refrigeration Institute Standards.

The central air conditioning system provided with this home has been sized, assuming an orientation of the front (hitch end) of the home facing \_\_\_\_\_. On this basis, the system is designed to maintain an indoor temperature of 75 °F when the outdoor temperatures are \_\_\_\_\_ °F dry bulb and \_\_\_\_\_ °F wet bulb.

The temperature to which this home can be cooled will change depending upon the amount of exposure of the windows of this

home to the sun's radiant heat. Therefore, the home's heat gains will vary depending upon its orientation to the sun and any permanent shading provided. Information concerning the calculation of the cooling loads at various locations, window exposures, and shadings is provided in Chapter 27 of the 1997 ASHRAE Handbook of Fundamentals.

(2) *Alternative 2.* For each home suitable for a central air conditioning system but in which such a system is not installed, the manufacturer must provide the following statement: "The air distribution system of this home is suitable for the installation of a central air conditioning system." The Comfort Cooling Certificate required by paragraph (a) of this section must include the information provided in the following:

Comfort Cooling Certificate  
 Manufactured Home Manufacturer: \_\_\_\_\_  
 Plant Location: \_\_\_\_\_  
 Manufactured Home Model: \_\_\_\_\_

The air distribution system of this home is suitable for the installation of central air conditioning.

The supply air duct system installed in this home is sized for a manufactured home central air conditioning system of up to \_\_\_\_\_ BTU/Hr. This size assumes the air conditioner uses air circulators rated at 0.3 inch water column static pressure or greater for the cooling air delivered to the manufactured home supply air duct system.

\* \* \* \* \*

24. In § 3280.602, remove the definition for *Anti-siphon trap vent device* and add a new definition for *Mechanical trap vent device* in alphabetical order as follows:

**§ 3280.602 Definitions.**

\* \* \* \* \*

*Mechanical trap vent device* means a device that automatically opens to admit air to a fixture drain above the connection of the trap arm so as to prevent siphonage, and closes tightly when the pressure within the drainage system is equal to or greater than atmospheric pressure so as to prevent the escape of gases from the drainage system into the manufactured home.

\* \* \* \* \*

25. In § 3280.603, revise paragraphs (a)(2), (b)(4)(ii), and (b)(4)(iii) to read as follows:

**§ 3280.603 General requirements.**

(a) \* \* \*

(2) *Conservation.* Each water closet must not use more than 1.6 gallons of water per flush.

\* \* \* \* \*

(b) \* \* \*

(4) \* \* \*

(ii) A statement in the installation instructions required by § 3280.306(b), stating that if the heat tape or pipe heating cable is used, it must be listed for use with manufactured homes.

(iii) A receptacle outlet complying with § 3280.806(d)(10).

\* \* \* \* \*

26. In § 3280.604(b)(2), in the list under the undesignated heading “Plastic Pipe and Fittings,” add new reference standards for “Standard Specification for Crosslinked Polyethylene (PEX) Tubing,” and “Standard Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems,” immediately before the undesignated heading “Miscellaneous,” to read as follows:

**§ 3280.604 Materials.**

\* \* \* \* \*

(b) \* \* \*

(2) \* \* \*

\* \* \* \* \*

Standard Specification for Crosslinked Polyethylene (PEX) Tubing—ASTM F876–1993.

Standard Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems—ASTM F877–1995.

\* \* \* \* \*

27. In § 3280.605, redesignate paragraphs (a)(1) through (a)(7), as paragraphs (b) through (h); in newly redesignated paragraph (h), further redesignate paragraphs (i) and (ii) as paragraphs (h)(1) and (h)(2); and revise newly redesignated paragraph (h)(1) to read as follows:

**§ 3280.605 Joints and connections.**

\* \* \* \* \*

(h) \* \* \*

(1) Approved or listed hub-less pipe and fittings must be permitted to be joined with listed couplings or adapters, per the manufacturer’s recommendations.

\* \* \* \* \*

28. In § 3280.606, revise paragraph (a)(2) to read as follows:

**§ 3280.606 Traps and cleanouts.**

(a) \* \* \*

(2) *Combination fixtures.* For the purposes of drainage and ventilation requirements, a two- or three-compartment sink, up to three single sinks, or up to three lavatories may be connected to one “P” trap and considered as a single fixture, so long as the sinks and lavatories are in the same room, have waste outlets not more than 30 inches apart, and have flood level rims at the same level. The “P” trap must be installed at the center fixture when three such fixtures are installed.

\* \* \* \* \*

29. In § 3280.607, revise paragraphs (a)(3), (b)(2)(v), (b)(4)(i), (b)(5)(ii), and (c)(6)(i) through (c)(6)(iii), and add new paragraph (b)(3)(v) to read as follows:

**§ 3280.607 Plumbing fixtures.**

(a) \* \* \*

(3) *Fixture Connections.* Fixture tailpieces and continuous wastes in exposed or accessible locations must be of not less than No. 20 Brown and Sharpe gauge seamless drawn-brass tubing or other approved pipe or tubing materials. Inaccessible fixture connections must be constructed according to the requirements for drainage piping. The diameter of each fixture tailpiece, continuous waste, or waste and overflow must be not less than:

(i) 1½ inches, for sinks of two or more compartments, dishwashers, clothes washing machines, laundry tubs, bathtubs, and showers; and

(ii) Not less than 1¼ inches for lavatories or single compartment sinks having a 2-inch maximum drain opening.

