# MHCC
# Proposed Changes
# 2016-2017 Cycle
# and Non-Log Items

April 20, 2018

# Table of Contents

# Proposed Change Status Summary

| LogID | Section | Action | Current Status |
|---|---|---|---|
| 78 | 3280.304(a) Materials | Approve as Modified - Ballot III | MHCC Final Action Submitted to HUD |
| 80 | 3280.406 Air chamber test methods | Disapprove | MHCC Final Action Submitted to HUD |
| 87 | 3280.112 Hallways | Disapprove - Ballot IV | MHCC Final Action Submitted to HUD |
| 88 | 3280.715 Circulating air systems | Approve - Ballot II | MHCC Final Action Submitted to HUD |
| 89 | 3282.8 Applicability (g) recreational vehicles | Approve as Modified - Ballot II | MHCC Final Action Submitted to HUD |
| 90 | 3285.2(c)(1)(ii) Manufacturer installation instructions | Disapprove - Ballot III | MHCC Final Action Submitted to HUD |
| 91 | 3280.603(b)(4)(ii) General requirements | Approve - Ballot II | MHCC Final Action Submitted to HUD |
| 92 | 3280.709(a) Installation of appliances | Approve - Ballot II | MHCC Final Action Submitted to HUD |
| 93 | 3280.709(g) Installation of appliances and 3285.503(b) Optional appliances | Log 93-A: Approve - Ballot II<br>Log 93-B: Approve as Modified - Ballot II | MHCC Final Action Submitted to HUD |
| 94 | 3280.707(a) Heat producing appliances | Approve as Modified - Ballot II | MHCC Final Action Submitted to HUD |
| 95 | 3280-103 definitions, | Approve as Modified - Ballot II | MHCC Final Action Submitted to HUD |
| 96 | 3280.2 Definitions | Disapprove - Ballot II | MHCC Final Action Submitted to HUD |
| 97 | 3280.707 Heat producing appliances | Disapprove - Ballot II | MHCC Final Action Submitted to HUD |
| 98 | 3280-307 Resistance to elements and use | Approve - Ballot II | MHCC Final Action Submitted to HUD |
| 99 | 3282.8(g) Applicability | Disapprove - Ballot II | MHCC Final Action Submitted to HUD |
| 100 | 3204 Kitchen Cabinet protection | Approve as Modified - Ballot III | MHCC Final Action Submitted to HUD |
| 101 | 3280 Section 611(c) Vents and venting | Approve - Ballot II | MHCC Final Action Submitted to HUD |
| 102 | 3280.105 Exit facilities exterior doors | Disapprove - Ballot II | MHCC Final Action Submitted to HUD |
| 103 | 3280 Section 808(k) wiring methods and materials | Approve as Modified - Ballot II | MHCC Final Action Submitted to HUD |
| 104 | 3285 Sections 3285.5 Definitions and 3285.801 Exterior close-up | Approve - Ballot II | MHCC Final Action Submitted to HUD |
| 105 | 3282.8(g) Applicability | Disapprove - Ballot II | MHCC Final Action Submitted to HUD |
| 106 | 3282.362 Labels | Disapprove - Ballot III | MHCC Final Action Submitted to HUD |
| 107 | 3280.2 Definitions | Approve - Ballot III | MHCC Final Action Submitted to HUD |
| 108 | 3280.607 Plumbing fixtures | Approve as Modified - Ballot III | MHCC Final Action Submitted to HUD |
| 109 | 3280.210 Fire testing | Disapprove - Ballot III | MHCC Final Action Submitted to HUD |
| 110 | 3280.211 (New section) | Disapprove - Ballot III | MHCC Final Action Submitted to HUD |
| 111 | 3280.2 Definitions; 3280.105 Exit facilities, 3280.205 Fire blocking | Disapprove - Ballot III | MHCC Final Action Submitted to HUD |
| 112 | 3280.4(b) Incorporation by reference. | Approve - Ballot III | MHCC Final Action Submitted to HUD |
| 113 | 3280.4(b)(1) Incorporation by reference | Approve | MHCC Final Action Submitted to HUD |
| 114 | 3280.4(i)(20) Incorporation by reference | Approve | MHCC Final Action Submitted to HUD |
| 115 | 3280.4(ff)(21) Incorporation by reference | Approve as Modified - Ballot IV | MHCC Final Action Submitted to HUD |
| 116 | 3280.4(aa)(2) Incorporation by reference | Approve - Ballot IV | MHCC Final Action Submitted to HUD |
| 117 | 3280.4(aa)(5) Incorporation by reference | Approve - Ballot III | MHCC Final Action Submitted to HUD |
| 118 | 3280.4 Incorporation by reference and 3280.703 Minimum standards | Approve as Modified - Ballot IV | MHCC Final Action Submitted to HUD |
| 119 | 3280.508(b) Heat loss, heat gain and cooling load calculations | Disapprove | MHCC Final Action Submitted to HUD |
| 120 | 3280.508(b) Heat loss, heat gain and cooling load calculations | Disapprove | MHCC Final Action Submitted to HUD |

| LogID | Section | Action | Current Status |
|---|---|---|---|
| 121 | 3280.508(d) Heat loss, heat gain and cooling load calculations | Disapprove | MHCC Final Action Submitted to HUD |
| 122 | 3280.511(a)(1) Comfort cooling certificate and information | Disapprove | MHCC Final Action Submitted to HUD |
| 123 | 3280.511(a)(2) Comfort cooling certificate and information | Tabled | Pending MHCC Final Action |
| 124 | 3280.714(a)(1)(ii) Appliances, cooling | Approve as Modified - Ballot III | MHCC Final Action Submitted to HUD |
| 125 | 3280.714(a)(1)(iii) Appliances, cooling | Approve - Ballot III | MHCC Final Action Submitted to HUD |
| 126 | 3280.715(a)(3)(ii) Circulating air systems | Disapprove - Ballot III | MHCC Final Action Submitted to HUD |
| 127 | 3280.607(b)(3)(v) Shower compartment | Disapprove - Ballot III | MHCC Final Action Submitted to HUD |
| 128 | 3280.211 (New section) | Approve as Modified - Ballot III | MHCC Final Action Submitted to HUD |
| 129 | 3280.4 Incorporate by reference | Approve - Ballot III | MHCC Final Action Submitted to HUD |
| 130 | 3280.105(a)(2)(i) Exit facilities; Exterior doors | Approve as Modified - Ballot IV | MHCC Final Action Submitted to HUD |
| 131 | 3280.305(k)(2) Structural Design Requirements | Approve - Ballot IV | MHCC Final Action Submitted to HUD |
| 132 | 3285.2 Manufacturer Installation Instructions | Approve as Modified - Ballot IV | MHCC Final Action Submitted to HUD |
| 133 | 3280.2 Referenced Standards | Approve as Modified - Ballot IV | MHCC Final Action Submitted to HUD |
| 134 | 3280.304(b)(1) Materials | Approve - Ballot IV | MHCC Final Action Submitted to HUD |
| 135 | 3285.603 Water supply. | Approve | MHCC Final Action Submitted to HUD |
| 136 | 3286.205 (d) Prerequisites for installation license | Approve as Modified - Ballot IV | MHCC Final Action Submitted to HUD |
| 137 | 3286.207 (d) Process for obtaining installation license | Approve as Modified - Ballot IV | MHCC Final Action Submitted to HUD |
| 138 | 3286.209 (8) (vi) Denial, suspension, or revocation of installation license | Approve as Modified - Ballot IV | MHCC Final Action Submitted to HUD |
| 139 | 3280.4 Reference Standard | Approve as Modified - Ballot IV | MHCC Final Action Submitted to HUD |
| 140 | 3280.404 Requirement for Windows | Approve | MHCC Final Action Submitted to HUD |
| 141 | 3286.409 Obtaining inspection | Approve | MHCC Final Action Submitted to HUD |
| 142 | 3286.103 DAPIA-approved installation instructions | Approve as Modified | MHCC Final Action Submitted to HUD |
| 143 | 3280.711 Instructions | Approve | MHCC Final Action Submitted to HUD |
| 144 | 3280.304 (b)(1) Materials | Approve as Modified | MHCC Final Action Submitted to HUD |
| 145 | 3280.5(i) (new text) Data plate | Approve | MHCC Final Action Submitted to HUD |

| Ballot Item # | Proposal | Action |
|---|---|---|
| IV-14 | Modify original addition of ANSI/ASHRAE 62.2-2010 to the 2013 version for Indoor Air Quality: Optional compliance with ASHRAE 62.2 (Log 25) | Approved - Ballot IV |
| IV-15 | Choosing Option B for SAA Funding Options | Approved - Ballot IV |
| IV-16 | Request HUD extend the transition period of the onsite rule to 12 months, instead of 6 months | Approved - Ballot IV |
| V-15 | Recommend that HUD adopt the NFPA 70-2014 as a reference standard with modifications. | Approved - Ballot V |
| V-16 | Approve the Working Draft proposed by HUD regarding the Formaldehyde Emission Controls for Certain Wood Products including a list of questions for publication with the rule-making for comments. | Approved - Ballot V |
| VI-1 | Submit 13 comments on the Interpretative Bulletin to HUD | Approved - Ballot VI |
| VI-2 | Submit redlined comments on the Interpretative Bulletin to HUD | Approved - Ballot VI |

# Proposed Changes

| Log # 78 - § 3280.304 Materials | Date: 11/26/2014 |
|---|---|
| **Submitter:** | Michael Wade, Cavalier Homes |
| **Requested Action:** | New Text |
| **Proposed Change:** | **Current Log #78 (re-submission)**<br>**Proposed add text in red.**<br>**3280.304 Materials.**<br><br>(a) Dimension and board lumber shall not exceed 19 percent moisture content at time of installation.<br><br>(1) Treated lumber used for porch decking and porch joists which are fully exposed to ambient air may have a moisture content exceeding 19 percent. |
| **Reason:** | Per the current language, it is not permissible to use standard treated lumber. KDAT (kiln dried after treatment) must be used to obtain moisture content below 19%. Many porch designs exist where the joists do not extend into the enclosed portion of the floor cavity, and thus are exposed to ambient air at all times. Taking this into consideration, it seems logical that the moisture content of exposed treated lumber at the time of construction should not be limited. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | Standard treated lumber typically sells for around $80.00 per thousand less that KDAT lumber, which equates to around $1.68 per board on a 2x8 that is 16' long. Example: On an End porch 8' deep that runs across both halves of a typical multi-section, would recognize a savings around/near $20.00 by being able to use standard treat vs KDAT. |
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| **Subcommittee Recommendation:** | Approve as Modified (10-0-0) |
| **MHCC Action:** | Approve as Modified (21-0-0) |
| **MHCC Modification of Proposed Change:** | **3280.304 Materials.**<br><br>(a) Dimension and board lumber shall not exceed 19 percent moisture content at time of installation, except that treated lumber used for exterior purposes may have a moisture content exceeding 19 percent. |
| **MHCC Reason:** | Clarification. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>**8/18/2015** – MHCC Motion: Approve as Modified.<br>**7/15/2015** – SDSC Recommendation: Approve as Modified. |

| Log # 80 - § 3280.406 (new section) | Date: |
|---|---|
| **Submitter:** | James P. Van Schoyck, PFS Corporation |
| **Requested Action:** | Add text to Subpart E, Testing to read as follows: |
| **Proposed Change:** | Add text to Subpart E, Testing to read as follows:<br>Sec. 3280.406 Air chamber test methods (Primary and Secondary) for certification and qualification of formaldehyde emission levels.<br>(a) Preconditioning. Preconditioning of plywood or particleboard panels for air chamber tests shall be initiated as soon as practicable but not in excess of 30 days after the plywood or particleboard is produced or surface-finished, whichever is later, using randomly selected panels.<br>(1) If preconditioning is to be initiated more than two days after the plywood or particleboard is produced or surface-finished, whichever is later, the panels must be dead-stacked or air-tight wrapped until preconditioning is initiated.<br>(2) Panels selected for testing in the air chamber shall not be taken from the top or bottom of the stack.<br>(b) Primary method testing. Primary method Testing shall be conducted in accordance with the Standard Test Method for Determining Formaldehyde Levels from Wood Products Under Defined Test Conditions Using a Large Chamber, ASTM E-1333-90, with the following exceptions:<br>(1) The chamber shall be operated indoors.<br>(2) Plywood and particleboard panels shall be individually tested in accordance with the following loading ratios: (i) Plywood--0.29 Ft2/Ft3, and (ii) Particleboard--0.13 Ft2/Ft3.<br>(3) Temperature to be maintained inside the chamber shall be 77 (deg) plus or minus 2 (deg) F.<br>(4) The test concentration (C) shall be standardized to a level ($C_o$) at a temperature ($t_o$) of 77 (deg)F and 50 percent relative humidity ($H_o$) by the following formula: $C = C_o x [1 + Ax (H - H_o)] \times e\text{-}R(1 / t - 1 / t_O)$<br><br>where:<br>C = Test formaldehyde concentration<br>$C_o$= Standardized formaldehyde concentration<br>e = Natural log base<br>R = Coefficient of temperature (9799)<br>t = Actual test condition temperature (°K) $t_o$ = Standardized temperature (° K)<br>A = Coefficient of humidity (0.0175)<br>H = Actual relative humidity (%)<br>$H_o$ = Standardized relative humidity (%)<br><br>The standardized level ($C_o$) is the concentration used to determine compliance with Sec. 3280.308(a).<br>(5) The air chamber shall be inspected and recalibrated at least annually to insure its proper operation under test conditions.<br>(c) Secondary method testing. Secondary method testing is defined as specified in ASTM D6007-02, with the additional conditions specified below:<br>(1) The secondary method shall be operated using the testing conditions and loading rates specified in ASTM D6007-02, and the conditioning time used to establish equivalence with the primary method. In addition, when testing panels, the secondary method shall be operated by testing nine specimens representing evenly distributed portions of an entire panel. The nine specimens shall be tested in groups of three specimens, resulting in three test results, which shall be averaged to represent one data point for the panel.<br><br>(2) Equivalence between the secondary method and the primary method must be established, at least once each year, for each testing laboratory used for CFR 3280 compliance. Minimum requirements for an equivalence demonstration shall include at |

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| | least ten comparison sample sets, which compare the results of the primary and secondary methods.<br>The following parameters must be met in the comparison:<br>(i) For the primary method, each comparison sample shall consist of the result of simultaneously testing an appropriate number of panels (factoring in the loading rate) from the same batch of panels tested by the secondary method.<br>(ii) For the secondary method, each comparison sample shall consist of testing nine specimens representing evenly distributed portions of an entire panel. The nine specimens shall be tested in groups of three specimens (factoring in the loading rate), resulting in three test results, which shall be averaged to represent one data point for the panel, and matched to their respective primary method comparison sample result.<br>(iii) The ten comparison sample sets shall consist of testing a minimum of five sample sets in each of at least two of the following ranges of formaldehyde concentrations, as measured by the primary method:<br>a. Lower range: less than 0.07 ppm<br>b. Intermediate range: 0.07 to less than 0.15 ppm<br>c. Upper range: 0.15 to 0.30 ppm<br><br>(3) The average and standard deviation of the difference of all comparison sets shall be calculated as follows. For each of the two ranges used for testing, the following computations shall be performed:<br>(i) Denote the number of sets in the given range by *n*.<br>(ii)Compute the difference for the *i* th set by *Di*, where *i* ranges from 1 to *n*.<br>(iii) Compute the average, *X*, and standard deviation, *S*, of the differences according to the following formulas:<br><br>*** Insert Equations here***<br><br>(4) The secondary method shall be considered equivalent to the primary method if the following condition is met for both tested ranges:<br><br>$[X] + 0.88\ S \leq C$<br><br>0.026 for the lower range;<br>0.038 for the intermediate range; and 0.052 for the upper range.<br><br>(5) Equivalence must be established between the primary and secondary method to represent the range in emissions based on the emission standards specified in section (c), (2), (iii).<br><br>[49 FR 32012, Aug. 9, 1984, as amended at 58 FR 55009, Oct 25, 1993] |
| **Reason:** | Currently Section 3280.406 "Air chamber test method for certification and qualification of formaldehyde emission levels" required the Formaldehyde Emission Level test to be performed in accordance with ASTM E1333 "Test method for Determining Formaldehyde Levels from Wood Products Under Defined Test Conditions Using a Large Chamber." PFS Corporation is requesting an alternate test method to the standard ASTM E1333 test. There are two (2) most recent formaldehyde emissions limitation programs in the United States and they are:<br>1. California Air Resources Board (CARB) *"ATCM to Reduce Formaldehyde Emission From Composite Wood Products"*<br>2. Environmental Protection Agency (EPA) Public Law 11-199 *"Title VI – Formaldehyde Standards from Composite Wood Products."* |

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| | Both CARB and EPA specify the use of ASTM E1333 but also allow the use of ASTM D6007 test method after equivalence has been proven between the two. Note - the equivalence is based on satisfactory compliance with minimum allowable variation between the ASTM E1333 test results and the ASTM D6007 test results which are determined on the same sample. PFS testing laboratory conducted the correlation protocol using our ASTM D6007 small chamber (Moblehyde) test apparatus. The Mobledehyde is a CARB approved secondary method. A copy of the PFS Corporation correlation test results showing compliance with requirement is Attachment A. Note: Supporting material is available for review at NFPA Headquarters. |
| **Substantiating Documents:** | Yes<br>Staff Note: No additional documents received. |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | The reasons for this request is that the ASTM D6007 is a more efficient test method because the sample size is smaller and the test is completed in less time. This difference reduces sample preparation time, shipping and handling costs, and the time to conduct the emission measurement which is a big savings to the HUD manufacture program.<br><br>Because the small chamber testing takes approximately 14 fewer hours than large chamber and the amount of lab area required is smaller - the cost savings is significant. During a 24 hour period - the small chamber has allowed for PFS to generate $6,000.00 in testing fees using three small chambers vs. $600.00 using the large chamber method. We allow for the small chambers to run via computer controlled data acquisition for over-night testing. This eliminates need for staff over-time. |
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| **Subcommittee Recommendation:** | Disapprove |
| **MHCC Action:** | Disapprove (19-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | Pursuant to accepting HUD's proposed language on EPA testing requirements |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/20/2016 –** Final Action from October 25-27, 2016 meeting confirmed by MHCC Ballot V.<br>**10/27/ 2016 –** MHCC Action: Disapprove.<br>**10/27/2016 –** Structure and Design Subcommittee Action: Disapprove. |

| Log # 87 - § 3280.112 Hallways | | Date: 11/18/2014 |
|---|---|---|
| **Submitter:** | Steve Anderson | |
| **Requested Action:** | Revised Text | |
| **Proposed Change:** | **§ 3280.112 Hallways.**<br>Hallways shall have a minimum horizontal dimension of ~~28~~36 inches measured from the interior finished surface to the interior finished surface of the opposite wall. When appliances are installed in a laundry area, the measurement shall be from the front of the appliance to the opposite finished interior surface. When appliances are not installed and a laundry area is provided, the area shall have a minimum clear depth of ~~27~~35 inches in addition to the ~~28~~36inches required for passage. In addition, a notice of the available clearance for washer/dryer units shall be posted in the laundry area. Minor protrusions into the minimum hallway width by doorknobs, trim, smoke alarms or light fixtures are permitted. | |
| **Reason:** | The justification has nothing to do with cost. It has everything to do with fire safety. Basic physics teach us that the narrowed the hallway, the greater the velocity. This means that there is a greater chance of the chimney effect occurring in homes with narrower hallways than with wider hallways. Most building codes recognize these factors by enlarging hallway widths. Most local building codes require hallway widths to be from 36" to 48". Florida state code puts them at either 42" or 48" – depending on whether it is handicapped accessible or not. Los Angeles County Building Code is 36". Salt Lake City has adopted the 2012 version of the IBC, which places the width at 36 inches. | |
| **Substantiating Documents:** | No | |
| **Additional Cost:** | Unknown | |
| **Cost Benefit Explanation:** | This proposal does not pretend to be of any financial benefit – with regards to cost savings in the construction of the homes. Instead, the benefit comes from making the homes safer and the potential loss of life lessened. The question regarding cost savings comes from the problem of defining the worth of human life. To me, the cost is high – others have a different point of view. | |
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| **Subcommittee Recommendation:** | Disapprove (7-1-0) | |
| **MHCC Action:** | Disapprove | |
| **MHCC Modification of Proposed Change:** | | |
| **MHCC Reason:** | Did not think that increasing the hallway widths was in the best interest of the industry. | |
| **Current Status:** | MHCC Final Action Submitted to HUD | |
| **Log History:** | **4/5/2016** – Final Action from January 19-21, 2016 meeting confirmed by MHCC Ballot IV.<br>**1/21/2016** – MHCC Motion: Disapprove.<br>**1/21/2016** – SDCS Recommendation: Disapprove.<br>**8/18/2015** – MHCC Motion: Refer to Structure and Design Subcommittee.<br>**12/2/2014** – Table until next MHCC meeting awaiting additional supporting documents. | |

| Log # 88 - § 3280.715 Circulating Air Systems | Date: 10/08/2014 |
|---|---|
| **Submitter:** | Task Force: Manuel Santana (chair), Debra Blake, & Tim O'Leary |
| **Requested Action:** | Revise as follows: |
| **Proposed Change:** | **§ 3280.715 Circulating air systems.**<br>(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– 2003, Factory-Made Air Ducts and Air Connectors (incorporated by reference, see § 3280.4). ~~Class 1 air~~ Air ducts and air connectors ~~must be~~ located ~~at least~~ within 3 feet ~~from~~ of the furnace discharge ~~bonnet or plenum~~ must be rated to withstand the maximum discharge air temperature of the equipment. 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.~~<br>Ducts constructed from sheet metal must be in accordance with the following table: |
| **Reason:** | Adding the requirement that the duct be rated to at least the maximum air discharge temperature of the equipment satisfies the fire safety concern and covers all installation cases without needing to specify type of equipment or type of duct. |
| **Substantiating Documents:** | no |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | There will be no additional cost associated with this proposal. |
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| **Subcommittee Recommendation:** | Approve (10-0-0) |
| **MHCC Action:** | Approve (19-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **2/10/2015** – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>**12/5/2014** – Additional Cost and Cost Benefit Explanation received from Manuel Santana.<br>**12/4/2014**<br>o MHCC Motion: Approve.<br>o TSSC Recommendation: Approve.<br>**10/8/2014** – Log 88 was submitted by a Task Force consisting of Manuel Santana (chair), Debra Blake, and Tim O'Leary. The TF was responsible for turning Action Item 1 – Supply Air Ducts Letter into a proposed change. Log 88 is the resulting proposed change. The proposed change is missing Cost/Benefit Information. |

| Log # 89 - § 3282.8 Applicability | | Date: 11/19/2014 |
|---|---|---|
| **Submitter:** | Mark Weiss | |
| **Requested Action:** | Revised Text | |
| **Proposed Change:** | ***Revise 24 CFR 3280.2 Definitions as follows:***<br><br>Dwelling ~~unit~~ means ~~one or more habitable rooms which are designed to be occupied by one family with facilities for living, sleeping, cooking and eating~~ a structure designed and constructed for use as a permanent residence by one or more persons, with facilities for sleeping, eating, cooking, and sanitation, which constitutes an independent living unit. The term "dwelling" (as defined in 24 C.F.R. 3282.8(g) does not include recreational vehicles or other transportable structures designed, constructed, and utilized exclusively for temporary, non-residential occupancy.<br><br>Manufactured home means a structure, transportable in one or more sections, which in the traveling mode is 8 body feet or more in width or40 body feet or more in length or which when erected on-site is 320 or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air-conditioning, and electrical systems contained in the structure. This term includes all structures that meet the above requirements except the size requirements and with respect to which the manufacturer voluntarily files a certification pursuant to§ 3282.13 of this chapter and complies with the construction and safety standards set forth in this part 3280. ~~The term does not include any self-propelled recreational vehicle~~. Calculations used to determine the number of square feet in a structure will include the total of square feet for each transportable section comprising the completed structure and will be based on the structure's exterior dimensions measured at the largest horizontal projections when erected on site. These dimensions will include all expandable rooms, cabinets, and other projections containing interior space, but do not include bay windows. Nothing in this definition should be interpreted to mean that a manufactured home necessarily meets the requirements of HUD's Minimum Property Standards (HUD Handbook 4900.1) or that it is automatically eligible for financing under 12U.S.C. 1709(b).<br><br>***Revise 24 C.F.R. 3282.8 Applicability as follows:***<br><br>**3282.8** (g) Recreational vehicles. ~~Recreational vehicles are not subject to this part, part3280, or part 3283. A recreational vehicle is a vehicle which is:~~<br><br>~~(1) Built on a single chassis;~~<br><br>~~(2) 400 Square feet or less when measured at the largest horizontal projections;~~<br><br>~~(3) Self-propelled or permanently towable by a light duty truck; and~~<br><br>~~(4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.~~ A recreational vehicle is a self-propelled or towable vehicle, or other transportable structure, not affixed to land either permanently or temporarily, that is neither designed, constructed nor utilized as a dwelling. | |

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| **Reason:** | At the urging of the recreational vehicle (RV) industry, legislation has been introduced in Congress (i.e. H.R. 5658) that would exempt certain RVs from the definition of "manufactured home" contained in the National Manufactured Housing Construction and Safety Standards Act of 1974 (as amended) (42 U.S.C. 5402(6)) ("Act"). Currently, the Act expressly exempts only "self-propelled recreational vehicle[s]" from the statutory definition of "manufactured home" and potential regulation by HUD pursuant to the Act. H.R. 5658 would create and extremely broad statutory exemption for "towed" RVs, with no size or single-chassis limitation, and for an undefined class of "Park Model" RVs with a "gross area of not greater than 400 square feet…" Given the fact that the Act, by its express terms, is a "housing" law and, in its original form, included no reference to RVs, expanded statutory RV exemption language would only exacerbate the problems caused by the later inclusion of "self-propelled" RVs. Such a broad statutory exemption, moreover, which could effectively create a class of unregulated de facto homes and thereby expose consumers to significant safety risks and home value issues, among other negative impacts, is unnecessary to address any potentially valid concerns raised by RV interests. It would also invite potentially unlimited requests for similar statutory exclusions for other types of existing structures and/or structures that could evolve with new technology in the future. Instead, since the Act defines regulated "manufactured homes" as designed for use as a "dwelling," and there is no dispute that RVs are not designed for use as a "dwelling," the sections cited above should be modified to exclude non-dwelling RVs from HUD regulation pursuant to the Act. Such regulation, based on the design, construction and use of RVs versus manufactured homes, would eliminate continuing disputes over the current definitions and exclusions based on size parameters and dimensions, as well as administrative interpretations regarding the proper measurement of those parameters, and create a firewall between manufactured homes designed and constructed as permanent residences and RVs. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | MHARR does not anticipate any impact on the cost of manufactured housing to the public as defined by the Act (42 U.S.C. 5403(e)) as a result of adoption of the proposed amendments. |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approved as Modified (19-0-0) |
| **MHCC Modification of Proposed Change:** | *Revise Standard as follows:*<br><br>***3282.8 Applicability***<br>(g) *Recreational vehicles.* Recreational vehicles are not subject to this part, part 3280. A recreational vehicle is a ~~vehicle which is:~~ factory built vehicular structure designed only for recreational use and not as a primary residence or for permanent occupancy, built and certified in accordance with NFPA 1192-2015 or ANSI A119.5-09 consensus standards for recreational vehicles and not certified as a manufactured home.<br>~~(1) Built on a single chassis;~~<br>~~(2) 400 Square feet or less when measured at the largest horizontal projections;~~<br>~~(3) Self-propelled or permanently towable by a light duty truck; and~~<br>~~(4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.~~ |
| **MHCC Reason:** | The HUD Office of Manufactured Housing regulates manufactured housing. Manufactured housing designed and built to HUD standards under the HUD Office of Manufactured Housing program are permanent residences. RVs designed and built for temporary recreational or seasonal camping accommodation in accordance with widely used/accepted national standards and are not manufactured homes. |

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| | RVs, in their many shapes and sizes, are not manufactured homes and are outside of the manufactured home standards and regulations. The current HUD regulation that excludes recreational vehicles from the HUD manufactured housing standards and regulations adds language that defines an RV. In practice, this has the effect of acting as de facto federal HUD regulation of RVs.<br><br>There is no need for a complicated definition of recreational vehicles in the HUD regulations that acts as de facto HUD standards for RVs and potentially creates an obligation for the HUD Office of Manufactured Housing to attempt to enforce manufactured housing standards on RVs.<br><br>The model for this proposal is 24 CFR 3282.8(L): "(l) Multifamily homes. Mobile homes designed and manufactured with more than one separate living unit are not covered by the standards and these regulations." This simple exclusionary language creates a clear, simple and bright line between manufactured housing and multifamily housing. The same clear, simple and bright line also makes sense for excluding RVs from HUD's manufactured housing program. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **2/10/2015** – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>**12/2/2014** – MHCC Motion: Approve as Modified. |

| Log # 90 - § 3285.2 Manufacturer installation instructions | Date: 11/21/2014 |
|---|---|
| **Submitter:** | Manuel Santana, Cavco Industries |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | **3285.2(c)(1)(ii)**<br>If designs and instructions are not available from the manufacturer, obtain an alternate design prepared and certified by a registered professional engineer or registered architect for the support and anchorage of the manufactured home that is consistent with the manufactured home design ~~,~~ and conforms to the requirements of the MHCSS~~,~~ ~~and has been approved by the manufacturer and the DAPIA.~~ |
| **Reason:** | This section recognizes that it is impossible for a manufacturer's installation manual to address all site specific circumstances. This section provides owners and installers with the option to obtain an installation method better suited (be it due to cost or site conditions) to their situation. Requiring that the proprietary, site specific installation or foundation system that the customer paid to obtain be submitted to both the manufacturer and DAPIA completely eliminates the benefit of allowing consumers to obtain their own design. This requirement only serves to increase both the cost and completion time of the project. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | This proposal constitutes a savings to the customer both in time and money, total savings will vary. |
| | |
| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Disapprove (17-4-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | Approval by the DAPIA and manufacturer are too important to remove from this section. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>**8/18/2015** – MHCC Motion: Disapprove.<br>**2/10/2015** – Final Action from December 2-4, 2014 meeting overturned by MHCC Ballot II.<br>**12/2/2014** – MHCC Motion: Approve as Modified.<br>" *Revise Standard as follows:*<br>**3285.2(c)(1)(ii)**<br>If designs and instructions are not available from the manufacturer, obtain an alternate design prepared and certified by a registered professional engineer or registered architect for the support and anchorage of the manufactured home that is consistent with the manufactured home design~~,~~ and conforms to the requirements of the MHCSS, and has been approved by ~~the manufacturer and~~ the DAPIA." |

| Log # 91 - § 3280.603 General requirements | | Date: 11/21/2014 |
|---|---|---|
| **Submitter:** | Manuel Santana, Cavco Industries | |
| **Requested Action:** | Revised Text | |
| **Proposed Change:** | **3280.603(b)(4)(ii)**<br>A statement in the installation instructions required by §3280.306(b), stating that if the heat tape of pipe heating cable is used, it must be listed ~~for use with manufactured homes.~~ or certified for its intended purpose. | |
| **Reason:** | Heat tape used on a manufactured home is not different than heat tape used on a conventionally built home. This would relieve the added cost to the customer of additional listing expense incurred by the manufacturer. | |
| **Substantiating Documents:** | No | |
| **Additional Cost:** | No | |
| **Cost Benefit Explanation:** | There is no additional costs with this proposal. there are potential cost savings by having more options available to the consumer. | |
| | | |
| **Subcommittee Recommendation:** | | |
| **MHCC Action:** | Approve (19-0-0) | |
| **MHCC Modification of Proposed Change:** | | |
| **MHCC Reason:** | | |
| **Current Status:** | MHCC Final Action Submitted to HUD | |
| **Log History:** | **2/10/2015** – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>**12/2/2014** – MHCC Motion: Approve. | |

| Log # 92 - § 3280.709 Installation of appliances | | Date: 11/21/2014 |
|---|---|---|
| **Submitter:** | Manuel Santana, Cavco Industries | |
| **Requested Action:** | Revised Text | |
| **Proposed Change:** | **3280.709(a)**<br>The installation of each appliance shall conform to the terms of its listing and the manufacturer's instructions. ~~The installer shall leave the manufacturer's instructions attached to the appliance.~~ Every appliance shall be secured in place to avoid displacement. For the purpose of servicing and replacement, each appliance shall be both accessible and removable. | |
| **Reason:** | §3280.711 requires that installation instructions be shipped with the homeowners manual. This caused confusion as to whether it was necessary to ship two installation instructions with each appliance, one with the appliance and one with the homeowners manual. This revision will make it clear that it is not necessary to ship a duplicate set of installation instructions with each house. | |
| **Substantiating Documents:** | No | |
| **Additional Cost:** | No | |
| **Cost Benefit Explanation:** | There is a cost benefit of not having to procure and ship duplicate sets of installation manuals. | |
| | | |
| **Subcommittee Recommendation:** | | |
| **MHCC Action:** | Approve (19-0-0) | |
| **MHCC Modification of Proposed Change:** | | |
| **MHCC Reason:** | | |
| **Current Status:** | MHCC Final Action Submitted to HUD | |
| **Log History:** | **2/10/2015** – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>**12/2/2014** – MHCC Motion: Approve. | |