\* \* \* \* \*

(b) \* \* \*

(2) \* \* \*

(v) *Floor Connection.* Water closets must be securely bolted to an approved flange or other approved fitting that is secured to the floor by means of corrosion-resistant screws. The bolts must be of solid brass or other corrosion-resistant material and must not be less than ¼ inch in diameter. A watertight seal must be made between the water closet and flange or other approved fitting by use of a gasket,

sealing compound, or listed connector device.

(3) \* \* \*

(v) Shower, bathtub, and tub-shower combination valves must be balanced pressure, thermostatic, or combination mixing valves that conform to the requirements of ASSE 1016–1996, Performance Requirements for Individual Thermostatic Pressure Balancing and Combination Control for Bathing Facilities. Such valves must be equipped with handle position stops that are adjustable in accordance with the valve manufacturer’s instructions to a maximum setting of 120 °F.

(4) \* \* \*

(i) A dishwashing machine must discharge its waste through a fixed air gap installed above the machine; through a high loop as specified by the dishwashing machine manufacturer; or into an open standpipe receptor with a height greater than the washing compartment of the machine. When a standpipe is used, it must be at least 18 inches, but not more than 30 inches, above the trap weir. The drain connections from the air gap or high loop are permitted to connect to an individual trap to a directional fitting installed in the sink tailpiece or to an opening provided on the inlet side of a food waste disposal unit.

\* \* \* \* \*

(5) \* \* \*

(ii) Standpipes must be either 1½ inch diameter minimum nominal iron pipe size, 1½ inch diameter nominal brass tubing of not less than No. 20 Brown and Sharp gauge, or 1½ inch diameter approved plastic materials. Receptors must discharge into a vented trap or must be connected to a laundry tub appliance by means of an approved or listed directional fitting. Each standpipe must extend not less than 18 inches or more than 42 inches above its trap and must terminate in an accessible location no lower than the top of the clothes washing machine. A removable, tight fitting cap or plug must be installed on the standpipe when the clothes washer is not provided.

\* \* \* \* \*

(c) \* \* \*

(6) *Hydromassage Bathtub.* (i) *Access panel.* A door or panel of sufficient size must be installed to provide access to the pump for repair or replacement.

(ii) *Piping drainage.* The circulation pump must be accessibly located above the crown weir of the trap. The pump drain line must be properly sloped to drain the volute after fixture use.

(iii) *Piping.* Hydromassage bathtub circulation piping must be installed to be self-draining.

\* \* \* \* \*

30. In § 3280.609, revise paragraphs (b)(7) and (b)(8) to read as follows:

§ 3280.609 Water distribution systems.

\* \* \* \* \*

(b) \* \* \*

(7) *Hose bibbs.* When provided, all exterior hose bibbs and laundry sink hose connections must be protected by a listed nonremovable backflow prevention device. This requirement is not applicable to hose connections provided for automatic washing machines with built-in backflow prevention or water heater drain valves.

(8) *Flushometer tanks.* Flushometer tanks must be equipped with an approved air gap or vacuum breaker assembly that is located above the flood level rim above the fixture.

\* \* \* \* \*

31. In § 3280.610, revise paragraphs (b)(1) and (e) to read as follows:

§ 3280.610 Drainage systems.

\* \* \* \* \*

(b) \* \* \*

(1) *Pipe.* Drainage piping must be standard weight galvanized steel, brass, copper tube DWV, listed Scheduled 40 ABS plastic, listed Scheduled 40 PVC plastic, cast iron, or other listed or approved materials.

\* \* \* \* \*

(e) *Size of drainage piping.* Fixture drains must be sized as follows:

(1) Fixture drains serving a single lavatory must be a minimum of 1¼ inches in diameter.

(2) Fixture drains serving two or three fixtures must be a minimum of 1½ inches in diameter.

(3) Fixture drains serving four or more fixtures that are individually vented must be a minimum of 2 inches in diameter.

(4) Fixture drains for water closets must be a minimum of 3 inches in diameter.

\* \* \* \* \*

32. In § 3280.611, revise paragraphs (b)(1), (d), and (f), to read as follows:

§ 3280.611 Vents and venting.

\* \* \* \* \*

(b) \* \* \*

(1) *Pipe.* Vent piping must be standard weight galvanized steel, brass, copper tube DWV, listed Scheduled 40 ABS plastic, listed Scheduled 40 PVC plastic, cast iron, or other listed or approved materials.

\* \* \* \* \*

(d) *Mechanical Vents.* Where mechanical vents are used as a secondary vent system for plumbing fixtures that are protected by traps, the mechanical vents must comply with

paragraphs (d)(1) or (d)(2) of this section.

(1) Spring-operated mechanical (anti-siphon) vents must comply with the following:

(i) No more than two fixtures individually protected by the spring-operated mechanical vent may be drained by a common 1½ inch diameter drain.

(ii) The drain size for three or more fixtures individually protected by a spring-operated mechanical vent must be at least 2 inches in diameter.

(iii) Spring-operated mechanical vents are restricted to venting fixtures with 1½ inch traps.

(iv) A spring-operated mechanical vent must be installed in a location that allows a free flow of air and is accessible for inspection, maintenance, and replacement. The sealing function must be at least 6 inches above the top of the trap arm.