| Log # 93 - § 3280.709 Installation of appliances & § 3285.503 Optional appliances | Date: 11/21/2014 |
|---|---|
| **Submitter:** | Manuel Santana, Cavco Industries |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | **3280.709(g)**<br>Solid fuel-burning factory-built fireplaces and fireplace stoves listed for ~~use in manufactured homes~~ residential use may be installed in manufactured homes provided they and their installation conform to the following paragraphs. A fireplace or fireplace stove shall not be considered as a heating facility for determining compliance with subpart F.<br><br>**3285.503 (b) *Fireplaces and wood stoves*.**<br>When not provided by the home manufacturer, fireplaces and wood-stoves must be listed ~~for use with manufactured homes~~ or certified for their intended purpose and must be installed in accordance with their listings. |
| **Reason:** | Residential fireplaces when listed by a nationally recognized agency are constructed in the same manner as one that has been listed for use in a manufactured home. This would relieve the added cost to the customer of additional listing expense incurred by the manufacturer. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | There is no additional cost associated with this proposal |
| | |
| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Log 93-A: Approve (19-0-0)<br>Log 93-B: Approve as Modified (18-1-0) |
| **MHCC Modification of Proposed Change:** | **Log 93-A**<br>**3280.709(g)**<br>Solid fuel-burning factory-built fireplaces and fireplace stoves listed for ~~use in manufactured homes~~ residential use may be installed in manufactured homes provided they and their installation conform to the following paragraphs. A fireplace or fireplace stove shall not be considered as a heating facility for determining compliance with subpart F.<br>**Log 93-B**<br>*Revise proposed change as follows (in red):*<br><br>**3285.503 (b) *Fireplaces and wood stoves*.**<br>When not provided by the home manufacturer, fireplaces and wood-stoves must be listed for residential use ~~with manufactured homes or certified for their intended purpose~~ and must be installed in accordance with their listings. |
| **MHCC Reason:** | Log 93-B: Clarification for residential use only, "certified for their intended purpose" language was deemed unnecessary. If the fireplace or wood stoves were intended for residential use and are installed in accordance with their listings there should be no reason why you shouldn't be able to use them in a manufactured home. |
| **Current Status:** | Log 93-A: MHCC Final Action Submitted to HUD<br>Log 93-B: MHCC Final Action Submitted to HUD |
| **Log History:** | **2/10/2015** – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>**12/2/2014**<br>○ MHCC Motion: Approve as Modified Log 93-B**.**<br>○ MHCC Motion: Approve Log 93-A.<br>○ MHCC Motion: Divide proposed change based on section. |

| Log # 94 - § 3280.707 Heat producing appliances | Date: 11/21/2014 |
|---|---|
| **Submitter:** | Manuel Santana, Cavco Industries |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | **3280.707(a)**<br>Heat-producing appliances and vents, roof jacks and chimneys necessary for their installation in manufactured homes shall be listed or certified by a nationally recognized testing agency ~~for use in manufactured homes.~~ |
| **Reason:** | Safety features and efficiency ratings can be met by using a residential appliance listed by a nationally recognized listing agency and not cause additional expense to the manufacturer and customer by forcing appliance manufacturers to state their product is listed for use in a manufactured home. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | There is no additional cost associated with this proposal. It will benefit consumers by making available a wider ranges appliances for installation in manufactured homes. |
| | |
| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve as Modified (19-0-0) |
| **MHCC Modification of Proposed Change:** | *Revise proposed change as follows (in red):*<br><br>**3280.707(a)**<br>Heat-producing appliances and vents, roof jacks and chimneys necessary for their installation in manufactured homes shall be listed or certified for residential use by a nationally recognized testing agency. ~~for use in manufactured homes.~~ |
| **MHCC Reason:** | Clarification. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **2/10/2015** – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>**12/2/2014** – MHCC Motion: Approve as Modified. |

| Log # 95 - § 3280.102 Definitions & § 3280.103 Light and ventilation | Date: 11/21/2014 |
|---|---|
| **Submitter:** | Michael Lubliner, Northwest Energy Efficiency Alliance |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | **PROPOSED VENTILATION CHANGES TO CURRENT HUD MANUFACTURED HOUSING CONSTRUCTION & SAFETY STANDARDS (MHCSS):**<br><br>**Insert the following definitions from 62.2-2013 into 3280.103:**<br><br>***air, exhaust:*** air discharged from any space to the outside by an exhaust system.<br><br>***air, outdoor:*** air from outside the building taken into a ventilation system or air from outside the building that enters a space through infiltration or natural ventilation openings.<br><br>***exhaust system:*** one or more fans that remove air from the building, causing outdoor air to enter by ventilation inlets or normal leakage paths through the building envelope.<br><br>***mechanical ventilation:*** the active process of supplying air to or removing air from an indoor space by powered equipment such as motor-driven fans and blowers but not by devices such as wind-driven turbine ventilators and mechanically operated windows<br><br>***natural ventilation:*** ventilation occurring as a result of only natural forces, such as wind pressure or differences in air density, through intentional openings such as open windows and doors.<br><br>***supply system:*** one or more fans that supply outdoor air to the building, causing indoor air to leave by normal leakage paths through the building envelope.<br><br>***ventilation:*** the process of supplying outdoor air to or removing indoor air from a dwelling by natural or mechanical means. Such air may or may not have been conditioned.<br><br>**Insert and delter the following in § 3280.103 Light and ventilation.**<br><br>(b) *Whole-house ventilation.* Each manufactured home must be provided with whole-house mechanical ventilation having a minimum capacity of 0.035 ft3/min/ft2 of interior floor space or its hourly average equivalent. This ventilation capacity must be in addition to any openable window area. . The following criteria must be adhered to:<br><br>(1) The ventilation capacity must be provided by a mechanical ventilation system or a combination passive and mechanical ventilation system.<br><br>(3) The ventilation supply system or a portion of the system is permitted to be integral with the home's heating or cooling system. The supply system must be capable of operating independently of the heating or cooling modes. A mechanical ventilation supply system that is integral with the heating or cooling system is to be listed as part of the heating and cooling system or listed as suitable for use with that system.<br><br>(c) *Additional ventilation.*<br><br>(2)Kitchens shall be provided with a local exhaust fan that is capable of exhausting 100 cfm to the outside of the home. The local exhaust fan shall be located as close as possible to the range or cook top, but in no case farther than 3 feet horizontally from the range or cook top.<br><br>(3)Each bathroom and separate toilet compartment shall be provided with local exhaust fans capable of exhausting 50 cfm to the outside of the home. A separate toilet compartment may be provided with 1.5 square feet of openable glazed area in place of mechanical ventilation, except in Uo value Zone 3.<br><br>(f) **Ventilation Supply and Exhaust System(s) Airflow Measurement.** The airflow required is the quantity of indoor air supplied and/or exhausted by the ventilation system as installed and shall be measured using a flow hood, flow grid, or other |

commercially available airflow measuring device in accordance with the manufactured instructions. The frequency of testing shall be specified in manufacturer's quality assurance plan (QA). Measurements and shall occur whenever any ventilation system components is changed that may impact airflow(e.g. fan size, duct diameter, termination fitting type)

**Exception:** The airflow rating, at a pressure of 0.25 in. w.c. (62.5 Pa) may be used, provided the duct sizing meets the prescriptive requirements of Table XX or manufacturer's design criteria.

**TABLE XX – Prescriptive Duct Sizing**
**(note: bolded values are the range for mfg. home ventilation systems)**

| **Duct Type** | **Flex Duct** | | | | | | | | **Smooth Duct** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fan Airflow Rating** | | | | | | | | | | | | | | | | |
| CFM @0.25 in. w.c. (L/s @ 62.5 Pa) | **50 (25)** | **80 (40)** | **100 (50)** | 125 (65) | 150 (75) | 200 (100) | 250 (125) | 300 (150) | **50 (25)** | **80 (40)** | **100 (50)** | 125 (65) | 150 (75) | 200 (100) | 250 (125) | 300 (150) |
| **Diameter[1]** in. (mm) | Maximum Length[2,3,4] ft. (m) | | | | | | | | | | | | | | | |
| 3 (75) | X | X | X | X | X | X | X | X | 5(2) | X | X | X | X | X | X | X |
| **4 (100)** | **56 (17)** | **4 (1)** | **X** | **X** | **X** | X | X | X | **114 (35)** | **31 (9)** | **10 (3)** | X | X | X | X | X |
| **5 (125)** | **NL** | **81 (25)** | **42 (9)** | **16 (5)** | **2 (0.6)** | X | X | X | **NL** | **152 (46)** | **91 (28)** | 51 (16) | 28 (9) | 4 (1) | X | X |
| **6 (150)** | **NL** | **NL** | **158 (48)** | **91 (28)** | **55 (17)** | 18 (5) | 1 (0.3) | X | **NL** | **NL** | **NL** | 168 (51) | 112 (34) | 53 (16) | 25 (8) | 9 (3) |
| 7 (175) | NL | NL | NL | NL | 161 (49) | 78 (24) | 40 (12) | 19 (6) | NL | NL | NL | NL | NL | 148 (45) | 88 (27) | 54 (16) |
| 8 (200) and above | NL | NL | NL | NL | NL | 189 (58) | 111 (34) | 69 (21) | NL | NL | NL | NL | NL | NL | 198 (60) | 133 (41) |

1. For non-circular ducts, calculate the diameter as four times the cross-sectional area divided by the perimeter.
2. This table assumes no elbows. Deduct 15 feet (5 m) of allowable duct length for each elbow.
3. NL = no limit on duct length of this size.
4. X = not allowed, any length of duct of this size with assumed turns and fitting will exceed the rated pressure drop.

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| **Reason:** | PROBLEM: This proposal attempts to address the GAO report recommendations to HUD related to INDOOR AIR QUAILTY. The proposer believes GOA raises urgent health and safety issue that must be PROMPTLY addressed to protect consumers and reduce liability issues to industry and HUD. PROPOSAL RECOMENDATIONS: 1) Utilize recognized engineering standards by better aligning 3280-103 with ANSI/ASHRAE standard 62.2-2013. The proposer believes that alignment is consistent with the objectives National Technology Transfer Act, which direct federal agencies to use established industry ANSI type standards. 2) The proposer looks forwarded to discussing this proposal as chair of the systems sub-committee task group addressing the GAO recommendations at the December 2014 MHCC meeting. 3) Improve engineering design equipment selection. This proposal advises on using 0.25 inch water static pressure drop (not 0.1 as currently assumed) and exhaust duct sizing tables in ASHRAE 62.2 at the design stage in selecting the ventilation system components. 4) Performance testing to ensure compliance with design values. The proposal includes a testing requirement for ALL ventilation system fans, using commercially available flow measuring equipment in accordance with the equipment manufacturer instructions for operation and calibration. The equipment manual instructions will allow for accurate measurements to be performed by manufacturer, DAPIA's, IPIA's, HUD staff and IBTS. it was suggested that the manufacturer QA plan should guide the frequency of ventilation system flow rate testing at the discretion of the manufacturer with DAPIA, IPIA and HUD/IBTS oversight. Noted examples of this commercially available equipment from; THE ENERGY CONSERVATORY: http://products.energyconservatory.com/flowblaster-capture-hood-attachment/ and http://products.energyconservatory.com/exhaust-fan-flow-meter/ ALNOR: http://www.tsi.com/Alnor-Balometer-Capture-Hood-EBT721/ The following are the proposers observations/notes from the MHCC Task Group Conference call on 11/17/2004: 1) Is there a low flow issue in the field? Lubliner offered to HUD and industry stakeholders technical field/in plant assistance to measure the performance of ventilation systems to ensure compliance with 3280.013 minimum flow rate requirements of; 0.035 cfm/ft2 for whole house, 100 cfm for kitchen and 50 cfm bath exhaust fans. Lubliner referenced his person experiences testing as well as an ASHRAE peer review research paper on HUD-code mfg. home ventilation, and the NIST research report for HUD Healthy Homes program. Both reports are peer reviewed engineering publications that document low flow measurements of bath, kitchen and whole house ventilation systems and both referenced in GAO report. 2) What is the scope of GAO report with respect to testing? Lubliner noted he believes the GAO report did not limit performance testing to just whole house ventilation, and suggests bath and kitchen fans performance testing be included, since the consumer care about all exhaust fans meeting the minimum flow rates required in MHCSS 3280.103. 3) What standards and protocols needed to guide flow rate measurements? There are no specific engineering standards that can be referenced to guide the testing. Francisco noted that that ASHRAE 62.2 does not include flow rate protocol requirements. Lubliner suggested that using the equipment manufacturer instructions should be adequate to help ensure the required accuracy and repeatability, as is the case when 62.2 is employed in site built and modular homes. 4) Proposer action items for HUD/MHCC should focus on; * The design and equipment selection using 0.25 pressure drop assumptions (as this proposal addresses), and duct sizing table. * Testing flow rates of ventilation systems using commercially available equipment in accordance the equipment manufacturer instructions. (as t * HUD provides an interpretation that would allow for one exhaust fan located in a bathroom be used for both whole house and bath exhaust ventilation to reduce cost to consumer and improve ventilation system performance. |
| **Substantiating Documents:** | |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | There is no cost increase in this proposal, IF HUD allows, (as 62.2 does), the use of one $100 low sone (quiet) exhaust fan in a bathroom to satisfy both the 50 CFM bath fan AND 0.035 CFM.ft2 whole house requirements in MHCSS-3280-103. Any increased cost would be offset by not having to install a furnace supply system (e.g. POS or Blendaire) |

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| | or installing cheap "whole house fan" in the hallway and by eliminating labor and materials associated with; ducting, wiring, ceiling drywall and roof decking/flashing. The cost of testing is insignificant, since the proposal allows the frequency to be determined by the mfg. QA plan. The testing equipment runs $100-$1000 and can be amortized over time so as not tom impact the cost of the individual home. These issues were discussed on the MHCC systems sub-committee tasks groups conference call 11/17/2014. |
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| **Subcommittee Recommendation:** | Approve as Modified (8-0-0) |
| **MHCC Action:** | Approve as Modified (17-1-1) |
| **MHCC Modification of Proposed Change:** | *Revise Standard as follows:*<br><br>**PROPOSED VENTILATION CHANGES TO CURRENT HUD MANUFACTURED HOUSING CONSTRUCTION & SAFETY STANDARDS (MHCSS):**<br><br>**Insert the following definitions from 62.2-2013 into 3280.102:**<br><br>***air, exhaust:*** air discharged from any space to the outside by an exhaust system.<br><br>***air, outdoor:*** air from outside the building taken into a ventilation system or air from outside the building that enters a space through infiltration or natural ventilation openings.<br><br>***exhaust system:*** one or more fans that remove air from the building, causing outdoor air to enter by ventilation inlets or normal leakage paths through the building envelope.<br><br>***mechanical ventilation:*** the active process of supplying air to or removing air from an indoor space by powered equipment such as motor-driven fans and blowers but not by devices such as wind-driven turbine ventilators and mechanically operated windows<br><br>***natural ventilation:*** ventilation occurring as a result of only natural forces, such as wind pressure or differences in air density, through intentional openings such as open windows and doors.<br><br>***supply system:*** one or more fans that supply outdoor air to the building, causing indoor air to leave by normal leakage paths through the building envelope.<br><br>***ventilation:*** the process of supplying outdoor air to or removing indoor air from a dwelling by natural or mechanical means. Such air may or may not have been conditioned.<br><br>**Insert the following in § 3280.103 Light and ventilation.**<br><br>(b) *Whole-house ventilation.* Each manufactured home must be provided with whole-house mechanical ventilation having the capability to provide a minimum capacity of 0.035 ft3/min/ft2 of interior floor space or its hourly average equivalent. This ventilation capacity must be in addition to any openable window area. The following criteria must be adhered to:<br><br>(1) The ventilation capacity must be provided by a mechanical ventilation system or a combination passive and mechanical ventilation system.<br><br>(3) The ventilation supply system or a portion of the system is permitted to be integral with the home's heating or cooling system. The supply system must be capable of operating independently of the heating or cooling modes. A mechanical ventilation supply system that is integral with the heating or cooling system is to be listed as part of the heating and cooling system or listed as suitable for use with that system.<br><br>(c) *Additional ventilation.*<br><br>(2)Kitchens shall be provided with a local exhaust system that is capable of exhausting 100 cfm to the outside of the home. The local exhaust system shall be located as close as |

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| | possible to the range or cook top, but in no case farther than ~~10~~ 3 feet horizontally from the range or cook top.<br><br>(3)Each bathroom and separate toilet compartment shall be provided with local exhaust system capable of exhausting 50 cfm to the outside of the home. A separate toilet compartment may be provided with 1.5 square feet of openable glazed area in place of mechanical ventilation, except in Uo value Zone 3.<br><br>~~(d) **Ventilation Supply and Exhaust System(s) Airflow Measurement.** The airflow required is the quantity of indoor air supplied and/or exhausted by the ventilation system as installed and shall be measured using a flow hood, flow grid, or other commercially available airflow measuring device in accordance with the manufactured instructions. The frequency of testing shall be specified in manufacturer's quality assurance plan (QA). Measurements and shall occur whenever any ventilation system components is changed that may impact airflow(e.g. fan size, duct diameter, termination fitting type)~~<br><br>During the design stage, the airflow rating at a pressure of 0.25 in. w.c. (62.5 Pa) may be used, provided the duct sizing meets the prescriptive requirements of ANSI/ASHRAE Standard 62.2-2013 *Ventilation and Acceptable Indoor Air Quality in low-rise Residential Buildings* Table 5.3 or ventilation system manufacturer's design criteria. |
| **MHCC Reason:** | The committee had concerns on the testing portion of the proposed change. It was removed to allow the other parts of the proposed change to move forward. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **2/10/2015** – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>**12/4/2014**<br>o MHCC Motion: Approve as Modified.<br>o TSSC Recommendation: Approve as Modified.<br>o Resolution of AI-2 GAO letter was presented as a modification to Log 95. |

| Log # 96 - § 3280.2 Definitions | Date: 11/21/2014 |
|---|---|
| **Submitter:** | Mark Wilson, Community Frameworks |
| **Requested Action:** | New Text |
| **Proposed Change:** | Development of Manufactured Home Construction and Safety Standards for structures transportable in one section, which in the traveling mode is 8 body feet or more in width or 40 body feet or less in length or which when erected on-site is between 150 and 320 square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air-conditioning, and electrical systems contained in the structure. The dwelling may or may not contain a kitchen, per se, and may or may not contain bathing fixtures, but at a minimum would contain a water closet and sink. |
| **Reason:** | Community Frameworks is a 501(C)3 non-profit organization that has been developing affordable housing in the Pacific Northwest for over forty years. We are also a licensed manufactured home dealer in the states of OR and WA. We recently completed a development of (30) Tiny Homes for a non-profit in Olympia, WA that provided permanent residence for otherwise homeless individuals. The development resulted in national media coverage and has resulted in a great deal of interest by non-profits and cities throughout the nation. The Tiny Homes for that project were site built as a result of a dearth of factory built options. We would like to develop a factory built solution that can be replicated but due to the size of the structures and their intended usage, we are relegated to having them built to IRC standards. By establishing standards under CFR 3280, it would create a Federal Preemption, establish a universal design, facilitate the ease of placement and undoubtedly result in a more affordable solution. In addition to providing a permanent residence to homeless populations, we believe there are other vulnerable individuals and groups that could benefit from the development of this standard. Information specific to the above referenced development may be found at: http://www.nytimes.com/2014/02/20/garden/small-world-big-idea.html?_r=0 (or) at http://quixotevillage.com/ |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Relative to Administrative Costs: I do not know the cost implications to the Office of Manufactured Housing Programs. Relative to product Costs: It has been my experience that it is much more cost effective to have a dwelling built to Part 3280 Manufactured Housing Construction and Safety Standards than to the International Residential Code. |
| | |
| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Disapprove (19-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | The MHCC does not have the authority under the Act to create a standard for a home under 320 sq ft. Other means are available for a tiny home producer to seek approval from HUD. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **2/10/2015** – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>**12/2/2014** – MHCC Motion: Disapprove. |

| Log # 97 - § 3280.707 Heat producing appliances | | Date: 11/21/2014 |
|---|---|---|
| **Submitter:** | Michael Lubliner, Northwest Energy Efficiency Alliance | |
| **Requested Action:** | New Text | |
| **Proposed Change:** | Insert "fuel burning" after "heat producing" in 3280-707 | |
| **Reason:** | The requirement for listing was intended only for heat producing, "fuel burning" appliances such as natural gas, propane, oil and solid fuel furnaces &/or Domestic Hot Water heater (DHW). This proposal will save consumers money and provide greater choices to utilize non-burning energy efficient technologies such as; heat pump water heaters and ductless and centrally ducted Variable Refrigerant flow (VRF) heat pumps. Consumers who desire these systems are often told that HUD requirements do not allow these technologies to be used without a special listing for HUD-homes built to MHCC. This often results in installation aftermarket which is more expensive than having the plant install | |
| **Substantiating Documents:** | No | |
| **Additional Cost:** | No | |
| **Cost Benefit Explanation:** | Consumers who desire these electric space and water heating systems are often told that HUD requirements do not allow these technologies to be used without a special listing for HUD-homes built to MHCC. Often they end up doing the installation aftermarket which is more expensive than having the plant install, and may result in non-compliance with MHCSS. The proposal however will reduce revenues to listing agencies who conduct the "special" HUD listing. | |
| | | |
| **Subcommittee Recommendation:** | | |
| **MHCC Action:** | Disapprove (18-1-0) | |
| **MHCC Modification of Proposed Change:** | | |
| **MHCC Reason:** | In favor of action on Log 94. | |
| **Current Status:** | MHCC Final Action Submitted to HUD | |
| **Log History:** | **2/10/2015** – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>**12/2/2014** – MHCC Motion: Disapprove. | |

| Log # 98 - § 3280.307 Resistance to elements and use | Date: 11/21/2014 |
|---|---|
| **Submitter:** | Michael Lubliner, Northwest Energy Efficiency Alliance |
| **Requested Action:** | New Text |
| **Proposed Change:** | **Add section 6.2 definitions:**<br>Water Resistive Barrier – A material behind the exterior wall covering that is intended to prevent liquid water that has penetrated behind the exterior covering from intruding further into the exterior wall assembly.<br><br>**Add a new section "e":**<br><br>**§3280.307 Resistance to elements and use.**<br>(e) The exterior wall envelope shall be designed and constructed in a manner that prevents the accumulation of water within the wall assembly by providing a Water Resistive Barrier (WRB) behind the exterior cladding and a means of draining water that enters the assembly. |
| **Reason:** | This proposal seeks to improve the durability, longevity, and quality of our national "federally preempted" housing stock built to HUD MHCSS. WRB systems are recognized by the residential home building industry as an effective way to reduce long-term potential wall moisture problems. WRB practices have been adopted in site-built codes and even the Manufactured Housing Standard NFPA501-2010 sections 6.2.1.2 and 6.7.1.3.1. WRB systems are also required by DOE, ASHRAE, EPA, and HUD in voluntary housing programs. Requiring a WRB system may reduce wall moisture problems such as mold, rot, and insects. Wall moisture-related problems may damage consumer property and may present potential negative health impacts. Reducing moisture problems may also lower risks to industry manufacturers, retailers, consumers, lenders, and insurance company property. During the MHCC meeting discussion, it was noted that manufactured home manufacturers follow window installation procedures detailed in installation manuals provided by window manufacturers. Window manufacturers that sell HUD code-approved windows have excluded a requirement for window flashings in their installation manuals because they do not want to upset their customers, such as large HUD-code corporations, in fear that they will lose their business. Adoption of this proposal levels the playing field so window installation practices follow those of the site built and modular industry |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Moisture-related problems, which show up long after the manufacturer warranty expires, result from failed cladding and/or window systems. The repair bill can easily be several thousand dollars. The proposal would add an estimated; $0.80 to $1.11 per window for window flashing and $0.20 to $0.30 per square foot for a WRB. Cost benefits are positive given the avoided maintenance expenses, increases resale benefits and extended useful life and/or home resale value. |
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| **Subcommittee Recommendation:** | Approve (10-0-0) |
| **MHCC Action:** | Approve (19-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **2/10/2015** – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>**12/3/2014**<br>o MHCC Motion: Approve.<br>o TSSC Recommendation: Approve. |

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| | **12/2/2014** – MHCC Motion: Refer to Technical Systems Subcommittee. |

| Log # 99 - § 3282.8 Applicability | | Date: 11/24/2014 |
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| **Submitter:** | Matt Wald, RVIA | |
| **Requested Action:** | New Text | |
| **Proposed Change:** | **3282.8**<br>(g) *Recreational vehicles.* Recreational vehicles are not subject to this part, part 3280, or part 3283. A recreational vehicle is a vehicle which is built on a single chassis and designed as temporary living quarters for recreational, camping, travel, or seasonal use and built in compliance with consensus standards for such products, including:<br><br>(1) a self-propelled motorhome or recreational vehicle trailer that is towed by another vehicle without a special highway use permit and is regulated by the National Highway Traffic Safety Administration as a vehicle, and<br><br>(2) a park model recreational vehicle that has a gross area of not greater than 400 square feet based on the exterior dimensions of the unit measured at the largest horizontal projections in the setup mode, excluding any loft area having less than 5 feet in ceiling height, roof overhangs, and exterior porch or deck area 10 feet or less in length that is not enclosed other than by guardrails.<br><br>~~(1) Built on a single chassis;~~<br><br>~~(2) 400 Square feet or less when measured at the largest horizontal projections;~~<br><br>~~(3) Self-propelled or permanently towable by a light duty truck; and~~<br><br>~~(4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.~~ | |
| **Reason:** | Recreation vehicles (RV) are not manufactured housing: they are not designed nor built to be permanent residences, they do not have a HUD label (tag), their manufacturers do not seek to attach a HUD label to them, and manufacturers are not seeking federal preemption from state or local regulations of RVs. The Department of Housing and Urban Development (HUD) and, specifically, the HUD Office of Manufactured Housing regulates manufactured housing. Manufactured housing, designed and built to HUD standards under the HUD Office of Manufactured Housing program, are permanent residences. Recreational vehicles are designed and built to provide temporary living quarters for camping, recreational or seasonal use. Most, in fact, are vehicles. Therefore, RVs are statutorily outside the scope of HUD's manufactured housing program, regulation and standards. These proposed amendments to the applicable regulations will clarify RVs' status under the law. RVs and their use are regulated by: • The National Highway Traffic Safety Administration (NHTSA) • State maximum vehicle dimension laws which limit the length, width and height of all vehicles • State Motor Vehicle Departments • State RV standards requirements • Local zoning laws and regulations • ANSI/NFPA RV consensus standards RVIA's proposed amendments to HUD's regulations, by clarifying that RVs are excluded from the definition of manufactured housing, avoids conflicts and tensions between regulatory regimes and unnecessary overregulation of the RV industry. The current HUD regulation defining "recreational vehicles" as excluded from the HUD manufactured housing standards program is 32 years old. The definition does not reflect the evolution of RVs over the past three decades or the regulatory scheme they operate under today. Since the current definition was written in 1982, park model RVs with porches have become a common RV choice in American campgrounds. Fifth wheel and travel trailer RVs have evolved to meet consumer demand, including the advent of slide-out rooms. These innovations in response to consumer demand do not pose any additional safety or health risks to the public, as evidence by the fact that state highway laws have allowed vehicles, including travel trailers and fifth wheels, to become larger. The HUD definition of "recreational vehicle" must be updated to reflect the modern RV industry, current state maximum vehicle dimension laws, technology improvements, and consumer preferences rather than relying on regulatory policies that were created over a generation ago when electric typewriters and cassette tapes were | |

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| | cutting edge technology. RVIA's proposed amendments to HUD's regulations would create a modern, clear, simple and bright line between manufactured housing and recreational vehicles. Consumers, regulators, manufacturers, campground owners, dealers, and other stakeholders will be able to clearly and easily understand the distinction between modern manufactured housing that bears a HUD label and modern RVs that provide temporary living quarters for camping, recreational or seasonal use. As a result, there will be less need for enforcement action by the Office of Manufactured Housing as the industry will be better able to bring itself into compliance with the new regulations. Both the RV industry and the manufactured housing industry will benefit, as will consumers. These proposed amendments to the HUD regulations are supported by the recreation vehicle manufacturers, dealers, and the manufactured housing industry as well as the campground and RV park industry. In a letter to Administrator Danner (attached), RVIA requests HUD's support of these changes as well as sub-regulatory action to mitigate the effect of the outdated definition while updates to the regulation are considered. |
| **Substantiating Documents:** | Yes |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | There are no costs associated with this proposal. To the contrary, confusion caused by the existing regulations and the interpretive bulletins issued under them have created circumstances in which a failure to promulgate an amended regulation on an expedited basis will lead to significantly increased costs. The October 1, 2014, HUD Office of Manufactured Housing policy memo affects current park models with porches that extend beyond 400 square feet, worth approximately $454 million , and has pushed manufacturers that had intended to build additional park models into a regulatory limbo that could lead to closing down their businesses or substantial product lines. While accurate dollar value estimates do not currently exist, jobs and sales revenue will be lost for manufacturers and dealers if the regulations are not amended as proposed. In addition, campgrounds face the risk of being required to prohibit the use of park models or risk new regulation and taxation from state and local authorities. Millions of dollars in revenue and taxes could be at risk if the proposed new regulations are not promulgated quickly. Further, if the regulation is not amended to recognize the invention of slide out rooms (potentially allows slide out rooms to turn a recreational vehicle into manufactured housing) and continues to require that recreational vehicles be 'permanently towable by a light duty truck,' a term for which HUD currently has no definition' but which EPA defines as trucks 8500 GVWR and less, further costs will be incurred. Two and one-half million travel trailers, fifth wheels, and park model RVs would be classified as "manufactured housing" subject to HUD regulation if these regulatory changes are not made. The resulting cost to RV consumers, dealers, and manufacturers could total in the tens of billions of dollars. The benefits of this proposal to amend HUD's regulations extend beyond these avoided costs. Clarifying that modern RVs are not manufactured housing gives all elements of both industries, and consumers, regulatory certainty with regard to the modern line between RVs and manufactured housing. As a result, the industry's cost of compliance will be lower. Finally, the proposal frees the Office of Manufactured Housing to focus on regulating and updating standards for manufactured housing rather than spending time or resources attempting to make RVs conform to decades-out-of-date definitions. |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Disapprove (19-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | In favor of action on Log 89. |
| **Current Status:** | MHCC Final Action Submitted to HUD |

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| **Log History:** | **2/10/2015** – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>**12/2/2014** – MHCC Motion: Disapprove. |

| Log # 100 - § 3280.204 Kitchen cabinet protection | | Date: 11/24/2014 |
|---|---|---|
| **Submitter:** | Lois Starkey, MHI | |
| **Requested Action:** | New Text | |
| **Proposed Change:** | (f) Range hood finish materials must be installed with a minimum 5/16" gypsum board or other limited or non-combustible substrate between the metal range hood and the decorative finish materials. Finish materials shall have a flame spread rating not exceeding 200. Sealants and other trim materials 2" or less in width are exempt from this provision. | |
| **Reason:** | Decorative range hoods are used widely in the homebuilding industry. This proposed changes is needed to ensure that the use of decorative range hood covers will meet the fire safety requirements of Subpart C of the Manufactured Home Construction and Safety Standards (24 CFR Part 3280). The proposal is more stringent then the International Residential Code (IRC) for One- to-Four Single Family Housing, which contains no such requirement. | |
| **Substantiating Documents:** | Yes<br>Staff Note: No additional documents received. | |
| **Additional Cost:** | No | |
| **Cost Benefit Explanation:** | The proposal will update the standard to take into consideration current industry practices and at the same time meet appropriate fire safety requirements. The cost is minimal | |
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| **Subcommittee Recommendation:** | Approve as Modified (9-0-0) | |
| **MHCC Action:** | Approve as Modified (21-0-0) | |
| **MHCC Modification of Proposed Change:** | **§3280.203 Flame spread limitations and fire protection requirements.**<br><br>(b) Flame-spread rating requirements.<br><br>(4) Exposed interior finishes adjacent to the cooking range shall have a flame spread rating not exceeding 50, except that backsplashes not exceeding 6 inches in height are exempted. Adjacent surfaces are the exposed vertical surfaces between the range top height and the overhead cabinets or ceiling and within 6 horizontal inches of the cooking range. (Refer also to §3280.204(a), Kitchen Cabinet Protection.) Sealants and other trim materials 2 inches or less in width used to finish adjacent surfaces are exempt from this provision provided that all joints are completely supported by a framing member.<br><br>(5) Kitchen cabinet doors, countertops, backsplashes, exposed bottoms, and end panels shall have a flame spread rating not to exceed 200. Cabinet rails, stiles, mullions, and top strips are exempted.<br><br>(6) Finish surfaces of plastic bathtubs, shower units, and tub or shower doors shall not exceed a flame spread rating of 200.<br><br>(c) Fire protective requirements.<br><br>(1) Materials used to surface the following areas shall be of limited combustible material (e.g., 5/16 -inch gypsum board, etc.):<br>(i) The exposed wall adjacent to the cooking range (see §3280.203(b)(4));<br><br>(ii) Exposed bottoms and sides of kitchen cabinets as required by §3280.204; non-horizontal surfaces above the horizontal plane formed by the bottom of the range hood are not considered exposed<br><br>(iii) Interior walls and ceilings enclosing furnace and/or water heater spaces; and | |