(v) Materials for the spring-operated mechanical vents must be as follows:

(A) Cap and housing must be listed acrylonitrile-butadiene-styrene, DWV grade;

(B) Stem must be DWV grade nylon or acetal;

(C) Spring must be stainless steel wire, Type 302; and

(D) Sealing disc must be either:

(1) Neoprene, conforming to CISPI-HSN-85, Specification for Neoprene Rubber Gaskets for HUB and Spigot Cast Iron Soil Pipe and Fittings, and to ASTM C 564-97, Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings; or

(2) Other material, conforming to ASTM C 920-2002, Standard Specification for Elastomeric Joint Sealants, and to ASTM D 4635-2001, Standard Specification for Polyethylene Films Made from Low-Density Polyethylene for General Use and Packaging Applications.

(2) Gravity-operated mechanical (air admittance valves) vents must comply with the following:

(i) Where installed to vent any fixture, the drain system must have a minimum 1½ inch diameter vent that terminates outside the manufactured home.

(ii) Where gravity-operated mechanical vent devices terminate in the attic cavity, the following requirements must be met:

(A) The attic cavity must be accessible.

(B) The sealing device must be installed a minimum of 6 inches above the insulation materials.

(C) The attic must be vented in accordance with § 3280.504(c)(1)(i).

(3) Mechanical vents must be installed in accordance with the vent manufacturer's instructions.

\* \* \* \* \*

(f) *Vent terminal.* Vents must terminate through the roof or wall, or to a mechanical vent device in accordance with paragraph (d) of this section.

(1) *Roof extension.* Each vent pipe must extend through its flashing and terminate vertically. Vents that extend through the roof must extend undiminished in size, not less than 2 inches above the roof. Vent openings must be at least 3 feet away from any motor-driven air intake that opens into any habitable area.

(2) *Wall extensions.* Extensions through exterior walls must terminate downward, have a screen to prevent entrance of birds and rodents, and be located as follows:

(i) Extensions must not be located beneath a door, window, or other opening;

(ii) Extensions must be a minimum of 10 feet above the finished floor;

(iii) Extensions must be located a minimum of 2 feet above any building opening that is within 10 feet horizontally of any extension; and

(iv) Extensions must not terminate under an overhang with soffit vents.

(3) *Flashing.* The opening around each vent pipe shall be made watertight by an adequate flashing or flashing material.

\* \* \* \* \*

33. In § 3280.702, revise the definitions of "Class 0 air ducts," "Class 1 air ducts," "Heating appliance," and "Water heater;" remove the definitions of "Class 2 air ducts" and "Energy Efficiency Ratio (EER);" and add definitions of "Combination space heating and water heating appliance," "Direct-vent system," and "Direct-vent system appliance" in alphabetical order, as follows:

§ 3280.702 Definitions.

\* \* \* \* \*

*Class 0 air ducts and air connectors* means air ducts and air connectors having a fire hazard classification of zero when tested in accordance with UL 181-1998, Factory-Made Air Ducts and Air Connectors.

*Class 1 air ducts and air connectors* means air ducts and air connectors having a flame spread rating of not over 25 without evidence of continued progressive combustion and a smoke developed rating of not over 50 when tested in accordance with UL 181, Standard for Safety Factory-Made Air Ducts and Air Connectors.

\* \* \* \* \*

*Combination space heating and water heating appliance* means a listed unit that is designed to provide space heating and water heating from a single primary energy source.  
\* \* \* \* \*

*Direct-vent system* means a system or method of construction where all air for combustion is derived directly from the outside atmosphere and all flue gases are discharged to the outside atmosphere.

*Direct-vent system appliance* means an appliance that is installed with a direct vent system.  
\* \* \* \* \*

*Heating appliance* means an appliance for comfort heating, domestic water heating, or a combination of comfort heating and domestic water heating.  
\* \* \* \* \*

*Water heater* means an appliance for heating water for domestic purposes.  
34. In § 3280.703:

a. Under the undesignated heading “Appliances,” add a reference standard for “Decorative Gas Appliances for Installation in Solid Fuel Burning Appliances” after the standard for “Gas-Fired Central Furnace;”

b. Under the undesignated heading “Miscellaneous,” revise the reference standards for “Gas Appliance Thermostats” and “Standard for the Installation of Oil-Burning Equipment”.

The revisions and additions to read as follows:

**§ 3280.703 Minimum standards.**

Decorative Gas Appliances for Installation in Solid Fuel Burning Appliances—RADCO Standard DS-010-1991.  
\* \* \* \* \*

Gas Appliance Thermostats—ANSI Z21.23, 1993.  
\* \* \* \* \*

Standard for the Installation of Oil-Burning Equipment, NFPA 31, 2001 Edition.  
\* \* \* \* \*

**§ 3280.705 [Removed and reserved].**

35. Remove and reserve § 3280.704.

36. In § 3280.705, add paragraph (b)(5), add Table 3280.705(d) following paragraph (d), and revise paragraph (h) (removing the Table designated “Part I” and the reference to “Part II [Reserved]”) to read as follows:

**§ 3280.705 Gas piping systems.**

(b) \* \* \*  
(5) Corrugated stainless steel tubing (CSST) systems must be listed and installed in accordance with ANSI/IAS LC-1-1997, Gas Piping Systems Using Corrugated Stainless Steel Tubing, and the requirements of this section.  
\* \* \* \* \*

(d) \* \* \*

TABLE 3280.705(D)—MAXIMUM CAPACITY OF DIFFERENT SIZES OF PIPE AND TUBING IN THOUSANDS OF BTU/HR OF NATURAL GAS FOR GAS PRESSURES OF 0.5 PSIG OR LESS, AND A MAXIMUM PRESSURE DROP OF ½ IN. WATER COLUMN

ID	10 ft	20 ft	30 ft	40 ft	50 ft	60 ft	70 ft	80 ft	90 ft	100 ft	
<b>Iron Pipe Sizes—Length</b>											
¼ in. ....	43	29	24	20	18	16	15	14	13	12	
⅜ in. ....	95	65	52	45	40	36	33	31	29	27	
½ in. ....	175	120	97	82	73	66	61	57	53	50	
¾ in. ....	360	250	200	170	151	138	125	118	110	103	
1 in. ....	680	465	375	320	285	260	240	220	215	195	
EHD <sup>2</sup>	ID	10 ft	20 ft	30 ft	40 ft	50 ft	60 ft	70 ft	80 ft	90 ft	100 ft
<b>Corrugated Stainless Steel Tubing—Length<sup>1</sup></b>											
13 .....	⅜ in.	31	21	17	14	13	12	11	10	10	9
15 .....	⅜ in.	42	30	24	20	18	16	15	14	13	12
18 .....	½ in.	79	56	45	39	36	33	30	28	27	25
19 .....	½ in.	91	64	52	45	40	36	35	32	31	29
23 .....	¾ in.	155	111	92	80	72	65	60	58	55	52
25 .....	¾ in.	184	132	108	93	84	77	71	66	62	60
30 .....	1 in.	317	222	180	156	138	126	116	108	103	97
31 .....	1 in.	368	258	209	180	161	147	135	127	120	113
37 .....	1¼ in.	598	426	350	304	273	250	231	217	205	195
OD		10 ft	20 ft	30 ft	40 ft	50 ft	60 ft	70 ft	80 ft	90 ft	100 ft
<b>Copper Tubing — Length</b>											
¼ in. ....		27	18	15	13	11	10	9	9	8	8
⅜ in. ....		56	38	31	26	23	21	19	18	17	16
½ in. ....		113	78	62	53	47	43	39	37	34	33
¾ in. ....		197	136	109	93	83	75	69	64	60	57
1 in. ....		280	193	155	132	117	106	98	91	85	81

<sup>1</sup> Includes losses for four 90-degree bends and two end fittings. Tubing runs with larger numbers of bend and/or fittings shall be increased by an equivalent length of tubing according to the following equation:  $L = 1.3n$ , where  $L$  is actual length (ft) of tubing and  $n$  is the number of additional fittings and/or bends.

<sup>2</sup> EHD (Equivalent Hydraulic Diameter)—A measure of the hydraulic efficiency between different tubing sizes.

\* \* \* \* \*  
(h) *Concealed tubing.* (1) Copper tubing must not be run inside walls, floors, partitions, or roofs. Corrugated

stainless steel tubing (CSST) may be run inside walls, floors, partitions, and roofs under the following conditions:

(i) The CSST is protected from accidental puncture by a steel strike barrier not less than 0.058 inch thick, or the barrier’s equivalent, installed

between the tubing and the finished wall and extending 4 inches beyond concealed penetrations of plates, firestops, and wall studs, or specified by the tubing manufacturer's instructions; and

(ii) The CSST is installed in single runs and is not rigidly secured.

(2) Where tubing passes through exterior walls, floors, partitions, or similar construction, the tubing must be protected by the use of weather-resistant grommets that snugly fit both the tubing and the hole through which the tubing passes, or protected as specified in the tubing manufacturer's instructions.

(3) Concealed joints. Piping or tubing joints must not be located in any wall, floor, partition, or similar concealed construction space.

\* \* \* \* \*

37. In § 3280.706, revise paragraph (j) to read as follows:

**§ 3280.706 Oil piping systems.**

\* \* \* \* \*

(j) *Testing tag.* A tag must be affixed to each oil-fired appliance stating: "Before setting the system in operation, tank installations and piping must be checked for oil leaks with fuel oil of the same grade that will be burned in the appliance. No other material may be used for testing fuel oil tanks and piping. Tanks must be filled to maximum capacity for the final check for oil leakage."

38. In § 3280.707, revise paragraphs (a)(2) and (d) to read as follows:

**§ 3280.707 Heat producing appliances.**

(a) \* \* \*

(2) Each gas and oil burning comfort heating appliance must have an Annual Fuel Utilization Efficiency of not less than that specified in the National Appliance Energy Conservation Act of 1987.

\* \* \* \* \*

(d) *Performance efficiency.* Each automatic storage water heater must comply with the efficiency requirements of the National Appliance Energy Conservation Act of 1987.

39. Revise § 3280.711 to read as follows:

**§ 3280.711 Instructions.**

Operating instructions must be provided with each appliance. The operating and installation instructions for each appliance must be provided with the homeowner's manual.

40. In § 3280.714, revise paragraphs (a)(1)(i) and (ii) to read as follows:

**§ 3280.714 Appliances, cooling.**

(a) \* \* \*

(1) \* \* \*

(i) Electric motor-driven unitary air-cooled air conditioners and heat pumps in the cooling mode with rated capacity less than 65,000 BTU/hour (19,045 watts), when rated at ARI standard rating conditions in ARI Standard 210/240-89, Unitary Air Conditioning and Air Source Heat Pump Equipment, must have seasonal energy efficiency (SEER) values not less than as specified in the National Appliance Energy Conservation Act of 1987.