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| | (iv) Combustible doors which provide interior or exterior access to furnace and/or water heater spaces. The surface may be interrupted for louvers ventilating the enclosure. However, the louvers shall not be constructed of a material of greater combustibility than the door itself (e.g., plastic louvers on a wooden door).<br><br>(2) No burner of a surface cooking unit shall be closer than 12 horizontal inches to a window or an exterior door with glazing.<br><br>**§3280.204 Kitchen cabinet protection.**<br><br>(a) The exposed bottom and sides of combustible kitchen cabinets over cooking ranges to a horizontal distance of 6 inches from the outside edge of the cooking range shall be protected with at least 5/16 inch thick gypsum board or equivalent limited combustible material. One-inch nominal framing members and trim are exempted from this requirement. The cabinet area over the cooking range or cooktops shall be protected by a metal hood (26-gauge sheet metal, or .017 stainless steel, or .024 aluminum, or .020 copper) with not less than a 3-inch eyebrow projecting horizontally from the front cabinet face. The 5/16 -inch thick gypsum board or equivalent material which is above the top of the hood may be supported by the hood. A 3/8 -inch enclosed air space shall be provided between the bottom surface of the cabinet and the gypsum board or equivalent material. The hood shall be at least as wide as the cooking range.<br><br>(f) Range hood finish materials must be installed with at least 5/16" thick gypsum board or equivalent limited combustible material between the metal range hood and finish materials. Finish materials shall have a flame spread rating not exceeding 200. Sealants and other trim materials 2" or less in width are exempt from this provision. |
| **MHCC Reason:** | Modification is more inclusive. To ensure the protection of the consumer, and to allow for decorative range hoods. To clarify the protection requirements. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>**8/18/2015** – MHCC Motion: Approve as Modified.<br>**7/15/2015** – SDSC Recommendation: Approve as Modified.<br>**12/4/2014** – SDSC Motion: Refer Log 100 to Manuel Santana for further examination.<br>**12/2/2014** – MHCC Motion: Refer to SDSC. |

<table>
<tr><td colspan="2">Log # 101 - § 3280.611 Vents and venting</td><td>Date: 11/24/2014</td></tr>
<tr><td>Submitter:</td><td colspan="2">Lois Starkey, MHI</td></tr>
<tr><td>Requested Action:</td><td colspan="2">Revised Text</td></tr>
<tr><td>Proposed Change:</td><td colspan="2">§3280.611(c) Size of vent piping—(1) Main vents*******<br><br>§3280.611(c) Size of vent piping—(1) Main vents*******<br><br>(5) Distance of fixture trap from vent shall not exceed the values given in the following table:<br><br>Maximum Distance of Fixtures from Vent Trap<br><table><tr><th>Size of fixture drain (inches)</th><th>Distance trap to vent</th></tr><tr><td>1-1/4</td><td><s>4 ft. 6 in</s>. 5 ft.</td></tr><tr><td>1-1/2</td><td><s>4 ft 6 in</s>. 6 ft.</td></tr><tr><td>2</td><td><s>5 ft.</s> 8 ft.</td></tr><tr><td>3</td><td><s>6 ft.</s> 12 ft.</td></tr></table></td></tr>
<tr><td>Reason:</td><td colspan="2">This proposal aligns the distance from the fixture trap to vent of the HUD code with that of the International Plumbing Code. The International Plumbing Code has been used for the construction of site built and modular homes for over a decade. The IPC was not around when the HUD code was first developed.</td></tr>
<tr><td>Substantiating Documents:</td><td colspan="2">No</td></tr>
<tr><td>Additional Cost:</td><td colspan="2">No</td></tr>
<tr><td>Cost Benefit Explanation:</td><td colspan="2">There is no cost associated with this proposal. it is an update to an out dated provision and aligns current construction and design practices with current codes.</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td>Subcommittee Recommendation:</td><td colspan="2"></td></tr>
<tr><td>MHCC Action:</td><td colspan="2">Approve (19-0-0)</td></tr>
<tr><td>MHCC Modification of Proposed Change:</td><td colspan="2"></td></tr>
<tr><td>MHCC Reason:</td><td colspan="2"></td></tr>
<tr><td>Current Status:</td><td colspan="2">MHCC Final Action Submitted to HUD</td></tr>
<tr><td>Log History:</td><td colspan="2">2/10/2015 – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>12/3/2014 – MHCC Motion: Approve.</td></tr>
</table>

| Log # 102 - § 3280.105 Exit facilities; exterior doors | Date: 11/24/2014 |
|---|---|
| **Submitter:** | Lois Starkey, MHI |
| **Requested Action:** | New Text |
| **Proposed Change:** | **3280.105(a)(3)**<br>One of the two required exit doors may discharge into an attached site-built garage provided the garage has an exit door that discharges to grade. An overhead garage door may not be used as an exit door. |
| **Reason:** | The proposed change is consistent with the current requirement for construction of single family site built homes. It allows for greater flexibility in home design and construction and eliminates problems that arise from designing homes with three egress doors. It reflects current building design and construction techniques, yet provides equal protection for to homeowners. The current IRC Codes require a home to have only one egress door (and it can be an egress door into a garage). |
| **Substantiating Documents:** | No |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | Cost savings will result because it will avoid costs associated with having to meet the Alternative Construction approval requirements of the Procedural and Enforcement Regulations (24 CFR Part 3282). |
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| **Subcommittee Recommendation:** | Disapprove (8-0-0) – The proposal is incomplete. |
| **MHCC Action:** | Disapprove (19-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | The proposal is incomplete. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **2/10/2015** – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>**12/4/2014**<br>o MHCC Motion: Disapprove.<br>o SDSC Recommendation: Disapprove.<br>o MHCC Motion: Refer to SDSC. |

| Log # 103 - § 3280.808 Wiring methods and materials | Date: 11/24/2014 |
|---|---|
| **Submitter:** | Lois Starkey, MHI |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | Proposed Change to 24 CFR Part 3280.808. Wiring Methods and Materials<br><br>3280.808 (k) When outdoor or under-chassis line-voltage wiring is exposed to moisture or physical damage, it shall be protected by ~~rigid metal~~ conduit listed for the intended use. The conductors shall be suitable for wet locations. |
| **Reason:** | The current requirement limits this application to rigid metal conduit. The 2005 NEC provides many different types of conduit that can be used for wet locations and/or locations where the conductors may be subject to physical damage. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | This is a update to the current code, and is a benefit because it allows for new materials and technologies to be utilized in the construction of manufactured homes. |
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| **Subcommittee Recommendation:** | Approve as Modified (10-0-0) |
| **MHCC Action:** | Approve as Modified (19-0-0) |
| **MHCC Modification of Proposed Change:** | *Revise Standard as follows:*<br>**3280.808 (k)** Where ~~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 a ~~rigid metal~~ conduit or raceway approved for use in wet locations or where subject to physical damage. ~~or intermediate metal conduit listed for the intended use~~. 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.~~ |
| **MHCC Reason:** | Modification removes the requirement that the conduit be rigid metal and expands the possible materials to anything that is acceptable and listed for use in this manner. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **2/10/2015** – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>**12/4/2014**<br>o MHCC Motion: Approve.<br>o TSSC Recommendation: Approve as Modified**.**<br>**12/3/2014** – MHCC Motion: Refer to TSSC. |

| Log # 104 - § 3285.5 Definitions & § 3285.801 Exterior close-up | Date: 11/24/2014 |
|---|---|
| **Submitter:** | Lois Starkey, MHI |
| **Requested Action:** | New Text |
| **Proposed Change:** | **PART 3285—MODEL MANUFACTURED HOME INSTALLATION STANDARDS**<br><br>**In §3285.5**, in alphabetic order, add the definitions for ''peak cap assembly'' and ''peak flip assembly'' to read as follows: §3285.5 Definitions. * * * * <u>* Peak cap assembly means any roof peak assembly that is either shipped loose or site completed and is site installed to finish the roof ridge/peak of a home. Peak flip assembly means any roof peak assembly that requires the joining of two or more cut top chord members on site. The cut top chords must be joined at the factory by straps, hinges, or other means. *</u> * * *<br><br>**In §3285.801**, revise paragraph (f)(2) to read as follows:<br><br>§3285.801 Exterior close-up. * * * * * (f) *Hinged roofs and eaves.* Hinged roofs and eaves must be completed during installation in compliance with all requirements of the Manufactured Home Construction and Safety Standards (24 CFR Part 3280) and the Manufactured Home Procedural and Enforcement Regulations 24 CFR Part 3282). Unless exempted by the following provisions, hinged roofs are also subject to a final inspection for compliance with the Manufactured home Construction Standards (24 CFR Part 3280) by the IPIA or a qualified independent inspector acceptable to the IPIA. Homes with hinged roofs that are exempted from IPIA inspection are instead to be completed and inspected in accordance with the Manufactured Home Installation Program (24 CFR Part 3286). This includes homes:<br><br>1. That are designed to be located in Wind Zone I:<br>2. In which the roof pitch of the hinged roof is less than 7:12, <u>including designs incorporating peak cap or peak flip assembly components;</u><br><br>3. In which fuel burning appliance flue penetrations are not above the hinge |
| **Reason:** | In 2009 under a formal opinion letter by the former program administrator for Manufactured Housing, HUD issued Alternate Construction (AC) approvals for certain specified roof ridge designs without a requirement for specific on-site IPIA inspections. HUD has changed its position for any new approvals of these types of ridge assemblies, and going forward, will require an on-site IPIA inspection as a condition for approval of these types of designs. MHI believes that hinged roof assemblies, known as double hinged or "peak flip" assemblies and ridge box or "peak cap" assemblies, that meet the requirements of §3285.801(f) do not need AC letters and should be covered by the requirements for set-up under 24 CFR Part 3285. These types of hinged roof designs do not violate any section of the standards (§3280), and thus do not qualify for or require AC letters as prescribed under §3282.14. Pursuant to §3285.801, certain hinged roofs are exempted from on-site inspection by Production Inspection Primary Inspection Agencies (IPIA's). This exemption includes homes that: (1) that are designed to be located in Wind Zone 1; (2) in which the pitch of the hinged roof is less than 7:12, and (3) in which fuel burning appliance flue penetrations are not above the hinge. As noted by both industry representatives and state regulators at the October, 2012 MHCC meeting, this type of roof installation is common throughout the country, for all types of factory-built housing, including those under applicable modular construction programs. The installation of these hinged roofs is much less complicated than most "close up" requirements for multi-section homes. The technology involved is not new and has been time-tested without failures. Licensed and trained installers must install these homes in accordance with the manufacturer's installation instructions and meet all other provisions, including inspections, of 24 CFR Parts 3285 and 3286, Model Manufactured Home Installation Standards and Manufactured Housing Installation Rules and Regulations. |
| **Substantiating Documents:** | Yes<br>Staff Note: No additional documents received. |

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| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | This will be beneficial by incorporating current design practices into the regulations, and eliminate unnecessary IPIA inspections. |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve (19-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History** | **2/10/2015** – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>**12/3/2014** – MHCC Motion: Approve. |

| Log # 105 - § 3282.8 Applicability | | Date: 11/24/2014 |
|---|---|---|
| **Submitter:** | Lois Starkey, MHI | |
| **Requested Action:** | New Text | |
| **Proposed Change:** | Add the following (underlined language) to 24 CFR Part 3282.8<br><br>(g)Recreational vehicles. Recreational vehicles are not subject to this part, part3280, or part 3283. A recreational vehicle is a vehicle which is: (1) built on a single chassis; (2) 400 square feet or less when measured at the largest horizontal projections <u>in the setup mode, excluding any loft area having less than 5 feet in ceiling height, roof overhangs, and exterior porch or deck area less than 10 feet in length and not enclosed other than by guardrails</u>; (3) Self-propelled or permanently towable by a light duty truck; and (4)Designed primarily not for use as a permanent dwelling but as temporary living quarters, for recreational, camping travel, or seasonal use | |
| **Reason:** | The proposal clarifies that porches and roof overhangs an RV/park model may be excluded from the measurement requirements of HUD's Interpretative Bulletin A-I-88 and 24 CFR 3282.8(g). This address confusion that has arisen in the marketplace between a manufactured home and a towable, RV/Park models. Recreation vehicles (RV) are not manufactured housing: they are not designed nor built to be permanent residences, they do not have a HUD label (tag). There is no additional cost associated with this proposal | |
| **Substantiating Documents:** | No | |
| **Additional Cost:** | No | |
| **Cost Benefit Explanation:** | This will benefit consumers by eliminating any confusion between manufactured homes a RV Park Models or Recreational Park Trailers. | |
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| **Subcommittee Recommendation:** | | |
| **MHCC Action:** | Disapprove (19-0-0) | |
| **MHCC Modification of Proposed Change:** | | |
| **MHCC Reason:** | In favor of action on Log 89. | |
| **Current Status:** | MHCC Final Action Submitted to HUD | |
| **Log History** | **2/10/2015** – Final Action from December 2-4, 2014 meeting confirmed by MHCC Ballot II.<br>**12/2/2014** – MHCC Motion: Disapprove. | |

| Log # 106 - § 3282.362 Labels | | Date: 11/25/2014 |
|---|---|---|
| **Submitter:** | Lois Starkey, Manufactured Housing Institute | |
| **Requested Action:** | Revised Text | |
| **Proposed Change:** | **24 CFR3282.362** - Production Inspection Primary Inspection Agencies (IPIAs).<br>(c)(2)Labeling—<br>(i)Labels required.<br>(A) The IPIA shall <u>continuously</u> provide the manufacturer with a ~~two– four-week~~ supply (at the convenience of the IPIA and the manufacturer) of the labels described in this subsection, except that no labels shall be issued for use when the IPIA is not present if the IPIA is not satisfied that the manufacturer can and is producing manufactured homes which conform to the design and, as appropriate, to the standards. | |
| **Reason:** | This proposal is needed to address problems in recent years, of label shortages. There have been several such occasions in the last two years when Congressional budget impasses have led to a government wide shutdown. Also State IPIAs who serve a number of manufacturers, have had problems with allocations when production increases unexpectedly. | |
| **Substantiating Documents:** | No | |
| **Additional Cost:** | No | |
| **Cost Benefit Explanation:** | The proposed will be beneficial to consumers because sales will not be constrained by arbitrary limits on the number of labels that can be purchased by manufacturers. Should there be a need to limit label distribution, HUD can do so under its compliance and enforcement authority. | |
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| **Subcommittee Recommendation:** | | |
| **MHCC Action:** | Disapprove (21-0-0) | |
| **MHCC Modification of Proposed Change:** | | |
| **MHCC Reason:** | The committee does not want to supply manufacturers with a large number of labels that could be lost. The supply problem to IPIAS has been addressed. | |
| **Current Status:** | MHCC Final Action Submitted to HUD | |
| **Log History:** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>**8/18/2015** – MHCC Motion: Disapprove. | |

| Log # 107 - § 3280.2 Definitions | | Date: 11/25/2014 |
|---|---|---|
| **Submitter:** | Lois Starkey, Manufactured Housing Institute | |
| **Requested Action:** | Revised Text | |
| **Proposed Change:** | **Proposed Change to 24 CFR Part 3280.2 Definitions.**<br><br>*Certification label* means the approved form of certification by the manufacturer that, under ~~§3280.8~~ §3280.11, is permanently affixed to each transportable section of each manufactured home manufactured for sale in the United States. | |
| **Reason:** | This section corrects a typographical error. The section in the HUD Code that addresses certification requirements is §3280.11. §3280.8 deals with waivers. | |
| **Substantiating Documents:** | No | |
| **Additional Cost:** | No | |
| **Cost Benefit Explanation:** | This is an editorial change only. | |
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| **Subcommittee Recommendation:** | | |
| **MHCC Action:** | Approve (21-0-0) | |
| **MHCC Modification of Proposed Change:** | | |
| **MHCC Reason:** | | |
| **Current Status:** | MHCC Final Action Submitted to HUD | |
| **Log History:** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>**8/18/2015** – MHCC Motion: Approve. | |

| Log # 108 - § 3280.607 Plumbing fixtures | Date: 12/08/2014 |
|---|---|
| **Submitter:** | Ross Kinzler |
| **Requested Action:** | New Text |
| **Proposed Change:** | (7) Accessible shower or bath tubs. These fixtures designed to accommodate individuals with special needs shall be installed in accordance with the manufacturer's instructions not withstanding other requirements of this section. |
| **Reason:** | Manufacturers routinely reject requests for walk-in, zero step entry or other accessible bathing fixtures because of limitations imposed by 3280.607 for minimum dam heights and traps. This new language would permit in plant installation of bathing systems designed to serve the handicapped but may not conform to other sections of the HUD Code provided that they are installed in accordance with the fixture's manufacturer provided instructions. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | Consumers report to us that they often have to order a home with a standard bath only to bear the cost of demolishing the new bath just to install a handicap accessible unit. The new language should also avoid the need for an AC letter for those manufacturers that want to be customer focused and install the correct bath in the plant. |
| | |
| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve as Modified (21-0-0) |
| **MHCC Modification of Proposed Change:** | 3280.607(b)(3)<br>(3) *Shower compartment.* (i) Each compartment stall ~~shall~~ must be provided with an approved watertight receptor with sides and back extending at least 1 inch above the finished dam or threshold. Except as provided by 3280.607(b)(3)(v), ~~In no case shall~~ the depth of a shower receptor must not be less than 2 inches or more than 9 inches measured from the top of the finished dam or threshold to the top of the drain. The wall area ~~shall~~ must be constructed of smooth, noncorrosive, and nonabsorbent waterproof materials to a height not less than 6 feet above the bathroom floor level. Such walls ~~shall~~ must form a watertight joint with each other and with the bathtub, receptor or shower floor. The floor of the compartment ~~shall~~ must slope uniformly to the drain at not less than one-fourth nor more than one-half inch per foot.<br>(v) Thresholds. Thresholds in roll-in-type shower compartments must be 1/2 inch maximum in height in accordance with 3280.607(b)(3)(vi). In transfer-type shower compartments, thresholds 1/2 inch maximum in height must be beveled, rounded, or vertical.<br>(vi) Changes in level of 1/4 inch maximum in height must be permitted to be vertical. Changes in level greater than 1/4 inch in height and not more than 1/2 inch maximum in height must be beveled with a slope not steeper than 1:2. |
| **MHCC Reason:** | To comply with ICC disability standards for roll in showers. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III A.<br>**8/20/2015** – MHCC Motion: Approve as Modified. |

| Log # 109 - § 3280.210, Subpart C | Date: 12/16/2014 |
|---|---|
| **Submitter:** | David Karmol |
| **Requested Action:** | New Text |
| **Proposed Change:** | **24 CFR 3280.210** Fire and Life Safety Detection and Suppression Systems. All manufactured home dwelling units shall comply with the following life safety requirements of *2015 International Residential Code for One and Two Family Dwelling Units*©(IRC).<br><br>Residential Fire Sprinkler Systems (R313.2)<br><br>Interconnected Smoke Alarms (R314)<br><br>Carbon Monoxide Alarms (R315)<br><br>*(All of the cited 2015 International Residential Code (IRC) requirements can be found in Chapter 3 of the code, which is available for viewing at codes.iccsafe.org)* |
| **Reason:** | The International Residential Code(IRC) is adopted throughout the United States, and since the 2009 edition, Section R313 has required the installation of automatic fire sprinklers in all new residential dwelling units. This requirement is intended to reduce the risks associated with the change in materials of construction, as well as the significant changes in the materials of housing unit room contents and furnishings, which has dramatically raised the risk of fire related deaths and injuries in new homes. These changes have affected all new dwellings, including manufactured homes. The IRC has required smoke alarms since the 2000 version, and has required carbon monoxide detectors for certain housing units since 2006.All of these requirements are minimum life safety requirements, of minimal cost, with demonstrated proof that they save thousands of lives annually. We believe that most new manufactured homes are already protected by smoke alarms, and technology has made interconnected smoke alarms a sensible, and almost zero additional cost requirement in the new IRC. Likewise, carbon monoxide detectors are required where a fuel-fired appliance is installed in the dwelling unit, and such detectors are often combined in a single system with smoke alarms, which the code recognizes and permits. The requirement for a sprinkler system follows the evidence that where sprinklers are installed in all new homes the incidence of significant fires is dramatically reduced, property damage is dramatically lessened, and most important, deaths from fire are eliminated as a risk, both to the occupants, and to first responders who answer calls when a fire breaks out. In the one jurisdiction where sprinkler systems have been required in new residential dwellings, the record is clear: not a single death, to either a firefighter or occupant, has occurred in a sprinklered home for nearly thirty years. This is a remarkable statistic, and argues strongly in favor of sprinkler installation. That jurisdiction (Scottsdale, AZ) is one where construction and home sales were booming over those same twenty years, putting to rest the false claim that requiring sprinklers would damage home sales, or make homes too expensive. See Scottsdale Sprinkler System Reliability report: http://www.usfa.fema.gov/pdf/efop/efo42677.pdf The fact is that site built homes and manufactured homes share one of the key risk factors for fires: an increase in the flammability of home furnishings that has been well documented, and is a reason that more and more fires are not survivable, especially for the elderly and the very young, who often cannot escape in time. Likewise, the faster flashover time with newer home furnishings and materials, means that the fire department often cannot reach a fire before the home becomes impossible for firefighter to enter, rescue trapped occupants or extinguish the blaze. There is no reason that fire and life safety protection should be less for those who purchase lower cost manufactured housing than for those who purchase site-built housing. And the cost to install such systems should be less in manufactured housing than in site-built housing, due to the lack of separate inspections, the ability to design common systems, and the cost reductions that accompany mass production. In fact, the cost of installing automatic sprinkler systems in Scottsdale, AZ site built homes has declined from over $1.00 per square foot of protected space to |

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|---|---|
| | around $.59/sf, over the course of the years the requirement has been in place, despite generally rising construction costs over the same period. The same economies of scale should be expected with manufactured housing. See, Automatic Sprinklers, a Ten Year Study (http://www.ircfiresprinkler.org/docs/scottsdale%20sprinklers%2010%20year%20report.pdf ) The NFPA Research Foundation has release a study showing the cost of installing residential fire sprinkler systems for on-site construction to be an average of $1.35/sq. ft. Link: http://www.nfpa.org/research/fire-protection-research-foundation/reports-and-proceedings/suppression/home-fire-sprinklers/home-fire-sprinkler-cost-assessment-final-report It is reasonable to presume the cost would be lower for manufactured housing based on the efficiencies that can be achieved with installation at the manufacturing facility. Two recent fires in manufactured homes, one in Edna, TX and the other in Portland, ME, which together claimed the lives of nine people- seven children and two adults- should be reason enough for the HUD MHCC to immediately mandate the same protection for manufactured homes as is now required in the International Residential Code for site built homes, which is used as the basis for residential building codes in 49 of the 50 states. See reports in FireRescue1: http://www.firerescue1.com/children/articles/2029347-5-children-killed-in-Texas-mobile-home-fire/ |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Yes |
| **Cost Benefit Explanation:** | The estimated cost for automatic fire sprinklers is for additional cost of less than $1.00 per square foot of dwelling unit space, based on the cost of installation of sprinklers in site built homes, where transportation costs, specialized labor costs, and coordination and inspection costs are all higher than with manufactured housing. When a home is equipped with plumbing, the additional cost of installing automatic fire sprinklers is minimal, as the fire sprinklers simply require the additional installation of flexible piping, and sprinkler heads in the rooms/locations as required by the code. The following studies support the cost in site built homes: http://www.ircfiresprinkler.org/docs/scottsdale%20sprinklers%2010%20year%20report.pdf and http://www.nfpa.org/research/fire-protection-research-foundation/reports-and-proceedings/suppression/home-fire-sprinklers/home-fire-sprinkler-cost-assessment-final-report Interconnected smoke alarms will add no cost to the cost of smoke alarms, as almost all smoke alarms sold today are available with the interconnect feature, at prices equivalent to the price of non-interconnected smoke alarms ($12-31.00 retail) Carbon Monoxide detectors are available, at retail prices of between $7.00 and $50.00 on Amazon.com, and it is likely that they can be purchased at wholesale prices of considerably less. Link: http://www.amazon.com/carbon-monoxide-detector/b?ie=UTF8&node=495272 Combination smoke and carbon monoxide detectors are also commonly available, at prices not much higher than the cost of simple smoke detectors. At most, the cost of installing interconnected smoke alarms, and carbon monoxide detectors would be less than $100.00 per manufactured home. |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Disapprove (21-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | The committee does not feel that mandatory sprinklers are appropriate. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>**8/18/2015** – MHCC Motion: Disapprove. |

| Log # 110 - § 24 CFR 3280.211, Subpart C | | Date: 12/16/2014 |
|---|---|---|
| **Submitter:** | David Karmol | |
| **Requested Action:** | New Text | |
| **Proposed Change:** | **24 CFR 3280.211** Life Safety and Structure Resilience. All manufactured home dwelling units shall comply with the flood safety requirements of *International Residential Code for One and Two Family Dwelling Units* ©(IRC).<br><br>Flood resistant construction (R322) with specific requirements for Manufactured Homes in R322.1.9 | |
| **Reason:** | The reason for this section is to mandate that manufactured homes be installed in accordance with section R322 of the IRC, including Sec. R322.1.9 which includes specific requirements for manufactured homes. This section requires manufactured housing located in coastal high hazard flood zones to be installed on a foundation at or above the flood plain elevation, as well as meeting anchor and tie-down provisions in compliance with local, state and federal requirements referenced in that section. The referenced section, which includes provisions addressing manufactured homes in high hazard coastal zones, is also a minimum requirement, and should apply to manufactured homes in the same way provisions of Sec. R322 apply to site built homes in such zones. | |
| **Substantiating Documents:** | No | |
| **Additional Cost:** | Unknown | |
| **Cost Benefit Explanation:** | This cost cannot be estimated, as this proposed section is a cost associated with installation of manufactured housing, and will be entirely dependent on where the housing is installed. If the manufactured housing unit is installed in a high hazard flood zone, there may be some additional cost to elevating the foundation to meet the requirements of the code, which will be entirely dependent on the individual site. There should be no additional cost to manufacture the housing unit, as there are no tie down or anchor requirements other than those already required under local, state or federal laws and regulations. If a manufactured housing unit is installed anywhere outside of a high hazard flood zone, there would be no cost impact to this proposed change. | |
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| **Subcommittee Recommendation:** | | |
| **MHCC Action:** | Disapprove (21-0-0) | |
| **MHCC Modification of Proposed Change:** | | |
| **MHCC Reason:** | Already addressed in 3285.302. | |
| **Current Status:** | MHCC Final Action Submitted to HUD | |
| **Log History:** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>**8/18/2015** – MHCC Motion: Disapprove. | |

| Log # 111 - § 3280.2 Definitions; 3280.105 Exit Facilities, 3280.205 Fire Blocking | Date: 12/31/2014 |
|---|---|
| **Submitter:** | Lois Starkey |
| **Requested Action:** | New Text |
| **Proposed Change:** | Revise 24 CFR 3280.2 as follows:<br><br>"Dwelling Unit" means ~~one or more habitable rooms which are designed to be occupied by one family with facilities for living sleeping and eating.~~ A structure designed and constructed for use as a permanent residence by one or more persons, with facilities for sleeping, eating, cooking and sanitation, which constitute an independent living unit.<br><br>Add to 24 CFR Part 3280.206 Fire Blocking<br><br>a. *General.* Manufactured homes designed for one dwelling unit must meet the fire blocking requirements of this section. The integrity of all materials must be maintained. Manufactured Homes designed for more than one dwelling units must meet fire blocking and separation requirements which are comparable to those provided for in the other residential building codes for multifamily housing.<br><br>Add to 24 CFR Part 328.105; Exit Facilities; exterior doors, add a new subsection:<br><br>a. *General.* Manufactured homes designed for one dwelling unit must meet the egress requirements of this section. Manufactured homes designed for multifamily dwellings must meet egress requirements which are comparable to those provided for in other residential building codes for multifamily housing.<br><br>Revise existing subsections (a) to (b) and (b) to (c). |
| **Reason:** | This proposal will provide for the design and construction of manufactured housing for multifamily use. The current regulations are limited to single family design and construction. |
| **Substantiating Documents:** | Yes |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | The proposal does not envision additional costs, beyond costs that are already incurred in the normal design and construction process. In fact, this proposal could save costs by elimination duplicative design, design approval and certification requirements required by modular building codes and programs. |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Disapprove (21-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | In favor of action on Log 128. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>**8/18/2015** – MHCC Motion: Disapprove. |

| Log # 112 - § 3280.4(b) Incorporation by reference | | Date: 12/31/2014 |
|---|---|---|
| **Submitter:** | Gary Clark | |
| **Requested Action:** | Revised Text | |
| **Proposed Change:** | Air-Conditioning, Heating, & Refrigeration Institute (AHRI), ~~4100 North Fairfax Drive, Suite 200,~~2111 Wilson Boulevard, Suite 500, Arlington, VA 222~~03~~1, telephone number 703-524-8800, fax number 703-~~528-38165~~562-1942, Web site: ~~*http://www.lightindustries.com/ARI/*~~ *www.ahrinet.org*. | |
| **Reason:** | Reference to ARI within various sections of the document needs to be modified to "Air-Conditioning, Refrigeration, and Heating Institute (AHRI)." AHRI moved to a different location in Arlington, VA in 2008, so the address and the contact information within the regulation also needs to be updated. All references to "ARI" within the regulation need to be updated to "AHRI." | |
| **Substantiating Documents:** | No | |
| **Additional Cost:** | Unknown | |
| **Cost Benefit Explanation:** | Unknown | |
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| **Subcommittee Recommendation:** | | |
| **MHCC Action:** | Approve (21-0-0) | |
| **MHCC Modification of Proposed Change:** | | |
| **MHCC Reason:** | | |
| **Current Status:** | MHCC Final Action Submitted to HUD | |
| **Log History:** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>**8/18/2015** – MHCC Motion: Approve. | |

| Log # 113 - § 3280.4(b)(1) Incorporation by reference | Date: 12/31/2014 |
|---|---|
| **Submitter:** | Gary Clark |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | (1) ANSI/AHRI Standard 210/240-~~89~~2008, Unitary Air-Conditioning ~~and~~ & Air-Source Heat Pump Equipment, IBR approved for §§3280.511(b), 3280.703, and 3280.714(a), |
| **Reason:** | Reference to ANSI/ARI Standard 210/240-89 needs to be updated to "ANSI/AHRI 210/240-2008" in various sections of 24 CFR Part 3280. The latest versions of all AHRI standards can be downloaded on the following website: http://www.ahrinet.org/site/686/Standards/HVACR-Industry-Standards/Search-Standards |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Unknown |
| | |
| **Subcommittee Recommendation:** | Approve |
| **MHCC Action:** | Approve (19-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/20/2016 –** Final Action from October 25-27, 2016 meeting confirmed by MHCC Ballot V.<br>**10/26/2015 –** MHCC Motion: Approve.<br>**10/26/2015 –** Technical System Subcommittee Motion: Approve.<br>**9/27/2016 –** Pending review by William Freeborne.<br>**1/19/2016 –** MHCC Motion: Refer to Technical Systems Subcommittee.<br>**8/18/2015 –** MHCC Motion: Table pending review of referenced standard. |

| Log # 114 - § 3280.4(i)(20) Incorporation by reference | Date: 12/31/2014 |
|---|---|
| **Submitter:** | Gary Clark |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | ANSI Z21.47-~~1990~~2012/CSA 2.3-2012 ~~with Addendum Z21.47a-1990 and Z21.47b-1992~~, Gas-Fired Central Furnaces ~~(Except Direct Vent System Central Furnaces)~~, IBR approved for §3280.703. |
| **Reason:** | Reference to ANSI Z21.47-1990 needs to be updated to "ANSI Z21.47-2012/CSA 2.3-2012." Also, direct vent is now included within the scope of the standard. Additional details can be accessed here: http://shop.csa.ca/en/canada/gas-fired-domestic-and-commercial-heating-equipment-and-air-conditioning/ansi-z2147-2012csa-23-2012-/invt/27020082012 |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Unknown |
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| **Subcommittee Recommendation:** | Approve |
| **MHCC Action:** | Approve (19-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/20/2016 –** Final Action from October 25-27, 2016 meeting confirmed by MHCC Ballot V.<br>**10/26/2015 –** MHCC Motion: Approve.<br>**10/26/2015 –** Technical System Subcommittee Motion: Approve.<br>**9/27/2016 –** Pending review by William Freeborne.<br>**1/19/2016 –** MHCC Motion: Refer to Technical Systems Subcommittee.<br>**8/19/2015 –** MHCC Motion: Table pending review of referenced standard. |