(ii) Heat pumps must be certified to comply with all requirements of the ARI Standard 210/240-89, Unitary Air Conditioning and Air-Source Heat Pump Equipment. Electric motor-driven vapor compression heat pumps with supplemental electrical resistance heat must be sized to provide by compression at least 60 percent of the calculated annual heating requirements for the manufactured home being served. A control must be provided and set to prevent operation of supplemental electrical resistance heat at outdoor temperatures above 40 °F (4 °C), except for defrost conditions. Electric motor-driven vapor compression heat pumps with supplemental electric resistance heat conforming to ARI Standard 210/240-89, Unitary Air Conditioning and Air-Source Heat Pump Equipment, must have Heating Season Performance Factor (HSPF) efficiencies not less than as specified in the National Appliance Energy Conservation Act of 1987.

\* \* \* \* \*

41. In § 3280.715, revise the introductory text of paragraph (a)(1); revise the heading and add introductory text in paragraph (a)(2); and revise paragraphs (a)(4), (a)(5)(ii), (a)(6), (a)(7), and (d), to read as follows:

**§ 3280.715 Circulating air systems.**

(a) \* \* \*

(1) Supply air ducts, fittings, and any dampers contained therein must be made of galvanized steel, tin-plated steel, or aluminum, or must be listed as Class 0 or Class 1 air ducts and air connectors in accordance with UL 181-1998, Factory-Made Air Ducts and Air Connectors. Class 1 air ducts and air connectors must be located at least 3 feet from the furnace bonnet or plenum. Air connectors must not be used for exterior manufactured home duct connection. A duct system integral with the structure must be of durable construction that can be demonstrated to be equally resistant to fire and deterioration as required by this section. Furnace supply plenums must be constructed of metal that extends a minimum of 3 feet from the heat exchanger measured along the centerline of airflow. Ducts constructed

from sheet metal must be in accordance with the following table:

\* \* \* \* \*

(2) *Duct Static Pressure Test.* The duct static pressure test is to be performed after the system has demonstrated compliance with paragraph (a)(4) of this section.

\* \* \* \* \*

(4) *Airtightness of Supply Duct Systems.* A supply duct system is considered to be substantially airtight when the static pressure in the duct system, with all registers sealed and with the furnace air circulator at high speed, is at least 80 percent of the static pressure measured in the furnace casing, with its outlets sealed and the furnace air circulator operating at high speed. For the purpose of paragraph (a)(1) of this section, pressures must be measured with a water manometer or equivalent device calibrated to read in increments not greater than 1/10 inch water column. All duct designs requiring crossover duct plenums must be tested with the plenum in place.

(5) \* \* \*

(ii) The manufacturer must provide installation instructions for supporting, mechanically fastening, sealing, and insulating each crossover duct. The instructions must indicate that no portion of the crossover duct is to be in contact with the ground, and must describe the means to support the duct without compressing the insulation and restricting airflow.

(6) Air supply ducts installed outside the thermal envelope must be insulated with material having an effective thermal resistance (R) of not less than 4, unless the ducts are within manufactured home insulation having a minimum effective value of R-4 for floors, or R-6 for ceilings.

(7) Unless installed in a basement, supply and return ducts, fittings, and crossover duct plenums exposed directly to outside air, such as those under-chassis crossover ducts or ducts connecting external heating, cooling, or combination heating/cooling appliances, must be insulated with material having a minimum thermal resistance of R-8 in all Thermal Zones. All such insulating materials must have a continuous vapor barrier retarder having a perm rating of not more than 1 perm. Where ducts are exposed underneath the manufactured home, they must comply with paragraph (a)(5)(ii) of this section, and shall be listed for exterior use.

\* \* \* \* \*

(d) *Supports and protection.* Ducts must be securely supported. Nails or other fasteners must not be driven or

penetrate through duct walls. Where vertical ducts are installed within closets or rooms, they must be enclosed with materials equivalent to those used in the closet or room construction.

42. In § 3280.802, revise paragraphs (a)(37) and (a)(39) to read as follows:

**§ 3280.802 Definitions.**

(a) \* \* \*  
 (37) *Receptacle* means a contact device installed at the outlet for the connection of an attachment plug. A single receptacle is a single contact device with no other contact device on the same yoke. A multiple receptacle is

a device with two or more contact devices on the same yoke.

(39) *Utilization equipment* means equipment that utilizes electric energy for electronic, electromechanical, chemical, heating, lighting, or similar purposes.

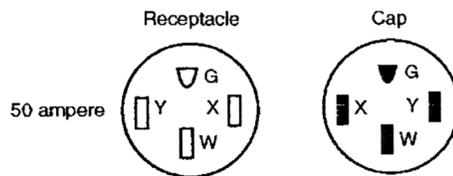
43. In § 3280.803, revise paragraphs (d), (f), (i), (k)(2), and (k)(3) to read as follows:

**§ 3280.803 Power supply.**

(d) A suitable clamp or the equivalent must be provided at the distribution panelboard knockout to afford strain relief for the cord to prevent strain from

being transmitted to the terminals when the power supply cord is handled in its intended manner.

(f) The attachment plug cap must be a 3-pole, 4-wire, grounding type, rated 50 amperes, 125/250 volts, intended for use with the 50-ampere, 125/250-volt receptacle configuration, as shown below. The cap must be listed, by itself or as part of a power-supply cord assembly, for the purpose, and must be molded to or installed on the flexible cord so that it is secured tightly to the cord at the point where the cord enters the attachment plug cap. If a right-angle cap is used, the configuration must be so oriented that the grounding member is farthest from the cord.