| Log # 115 - § 3280.4(ff)(21) Incorporation by reference | Date: 12/31/2014 |
|---|---|
| **Submitter:** | Gary Clark |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | UL 1995~~, 1995~~-2011, Heating and Cooling Equipment, ~~Second Edition, with 1999 revisions~~, IBR approved for §3280.703. Any future version of this standard is acceptable. |
| **Reason:** | References to UL 1995 need to be updated from the second edition to "UL 1995-2011." Also, a note needs to be added stating "any future version of this standard is acceptable." The references to standards within 24 CFR Part 3280 are not being revised frequently enough to keep up with the latest editions of those standards. Adding this sentence would address the issue in a major way. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Unknown |
| | |
| **Subcommittee Recommendation:** | Approve as Modified (8-0-0) |
| **MHCC Action:** | Approve as Modified |
| **MHCC Modification of Proposed Change:** | UL 1995~~, 1995~~-2011, Heating and Cooling Equipment, ~~Second Edition, with 1999 revisions~~, IBR approved for §3280.703. ~~Any future version of this standard is acceptable.~~ |
| **MHCC Reason:** | Regulatory limitations on approving all future versions of the standard without review. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **4/5/2016** – Final Action from January 19-21, 2016 meeting confirmed by MHCC Ballot IV.<br>**1/19/2016** – MHCC Motion: Approve as Modified.<br>**12/10/2015** – SDCS Recommendation: Approve as Modified.<br>**8/19/2015** – MHCC Motion: Refer to Structure and Design Subcommittee. |

| Log # 116 - § 3280.4(aa)(2) Incorporation by reference | Date: 12/31/2014 |
|---|---|
| **Submitter:** | Gary Clark |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | NFPA 54 ~~2002~~2015/ANSI Z223.1-2015, National Fuel Gas Code, IBR approved for §3280.703. |
| **Reason:** | References to National Fuel Gas Code needs to be updated from the 2002 edition to "NFPA 54-2015/ANSI Z223.1-2015" |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Unknown |
| | |
| **Subcommittee Recommendation:** | Approve (10-0-0) |
| **MHCC Action:** | Approve |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **4/5/2016** – Final Action from January 19-21, 2016 meeting confirmed by MHCC Ballot IV.<br>**1/19/2016** – MHCC Motion: Approve.<br>**12/2/2015** – TSSC Recommendation: Approve.<br>**8/19/2015** – MHCC Motion: Refer to Technical Systems Subcommittee. |

| Log # 117 - § 3280.4(aa)(5) Incorporation by reference | Date: 12/31/2014 |
|---|---|
| **Submitter:** | Gary Clark |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | NFPA 90B, Warm Air Heating and Air Conditioning Systems, ~~1996~~ 2015 Edition, IBR approved for §3280.703. |
| **Reason:** | References to NFPA 90B need to be updated from the 1996 edition to the 2015 edition. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Unknown |
| | |
| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve (21-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>**8/19/2015** – MHCC Motion: Approve. |

| Log # 118 - § 3280.4 Incorporation by reference and 3280.703 Minimum standards | Date: 12/31/2014 |
|---|---|
| **Submitter:** | Gary Clark |
| **Requested Action:** | New Text |
| **Proposed Change:** | UL 60335-2-40,Safety of Household and Similar Electrical Appliances, Part 2-34: Particular Requirements for Motor-Compressors. Any future version of this standard is acceptable. |
| **Reason:** | A reference to the 2012 edition of the UL 60335-2-40 standard should be added within section 3280.703 since this standard deals with electrical safety of heat pumps, air conditioner and other household products that can be installed in manufactured homes. 24 CFR Part 3280 should also state that "any future version of this standard is acceptable." The references to standards within 24 CFR Part 3280 are not being revised frequently enough to keep up with the latest editions of those standards. Adding this sentence would address the issue in a major way. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Unknown |
| | |
| **Subcommittee Recommendation:** | Approve as Modified (10-0-0) |
| **MHCC Action:** | Approve as Modified |
| **MHCC Modification of Proposed Change:** | UL 60335-2-40 2012, Safety of Household and Similar Electrical Appliances, Part 2-34: Particular Requirements for Motor-Compressors. ~~Any future version of this standard is acceptable.~~ |
| **MHCC Reason:** | Regulatory limitations on approving all future versions of the standard without review. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **4/5/2016** – Final Action from January 19-21, 2016 meeting confirmed by MHCC Ballot IV.<br>**1/19/2016** – MHCC Motion: Approve as Modified.<br>**12/2/2015** – TSSC Recommendation: Approve as Modified.<br>**8/19/2015** – MHCC Motion: Refer to Technical Systems Subcommittee. |

| Log # 119 - § 3280.508(b) Heat loss, heat gain and cooling load calculations | Date: 12/31/2014 |
|---|---|
| **Submitter:** | Gary Clark |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | The calculation of the manufactured home's transmission heat loss coefficient (Uo) must be in accordance with the fundamental principles of the ~~1997~~ latest edition of the ASHRAE Handbook of Fundamentals, Inch-Pound Edition, and, at a minimum, must address all the heat loss or heat gain considerations in a manner consistent with the calculation procedures provided in the document, Overall U-values and Heating/Cooling Loads—Manufactured Homes—February 1992-PNL 8006, HUD User No. 0005945. |
| **Reason:** | Section 3280.508 and some other sections within the regulation refer to ASHRAE 1997 Handbook for data. Reference to the most current version should be used. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Unknown |
| | |
| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Disapprove (19-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | Based on DOE proposed rule and the “latest edition” language. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/20/2016 –** Final Action from October 25-27, 2016 meeting confirmed by MHCC Ballot V.<br>**10/25/2016 –** MHCC Motion: Disapprove.<br>**1/19/2016 –** MHCC Motion: Table until next meeting.<br>**8/19/2015 –** MHCC Motion: Table until next meeting. |

| Log # 120 - § 3280.508(b) Heat loss, heat gain and cooling load calculations | Date: 12/31/2014 |
|---|---|
| **Submitter:** | Gary Clark |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | The calculation of the manufactured home's transmission heat loss coefficient (Uo) must be in accordance with ACCA Manual J or the fundamental principles of the ~~1997~~ latest edition of ASHRAE Handbook of Fundamentals, Inch-Pound Edition, and, at a minimum, must address all the heat loss or heat gain considerations in a manner consistent with the calculation procedures provided in the document, Overall U-values and Heating/Cooling Loads—Manufactured Homes—February 1992-PNL 8006, HUD User No. 0005945. |
| **Reason:** | Section 3280.508(b) refers to a HUD document from 1992. The section should refer to the 2011 edition of ACCA Manual J which addresses the latest and most pertinent load calculations for manufactured homes. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Unknown |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Disapprove (19-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | Based on DOE proposed rule and the “latest edition” language. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/20/2016 –** Final Action from October 25-27, 2016 meeting confirmed by MHCC Ballot V.<br>**10/25/2016 –** MHCC Motion: Disapprove.<br>**1/19/2016 –** MHCC Motion: Table until next meeting.<br>**8/19/2015 –** MHCC Motion: Table until next meeting. |

| Log # 121 - § 3280.508(d) Heat loss, heat gain and cooling load calculations | Date: 12/31/2014 |
|---|---|
| **Submitter:** | Gary Clark |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | (d) *High efficiency heating and cooling equipment credit.* The calculated transmission heat loss coefficient (Uo) used for meeting the requirement in §3280.506(a) may be adjusted for heating and cooling equipment above that required by the National Appliance Energy Conservation Act of 1987 (NAECA) by applying the following formula:<br><br>Uo adjusted = Uo standard×[1+(0.6) (heating efficiency increase factor)+(cooling multiplier) (cooling efficiency increase factor)]<br><br>where:<br><br>Uo standard = Maximum Uo for Uo Zone required by §3280.506(a)<br><br>Uo adjusted = Maximum Uo standard adjusted for high efficiency HVAC equipment<br><br>Heating efficiency increase factor = The increase factor in heating equipment efficiency ~~measured by~~ based on the certified Annual Fuel Utilization Efficiency (AFUE), or the Heating Seasonal Performance Factor (HSPF) for heat pumps, above that required by NAECA (indicated as "NAECA" in formula). The formula is heating efficiency increase factor = AFUE (HSPF) home - AFUE (or HSPF) NAECA divided by AFUE (HSPF) NAECA.<br><br>Cooling efficiency increase factor = the increase factor in the cooling equipment efficiency ~~measured by~~ based on the certified Seasonal Energy Efficiency Ratio (SEER) above that required by NAECA.<br><br>The formula being cooling equipment=SEER home—SEER NAECA divided by SEER NAECA. |
| **Reason:** | Section 3280.508(d) mentions that the cooling efficiency increase factor is based upon "cooling equipment efficiency measured…" and a similar phrase is used for heating efficiency as well. This should be changed to be based upon the certified rating, so that it is in accordance with the U.S. Department of Energy requirements. Field measurement should not be required/allowed. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Unknown |
| | |
| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Disapprove (19-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | Based on DOE proposed rule. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/20/2016 –** Final Action from October 25-27, 2016 meeting confirmed by MHCC Ballot V.<br>**10/25/2016 –** MHCC Motion: Disapprove<br>**1/19/2016** – MHCC Motion: Table until next meeting.<br>**8/19/2015** – MHCC Motion: Table until next meeting. |

| Log # 122 - § 3280.511(a)(1) Comfort cooling certificate and information | Date: 12/31/2014 |
|---|---|
| **Submitter:** | Gary Clark |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | (1) *Alternative I.* If a central air conditioning system is provided by the home manufacturer, the heat gain calculation necessary to properly size the air conditioning equipment shall be in accordance with procedures outlined in the 2011 edition of ACCA Manual J, or ~~chapter 22 of~~ the ~~1989~~ latest edition of the ASHRAE Handbook of Fundamentals, with an assumed location and orientation. The following shall be supplied in the Comfort Cooling Certificate:<br><br>Air Conditioner Manufacturer<br>Air Conditioner Model<br><br>Certified Capacity ___ BTU/Hr. in accordance with the appropriate Air Conditioning and Refrigeration Institute Standards<br><br>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.<br><br>Example Alternate I<br>COMFORT COOLING CERTIFICATE<br>Manufactured Home Mfg<br>Plant Location<br>Manufactured Home Model<br>Air Conditioner Manufacturer<br><br>Certified Capacity ___ BTU/Hr. in accordance with the appropriate Air Conditioning and Refrigeration Institute Standards.<br><br>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 outdoor temperatures are _ °F dry bulb and _ °F wet bulb.<br><br>The temperature to which this home can be cooled will change depending upon the amount of exposure of the windows to the sun's radiant heat. Therefore, the home's heat gains will vary dependent upon its orientation to the sun and any permanent shading provided. Information concerning the calculation of cooling loads at various locations, window exposures and shadings are provided in the 2011 edition of ACCA Manual J, or ~~chapter 22 of the 1989~~ the latest edition of the ASHRAE Handbook of Fundamentals. |
| **Reason:** | Section 3280.511 refers to chapter 22 of ASHRAE 1989 Fundamentals for heat gain. The section should refer to the 2011 edition of ACCA Manual J which addresses load calculations for manufactured homes, or at a minimum the latest version of the ASHRAE fundamentals. The reference to the 1989 edition is located in several sections of 24 CFR part 3280 and needs to be revised. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Unknown |
| | |
| **Subcommittee Recommendation:** | |

| | |
|---|---|
| **MHCC Action:** | Disapprove (19-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | Based on the "latest edition" language. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/20/2016 –** Final Action from October 25-27, 2016 meeting confirmed by MHCC Ballot V.<br>**10/25/2016 –** MHCC Motion: Disapprove<br>**1/19/2016** – MHCC Motion: Table until next meeting.<br>**8/19/2015** – MHCC Motion: Table until next meeting. |

| Log # 123 - § 3280.511(a)(2) Comfort cooling certificate and information | Date: 12/31/2014 |
|---|---|
| **Submitter:** | Gary Clark |
| **Requested Action:** | New Text |
| **Proposed Change:** | *Alternative 2.* For each home suitable for a central air cooling system, the manufacturer shall provide the following statement: "This air distribution system of this home is suitable for the installation of a central air conditioning system."<br><br>Example Alternate 2<br>COMFORT COOLING CERTIFICATE<br>Manufactured Home Manufacturer<br>Plant Location<br>Manufactured Home Model<br><br>This air distribution system of this home is suitable for the installation of central air conditioning.<br><br>The supply air distribution system installed in this home is sized for Manufactured Home Central Air Conditioning System of up to ___ B.T.U./Hr. rated capacity which are certified in accordance with the appropriate Air Conditioning and Refrigeration Institute Standards. When the air circulators of such air conditioners are rated at 0.3 inch water column static pressure or greater for the cooling air delivered to the manufactured home supply air duct system.<br><br>Information necessary to calculate cooling loads at various locations and orientations is provided in the special comfort cooling information provided with this manufactured home. |
| **Reason:** | The "Comfort Cooling Certificate" refers to static of 0.3 in.w.c for a given capacity. Instead, the certificate should refer to static at a nominal airflow in CFM. The MHCC should discuss this section further and consider implementing changes to this section. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Unknown |
| | |
| **Subcommittee Recommendation:** | |
| **MHCC Action:** | |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | |
| **Current Status:** | Pending MHCC Final Action |
| **Log History:** | **10/25/2016 –** MHCC Motion: Table until next meeting<br>**1/19/2016** – MHCC Motion: Table until next meeting.<br>**8/19/2015** – MHCC Motion: Table until next meeting. |

| Log # 124 - § 3280.714(a)(1)(ii) Appliances, cooling | Date: 12/31/2014 |
|---|---|
| **Submitter:** | Gary Clark |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | (ii) Heat pumps must be certified to comply with all requirements of the ANSI/AHRI Standard 210/240-~~89~~2008, 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. (Variable speed and two speed systems can typically meet such requirements.) Electric motor-driven vapor compression heat pumps with supplemental electric resistance heat conforming to ANSI/AHRI Standard 210/240-~~89~~2008, Unitary Air Conditioning ~~and~~ & Air-Source Heat Pump Equipment, must have Heating Season Performance Factor (HSPF) efficiencies not less than as specified in the 10 CFR Part 430, Energy Conservation Program for Consumer Products: Central Air Conditioners and Heat Pumps Energy Conservation Standards. |
| **Reason:** | Section 3280.714(a)(1)(ii) should explicitly note that the compression and control requirements specified within the section can be met by variable speed and two speed systems. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Unknown |
| | |
| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve as Modified (21-0-0) |
| **MHCC Modification of Proposed Change:** | *In Section 3280.714 (a)*<br><br>Update ARI Standard 210/240-89, Unitary Air Conditioning and Air-Source Heat Pump Equipment.<br><br>*To*<br><br>ANSI/AHRI Standard 210/240-~~89~~2008, Unitary Air Conditioning ~~and~~ & Air-Source Heat Pump Equipment. |
| **MHCC Reason:** | Change to standard should be repeated throughout entire section. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>**8/19/2015** – MHCC Motion: Approve as Modified. |