Note: 50-ampere 125/250-volt receptacle and attachment plug cap configurations, 3-pole, 4-wire, grounding types used for manufactured home supply cords and manufactured home parks. Complete details of the 50-ampere cap and receptacle can be found *Wiring Device Dimensional Requirements* (ANSI/NEMA WD-6-1997).

(i) Where the cord passes through walls or floors, it must be protected by means of conduits and bushings or the equivalent. The cord is permitted to be installed within the manufactured home walls, provided that a continuous raceway having a maximum size of 1¼ inch is installed from the branch-circuit panelboard to the underside of the manufactured home floor.

(2) A listed metal raceway or listed rigid nonmetallic conduit from the disconnecting means in the manufactured home to the underside of the manufactured home, with provisions for the attachment of a suitable junction box or fitting to the raceway on the underside of the manufactured home. The manufacturer must provide written installation instructions stating the proper feeder conductor sizes for the raceway and the size of the junction box to be used; or

(3) Service equipment installed in or on the manufactured home, provided that all of the following conditions are met:

(i) In its written installation instructions, the manufacturer must include information indicating that the home must be secured in place by an

- anchoring system or installed on and secured to a permanent foundation;
- (ii) The installation of the service equipment complies with Article 230 of the National Electrical Code, NFPA 70–2005. Exterior service equipment or the enclosure in which it is to be installed must be weatherproof, and conductors must be suitable for use in wet locations;
- (iii) Means are provided for the connection of the grounding electrode conductor to the service equipment and routing it to the conductor outside the structure;
- (iv) Bonding and grounding of the service must be in accordance with Article 250, NFPA 70–2005, National Electrical Code;
- (v) The manufacturer must include in its installation instructions one method of grounding the service equipment at the installation site. The instructions must clearly state that other methods of grounding are found in Article 250 of NFPA 70–2005, National Electrical Code;
- (vi) The minimum size grounding electrode conductor must be specified in the instructions; and
- (vii) A red warning label must be mounted on or adjacent to the service equipment. The label must state the following: WARNING—DO NOT PROVIDE ELECTRICAL POWER UNTIL THE GROUNDING ELECTRODE(S) IS

INSTALLED AND CONNECTED (SEE INSTALLATION INSTRUCTIONS).

44. In § 3280.804, revise paragraphs (a), (c), (e), and (f) to read as follows:

**§ 3280.804 Disconnecting means and branch-circuit protective equipment.**

(a) The branch-circuit equipment is permitted to be combined with the disconnecting means as a single assembly. Such a combination is permitted to be designated as a distribution panelboard. If a fused distribution panelboard is used, the maximum fuse size for the mains shall be plainly marked, with the lettering at least 1/4-inch high and visible when fuses are changed. See Article 110–22 of NFPA 70–2005, National Electrical Code, concerning the identification of each disconnecting means and each service, feeder, or branch circuit at the point where it originated, and the type of marking needed.

(c) Disconnecting means. A single disconnecting means must be provided in each manufactured home, consisting of a circuit breaker, or a switch and fuses and its accessories, installed in a readily accessible location near the point of entrance of the supply cord or conductors into the manufactured home. The main circuit breakers or

fuses must be plainly marked "Main." This equipment must contain a solderless type of grounding connector or bar for the purposes of grounding, with sufficient terminals for all grounding conductors. The neutral bar termination of the grounded circuit conductors must be insulated in accordance with § 3280.809(b).

\* \* \* \* \*

(e) A distribution panelboard employing a main circuit breaker must be rated not less than 50 amperes and employ a 2-pole circuit breaker rated 40 amperes for a 40-ampere supply cord, or 50 amperes for a 50-ampere supply cord. A distribution panelboard employing a disconnect switch and fuses must be rated not less than 60 amperes and must employ a single, 2-pole fuseholder rated not less than 60- amperes with 40- or 50-ampere main fuses for 40- or 50-ampere supply cords, respectively. The outside of the distribution panelboard must be plainly marked with the fuse size.

(f) The distribution panelboard must be located in an accessible location, and must not be located in a bathroom or a clothes closet. A clear working space at least 30 inches wide and 30 inches in front of the distribution panelboard must be provided. This space must extend from the floor to the top of the distribution panelboard. Where used as switches, circuit breakers must be installed so that the center of the grip of the operating handle of the circuit breaker, when in its highest position, will not be more than 6 feet, 7 inches above the floor.

\* \* \* \* \*

45. In § 3280.805, add a sentence at the end of paragraph (a)(1), revise paragraphs (a)(2) and (a)(3)(i), and add a new paragraph (a)(3)(vi), to read as follows:

**§ 3280.805 Branch circuits required.**

(a) \* \* \*  
(1) \* \* \* Lighting circuits are permitted to serve built-in gas ovens with electric service for lights, clocks, or timers, or for listed cord-connected garbage disposal units.

(2) *Small Appliances.* For the small appliance load in kitchens, pantries, dining rooms, and breakfast rooms of manufactured homes, two or more 20-ampere appliance branch circuits, in addition to the branch circuit specified in paragraph (a)(1) of this section, must be provided for all receptacle outlets in these rooms, and such circuits must have no other outlets. Countertop receptacle outlets installed in the kitchen must be supplied by not less than two small appliance branch

circuits. One or more of the small appliance branch circuits may also supply other receptacle outlets in the kitchen, pantry, dining room, and breakfast room. Receptacles installed solely for the electrical supply to an electric clock and receptacles installed to provide power for supplemental equipment and lighting on gas-fired ranges, ovens, or counter-mounted cooking units are not subject to the requirements of this paragraph (a)(2).

(3) \* \* \*

(i) The ampere rating of fixed appliances must not exceed 50 percent of the circuit rating if lighting outlets are on the same circuit (receptacles in the kitchen, dining area, and laundry are not considered to be lighting outlets);

\* \* \* \* \*

(vi) Bathroom receptacle outlets must be supplied by at least one 20-ampere branch circuit. Such circuits must have no other outlets, except that it is permissible to place the receptacle outlet for a heat tape or pipe heating cable required by § 3280.806(d)(10) on a bathroom circuit. (See § 3280.806(b).)

\* \* \* \* \*

46. In § 3280.806, revise paragraph (b) and paragraph (d) introductory text, redesignate paragraph (d)(10) as paragraph (d)(11), and add new paragraphs (d)(10) and (g) to read as follows:

**§ 3280.806 Receptacle outlets.**

\* \* \* \* \*

(b) All 125-volt, single-phase, 15- and 20-ampere receptacle outlets installed outdoors, or in compartments accessible from outside the manufactured home, and in bathrooms, including receptacles in light fixtures, must have ground-fault circuit-interrupter protection for personnel. Ground-fault circuit-interrupter protection for personnel must be provided for receptacles serving countertops in kitchens and receptacle outlets located within 6 feet of a wet bar sink, except for receptacles installed for appliances in dedicated spaces, such as for dishwashers, disposals, refrigerators, freezers, and laundry equipment.

\* \* \* \* \*

(d) *Receptacle outlets required.* Except in the bath, closet, and hall areas, receptacle outlets must be installed at wall spaces 2 feet or more wide, so that no point along the floor line is more than 6 feet, measured horizontally, from an outlet in that space. Receptacle outlets in floors shall not be counted as part of the required number of receptacle outlets, unless located within 18 inches of the wall. In

addition, a receptacle outlet must be installed in the following locations:

\* \* \* \* \*

(10) On the underside of the home for the connection of pipe heating cable(s) or heat tape(s), and the outlet must:

(i) Be located within 2 feet of the cold water inlet.

(ii) Be connected to an interior branch circuit, other than a small appliance branch circuit.

(iii) Be located on a circuit where all of the outlets are on the load side of the ground-fault circuit-interrupter protection for personnel.

(iv) Not be considered as the receptacle outlet required by paragraph (8) of this section.

\* \* \* \* \*

(g) Receptacles must not be in a face-up position in any countertop.

47. In § 3280.807, revise paragraph (c) to read as follows:

**§ 3280.807 Fixtures and appliances.**

\* \* \* \* \*

(c) Where a lighting fixture is installed over a bathtub or in a shower stall, it must be listed for wet locations. [See also Article 410.4(D) of the National Electrical Code NFPA No. 70–2005.]

\* \* \* \* \*

48. In § 3280.808,  
a. Revise paragraphs (f), (h), (i) introductory text, (i)(1), and (k);  
b. Remove paragraph (l);  
c. Redesignate paragraphs (m) through (r) as paragraphs (l) through (q); and  
d. Revise newly redesignated paragraph (o)(2).

The revisions read as follows:

**§ 3280.808 Wiring methods and materials.**

\* \* \* \* \*

(f) Where metal faceplates are used, they must be effectively grounded.

\* \* \* \* \*

(h) Where rigid metal conduit or intermediate metal conduit is terminated at an enclosure with a locknut and bushing connection, two locknuts must be provided, one inside and one outside of the enclosure. Rigid nonmetallic conduit or electrical nonmetallic tubing is permitted. All cut ends of conduit and tubing must be reamed or otherwise finished to remove rough edges.

(i) Switches must be rated as follows:

(1) For lighting circuits, switches must be rated not less than 10 amperes, 120 to 125 volts, and in no case less than the connected load.

\* \* \* \* \*

(k) When outdoor or under-chassis line-voltage (120 volts, nominal or higher) wiring is exposed to moisture or

physical damage, it must be protected by rigid metal conduit or intermediate metal conduit. The conductors must be suitable for wet locations. Electrical metallic tubing or rigid nonmetallic conduit is permitted to be used when closely routed against frames and equipment enclosures.

\* \* \* \* \*

(o) \* \* \*

(2) Conductors having an insulation suitable for the temperature encountered may be run from the appliance terminal connections to a readily accessible outlet box placed at least one foot from the appliance. If provided, these conductors must be in a suitable raceway or Type AC or MC cable, of at least 18 inches but not more than 6 feet in length.

\* \* \* \* \*

49. In § 3280.813, revise paragraph (b) to read as follows:

**§ 3280.813 Outdoor outlets, fixtures, air-conditioning equipment, etc.**

\* \* \* \* \*

(b) A manufactured home provided with a branch circuit designed to energize outside heating equipment or air-conditioning equipment, other than room air conditioners, or both, located outside the manufactured home, other than room air conditioners, must have such branch-circuit conductors terminate in a listed outlet box, or disconnecting means, located on the outside of the manufactured home.

(1) A label must be permanently affixed adjacent to the outlet box. The label must be not less than 0.020-inches thick etched brass, stainless steel, anodized or alclad aluminum, or equivalent, and must not be less than 3 inches x 1-3/4 inches in size.

(2) The label must include the correct voltage and ampere rating and the following information:

THIS CONNECTION IS FOR HEATING AND/OR AIR-CONDITIONING EQUIPMENT. THE BRANCH CIRCUIT IS RATED AT NOT MORE THAN \_\_\_ AMPERES, AT \_\_\_ VOLTS, 60-HERTZ, \_\_\_ CONDUCTOR AMPACITY. A DISCONNECTING MEANS IS LOCATED WITHIN SIGHT OF THE EQUIPMENT.

(3) The correct voltage and ampere rating shall be given. The tag must be not less than 0.020-inches thick etched brass, stainless steel, anodized or alclad aluminum, or equivalent. The tag must have a minimum size of not less than 3 inches x 1 3/4 inches.

50. In § 3280.815, revise paragraph (a) as follows:

**§ 3280.815 Polarization.**

(a)(1) Except as provided in paragraph (a)(2) of this section, the white conductor must be employed for the grounded (neutral) circuit conductors only and must be connected to the white terminal or lead on receptacle outlets and fixtures. The grounded conductor must be the unswitched wire in switched circuits.

(2) A cable containing an insulated conductor with a white or natural gray outer finish or a marking of three continuous white stripes may be used for single-pole, 3-way, or 4-way switch loops, where this conductor is used for the supply to the switch, but not as a return conductor from the switch to the switched outlet. In these applications, the conductor with white or natural gray insulation or with three continuous white stripes must be permanently identified to indicate its use by painting or other effective means at its terminations and at each location where the conductor is visible and accessible.

\* \* \* \* \*

Date: May 25, 2010.

**David H. Stevens,**

*Assistant Secretary for Housing—Federal Housing Commissioner.*

[FR Doc. 2010-16724 Filed 7-12-10; 8:45 am]

**BILLING CODE 4210-67-P**

**LIBRARY OF CONGRESS**

**Copyright Royalty Board**

**37 CFR Part 386**

[Docket No. 2010-4 CRB Satellite Rate]

**Rate Adjustment for the Satellite Carrier Compulsory License**

**AGENCY:** Copyright Royalty Board, Library of Congress.

**ACTION:** Proposed rule.

**SUMMARY:** The Copyright Royalty Judges are publishing for comment negotiated royalty rates for the satellite carrier statutory license of the Copyright Act for the license period 2010-2014.

**DATES:** Objections to the proposed rates must be submitted no later than August 12, 2010.

**ADDRESSES:** Objections may be sent electronically to [crb@loc.gov](mailto:crb@loc.gov). In the alternative, send an original, five copies and an electronic copy on a CD either by mail or hand delivery. Please do not use multiple means of transmission. Objections may not be delivered by overnight delivery service other than the U.S. Postal Service Express Mail. If by mail (including overnight delivery),

objections must be addressed to: Copyright Royalty Board, P.O. Box 70977, Washington, DC 20024-0977. If hand delivered by a private party, objections must be brought to the Copyright Office Public Information Office, Library of Congress, James Madison Memorial Building, Room LM-401, 101 Independence Avenue, SE., Washington, DC 20559-6000, between 8:30 a.m. and 5 p.m. If delivered by a commercial courier, objections must be delivered between 8:30 a.m. and 4 p.m. to the Congressional Courier Acceptance Site located at 2nd and D Street, NE., Washington, DC, and the envelope must be addressed to: Copyright Royalty Board, Library of Congress, James Madison Memorial Building, Room LM-403, 101 Independence Avenue, SE., Washington, DC 20559-6000.

**FOR FURTHER INFORMATION CONTACT:** Richard Strasser, Senior Attorney, or Gina Giuffreda, Attorney Advisor, by telephone at (202) 707-7658 or e-mail at [crb@loc.gov](mailto:crb@loc.gov).

**SUPPLEMENTARY INFORMATION:** As required by section 119(c)(1)(B) of the Copyright Act, title 17 of the United States Code, the Copyright Royalty Judges published a Notice in the **Federal Register** announcing the commencement of a voluntary negotiation period for the purpose of determining the royalty fees to be paid under the satellite carrier statutory license, 17 U.S.C. 119. 75 FR 32228 (June 7, 2010). The law further provides that parties that have reached a voluntary agreement as to the rates may, within ten days of publication of the Notice, “request that the royalty fees in that agreement be applied to all satellite carriers, distributors, and copyright owners without convening a proceeding under subparagraph (F).” 17 U.S.C. 119(c)(1)(D)(ii)(I). The ten-day period ended on June 17, 2010.

On June 9, 2010, the Judges received a voluntary agreement from the Program Suppliers and Joint Sports Claimants (collectively, the “Copyright Owners”) and DIRECTV, Inc., DISH Network, LLC, and National Programming Service, LLC (collectively, the “Satellite Carriers”). The Copyright Owners and Satellite Carriers request that the Judges adopt the rates set forth in Article 2 of their agreement, which we are publishing today for comment. The Judges are publishing the rates as required by section 119(c)(1)(D)(ii)(II).

Section 119(c)(1)(D)(ii)(III) provides that the Judges shall adopt the negotiated rates “unless a party with an intent to participate in the proceeding and a significant interest in the outcome of that proceeding objects under clause