<table>
<tr><td>Log # 125 - § 3280.714(a)(1)(iii) Appliances, cooling</td><td>Date: 12/31/2014</td></tr>
<tr><td>Submitter:</td><td colspan="2">Gary Clark</td></tr>
<tr><td>Requested Action:</td><td colspan="2">Deleted Text</td></tr>
<tr><td>Proposed Change:</td><td colspan="2">~~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 shall show coefficient of performance ratios not less than shown below:~~<br><br>~~COP~~<br><table><tr><th>~~Temperature degrees fahrenheit~~</th><th>~~Coefficient of performance~~</th></tr><tr><td>~~47~~</td><td>~~2.5~~</td></tr><tr><td>~~17~~</td><td>~~1.7~~</td></tr><tr><td>~~0~~</td><td>~~1.0~~</td></tr></table></td></tr>
<tr><td>Reason:</td><td colspan="2">The minimum COP requirement at various temperatures must be removed due to conflict with federal preemption laws. The COP requirements go beyond the federal HSPF requirements and must not be specified in the regulation. The regulation, as currently written, is a violation of Federal law and needs to be revised with immediate effect.</td></tr>
<tr><td>Substantiating Documents:</td><td colspan="2">No</td></tr>
<tr><td>Additional Cost:</td><td colspan="2">Unknown</td></tr>
<tr><td>Cost Benefit Explanation:</td><td colspan="2">Unknown</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td>Subcommittee Recommendation:</td><td colspan="2"></td></tr>
<tr><td>MHCC Action:</td><td colspan="2">Approve (21-0-0)</td></tr>
<tr><td>MHCC Modification of Proposed Change:</td><td colspan="2"></td></tr>
<tr><td>MHCC Reason:</td><td colspan="2"></td></tr>
<tr><td>Current Status:</td><td colspan="2">MHCC Final Action Submitted to HUD</td></tr>
<tr><td>Log History:</td><td colspan="2">12/4/2015 – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>8/20/2015 – MHCC Motion: Approve.</td></tr>
</table>

| Log # 126 - § 3280.715(a)(3)(ii) Circulating air systems | Date: 12/31/2014 |
|---|---|
| **Submitter:** | Gary Clark |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | The refrigerated air cooling supply duct system including registers must be capable of handling at least ~~300 cfm per 10,000 btuh~~ 360 CFM/ton with a static pressure no greater than 0.3 inches of water when measured at room temperature. In the case of application of external self contained comfort cooling appliances or the cooling mode of combination heating/cooling appliances, either the external ducts between the appliance and the manufactured home supply system shall be considered part of, and shall comply with the requirements for the refrigerated air cooling supply duct system, or the connecting duct between the external appliance and the mobile supply duct system shall be a part of the listed appliance. The minimum dimension of any branch duct shall be at least $1^1/_2$ inches, and of any main duct, $2^1/_2$ inches. |
| **Reason:** | Instead of specifying 300 CFM per 10,000 Btu/h, the requirement should mention 360 CFM/ton, especially since this requirement pertains to just the supply duct. Such a revision would make the section consistent with standard industry practice. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Unknown |
| | |
| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Disapprove (21-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | No substantiation by the submitter, and the unit change would cause confusion. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>**8/20/2015** – MHCC Motion: Disapprove. |

| Log # 127 - § 3280.607(b)(3)(v) Shower compartment | | Date: 5/01/2015 |
|---|---|---|
| **Submitter:** | Mark Conte | |
| **Requested Action:** | New Text | |
| **Proposed Change:** | Shower, bathtub, and tub-shower combination valves must be balanced pressure, thermostatic, or combination mixing valves that conform to the requirements of ASSE 1016-2005, Performance Requirements for Automatic Compensating Values for Individual Shower and Tub/Shower Combinations (incorporated by reference, see Sec. 3280.4). 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 [deg]F.<br><u>If the valves require adjustment and/or testing during the installation/set-up of the home, the manufacturer must attach a label to each such valve and fixture as a notification to the home installer and consumer.</u> | |
| **Reason:** | I believe that failing to notify the consumer or manufactured home installer that these valves require field adjustment places consumers at risk. A note in the installation manual will certainly be overlooked by the majority of installers or consumers. | |
| **Substantiating Documents:** | No | |
| **Additional Cost:** | No | |
| **Cost Benefit Explanation:** | The added cost to produce and attach a label will be negligible. | |
| | | |
| **Subcommittee Recommendation:** | | |
| **MHCC Action:** | Disapprove (18-3-0) | |
| **MHCC Modification of Proposed Change:** | | |
| **MHCC Reason:** | Committee does not think that the proposed change is enough to address the problem. | |
| **Current Status:** | MHCC Final Action Submitted to HUD | |
| **Log History:** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>**8/20/2015** – MHCC Motion: Disapprove. | |

| Log # 128 - § 3280.211 New Section | Date: 5/11/2015 |
|---|---|
| **Submitter:** | General Subcommittee - Mark Mazz |
| **Requested Action:** | New Text |
| **Proposed Change:** | *Revise and Add new text to 3280 as follows:*<br>**3280.2 Definitions.**<br>*Manufactured home* means a structure, transportable in one or more sections, which in the traveling mode is 8 body feet or more in width or 40 body feet or more in length or which when erected on-site is 320 or more square feet, and which is built on a permanent chassis and designed **to be used as a dwelling** with or without a permanent foundation ...<br>*Dwelling* means any structure that contains one to a maximum of three dwelling units, designed to be occupied for residential living purposes.<br>…<br>*Dwelling unit* means a single unit providing complete independent living facilities for one or more persons, where the occupancy is primarily permanent in nature, including permanent provisions ~~one or more habitable rooms which are designed to be occupied by one family with facilities~~ for separate living, sleeping, cooking, sanitation, and eating…<br>**3280.211 Multi-Unit Dwellings.**<br>(a) In structures with more than one dwelling unit, each dwelling unit shall be separated from each other by wall and floor assemblies having not less than a 1-hour fire-resistance rating when tested in accordance with ASTM E119-14 or UL263-2014 or not less than a 1-hour fire-resistance when calculated in accordance with Chapter 16 of National Design Specification for Wood Construction - 2015. Fire-resistance-rated floor/ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend from the foundation to the underside of the roof sheathing.<br>Exceptions:<br>(1) Wall assemblies need not extend through attic spaces where the ceiling is protected by not less than 5/8 -inch Type X gypsum board, and attic draft stop constructed as specified in Section 3280.212 is provided above and along the wall assembly separating the dwellings and the structural framing supporting the ceiling is protected by not less than ½-inchgypsum board or equivalent.<br>(b) *Supporting Construction.* Where floor assemblies are required to be fire-resistance rated by Section 3280.211, the supporting construction of such assemblies shall have an equal or greater fire-resistance rating.<br>(c) Dwelling unit rated penetrations. Penetrations of wall or floor-ceiling assemblies in multi-unit dwellings shall be required to be fire-resistance rated in accordance with this section.<br>(1) Through penetrations.<br>(i) Penetrations shall be installed as tested in the approved fire-resistance-rated assembly; or<br>(ii)Penetrations shall be protected by an approved penetration fire stop system installed as tested in accordance with ASTM E814-13 or UL 1479-2014, with a positive pressure differential of not less than 0.01 inch of water and shall have an F rating of not less than the required fire-resistance rating of the wall or floor-ceiling assembly penetrated; or<br>(iii) Where the penetrating items are steel, ferrous or copper pipes, tubes or conduits, the annular space shall be protected as follows:<br>(1) The material used to fill the annular space shall prevent the passage of flame and hot gases sufficient to ignite cotton waste where subjected to ASTM E119-14 or UL263-2014 time temperature fire conditions under a positive pressure differential of not less than 0.01 inch of water at the location of the penetration for the time period equivalent to the penetration for the time period equivalent to the fire-resistance rating of the construction penetrated. |

(2) Membrane penetrations. Membrane penetrations shall comply with3280.211(c)(1). Where walls are required to have a fire-resistance rating, recessed fixtures shall be installed so that the required fire-resistance rating will not be reduced.

Exceptions:

(i) Membrane penetrations of fire-resistance-rated walls, ceiling/floors and partitions by steel electrical boxes provided they do not exceed 16 square inches in area and the aggregate area of the openings through the membrane does not exceed 100 square inches in any 100 square feet of wall area. The annular space between the wall membrane and the box shall not exceed? inch. Such boxes on opposite sides of the wall shall be separated by one of the following:

(1) By a horizontal distance of not less than 24inches where the wall or partition is constructed with individual non communicating stud cavities.

(2) By a horizontal distance of not less than the depth of the wall cavity where the wall cavity is filled with cellulose loose-fill, rockwool or slag mineral wool insulation.

(3) By solid fire blocking in accordance with Section 3280.206

(4) By protecting both boxes with listed putty pads.

(5) By other listed materials and methods.

(ii) Membrane penetrations by listed electrical boxes of any materials provided that the boxes have been tested for use in fire-resistance-rated assemblies and are installed in accordance with the instructions included in the listing. The annular space between the wall membrane and the box shall not exceed? inch unless listed otherwise. Such boxes on opposite sides of the wall shall be separated by one of the following:

(1) By the horizontal distance specified in the listing of the electrical boxes.

(2) By solid fire blocking in accordance with Section 3280.206

(3) By protecting both boxes with listed putty pads.

(4) By other listed materials and methods.

(iii) The annular space created by the penetration of a fire sprinkler provided that it is covered by a metal escutcheon plate.

**3280.5 Dataplate**

Each ~~manufactured homes~~ dwelling unit shall bear a data plate affixed in a permanent manner near the main electrical panel or other readily accessible and visible location. …

**3280.103(b) Whole-house ventilation.** Each ~~manufactured home~~ dwelling unit must be provided with whole-house ventilation having a minimum…

**3280.105(a) Number and location of exterior doors.** ~~Manufactured homes~~ Each dwelling unit shall have a minimum of two exterior doors located remote from each other.

**3280.109(a)** ~~Every manufactured homes~~ Each dwelling unit shall have at least one living area with not less than 150 sq. ft. of gross floor area.

**3280.309 Health Notice on formaldehyde emissions.**

(a) Each ~~manufactured home~~ dwelling unit shall have a Health Notice on formaldehyde emissions prominently displayed in a temporary manner in the kitchen…

**3280.510 Heat loss certificate**

The manufactured home manufacturer shall permanently affix the following "Certificate" to an interior surface of ~~the home~~ each dwelling unit that is readily visible to the occupant ~~homeowner.~~ ...

**3280.511 Comfort cooling certificate and information.**

(a) The manufactured home manufacturer shall permanently affix a "Comfort Cooling Certificate" to an interior surface of ~~the home~~ each dwelling unit that is readily visible to the occupant ~~homeowner~~. …

**3280.609(a)(2) Hot water supply.** Each ~~manufactured home~~ dwelling unit equipped with a kitchen sink, and bathtub and/or shower shall be provided with a hot water supply system including a listed water heater.

**3280.705(j) Gas supply connections.** When gas appliances are installed, at least one gas supply connection shall be provided on each ~~home~~ dwelling unit. …

**3280.802 Definitions.**

(20) Feeder assembly means the overhead or under-chassis feeder conductors, including the grounding conductor, together with the necessary fittings and equipment, or a power supply cord approved for manufactured home use, designed for the purpose of delivering energy from the source of electrical supply to the distribution panel board within ~~the manufactured home~~ each dwelling unit.

**3280.803 Power supply**

(a) The power supply to the manufactured home shall be a feeder assembly consisting of not more than one listed 50 ampere manufactured home power-supply cords, or a permanently installed circuit. A manufactured home that is factory-equipped with gas or oil-fired central heating equipment and cooking appliances shall be permitted to be provided with a listed manufactured home power supply cord rated 40 amperes. This section does not apply to multi-unit dwellings.

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

(c) *Disconnecting means*. A single disconnecting means must be provided in each ~~manufactured home~~ dwelling unit, 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~~ dwelling unit.

…

(g) Branch-circuit distribution equipment shall be installed in each ~~manufactured home~~ dwelling unit and shall include overcurrent protection for each branch circuit consisting of either circuit breakers or fuses.

...

(h) A service distribution panel shall be factory installed and connected to the subpanels on multi-unit dwellings.

**3280.805Branch circuits required.**

(a) The number of branch circuits required shall be determined in accordance with the following:

(1) Lighting, based on 3 volt-amperes per square foot time outside dimensions of ~~the manufactured home~~ each dwelling unit(coupler excluded) divided by120 volts times amperes to determine number of 15 or 20 ampere lighting area circuits. ...

**3280.114 Sound Transmission between Multi-unit dwellings**

**(a) Scope.**

This section shall apply to common interior walls, partitions and floor/ceiling assemblies between adjacent *dwelling units.*

**(b) Air-borne sound.**

Walls, partitions and floor/ceiling assemblies between stories separating *dwelling units* from each other shall have a sound transmission class (STC) of not less than 39 for air-borne noise when tested in accordance with ASTM E 90 or calculated. Penetrations or openings in construction assemblies for piping; electrical devices; recessed cabinets; bathtubs; soffits; or heating, ventilating or exhaust ducts shall be sealed, lined, insulated or otherwise treated to maintain the required ratings. This requirement shall not apply to *dwelling unit* entrance doors; however, such doors shall be tight fitting to the frame and sill.

**(c)Structure-borne sound.**

Floor/ceiling assemblies between stories separating *dwelling units* shall have an impact insulation class (IIC) rating of not less than 39 when tested in accordance with ASTM E 492.

*Add new text to 3285 as follows:*

**3285.603.XXXWater Connections** Each dwelling unit shall have a separate water connection.

**3285.603(c)(1)** An identified and accessible shut off valve must be installed for each dwelling unit between the water supply and the inlet.

| | |
|---|---|
| **Reason:** | Proposed change to address the multi-dwelling unit problem, was submitted on behalf of the entire General Subcommittee based off of discussions during the 5-5-2015 General Subcommittee Conference Call. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Unknown |
| | |
| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve as Modified (20-1-0) |
| **MHCC Modification of Proposed Change:** | *Revise and Add new text to 3280 as follows:*<br>**3280.2 Definitions.**<br>*Manufactured home* means a structure, transportable in one or more sections, which in the traveling mode is 8 body feet or more in width or 40 body feet or more in length or which when erected on-site is 320 or more square feet, and which is built on a permanent chassis and designed **to be used as a dwelling** with or without a permanent foundation ...<br>*Dwelling* means any structure that contains one to a maximum of three dwelling units, designed to be occupied for residential living purposes.<br>…<br>*Dwelling unit* means a single unit providing complete independent living facilities for one or more persons, where the occupancy is primarily permanent in nature, including permanent provisions ~~one or more habitable rooms which are designed to be occupied by one family with facilities~~ for separate living, sleeping, cooking, sanitation, and eating…<br>**3280.211 Multi-Unit Dwellings.**<br>(a) In structures with more than one dwelling unit, each dwelling unit shall be separated from each other by wall and floor assemblies having not less than a 1-hour fire-resistance rating when tested in accordance with ASTM E119-14 or UL263-2014 or not less than a 1-hour fire-resistance when calculated in accordance with Chapter 16 of National Design Specification for Wood Construction - 2015. Fire-resistance-rated floor/ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend from the foundation to the underside of the roof sheathing.<br>Exceptions:<br>(1) Wall assemblies need not extend through attic spaces where the ceiling is protected by not less than 5/8 -inch Type X gypsum board, and attic draft stop constructed as specified in Section 3280.212 is provided above and along the wall assembly separating the dwellings and the structural framing supporting the ceiling is protected by not less than ½-inchgypsum board or equivalent.<br>(b) *Supporting Construction.* Where floor assemblies are required to be fire-resistance rated by Section 3280.211, the supporting construction of such assemblies shall have an equal or greater fire-resistance rating.<br>(c) Dwelling unit rated penetrations. Penetrations of wall or floor-ceiling assemblies in multi-unit dwellings shall be required to be fire-resistance rated in accordance with this section.<br>(1) Through penetrations.<br>(i) Penetrations shall be installed as tested in the approved fire-resistance-rated assembly; or<br>(ii)Penetrations shall be protected by an approved penetration fire stop system installed as tested in accordance with ASTM E814-13 or UL 1479-2014, with a positive pressure differential of not less than 0.01 inch of water and shall have an F rating of not less than the required fire-resistance rating of the wall or floor-ceiling assembly penetrated; or |

(iii) Where the penetrating items are steel, ferrous or copper pipes, tubes or conduits, the annular space shall be protected as follows:

(1) The material used to fill the annular space shall prevent the passage of flame and hot gases sufficient to ignite cotton waste where subjected to ASTM E119-14 or UL263-2014 time temperature fire conditions under a positive pressure differential of not less than 0.01 inch of water at the location of the penetration for the time period equivalent to the penetration for the time period equivalent to the fire-resistance rating of the construction penetrated.

(2) Membrane penetrations. Membrane penetrations shall comply with3280.211(c)(1). Where walls are required to have a fire-resistance rating, recessed fixtures shall be installed so that the required fire-resistance rating will not be reduced.

Exceptions:

(i) Membrane penetrations of fire-resistance-rated walls, ceiling/floors and partitions by steel electrical boxes provided they do not exceed 16 square inches in area and the aggregate area of the openings through the membrane does not exceed 100 square inches in any 100 square feet of wall area. The annular space between the wall membrane and the box shall not exceed? inch. Such boxes on opposite sides of the wall shall be separated by one of the following:

(1) By a horizontal distance of not less than 24inches where the wall or partition is constructed with individual non communicating stud cavities.

(2) By a horizontal distance of not less than the depth of the wall cavity where the wall cavity is filled with cellulose loose-fill, rockwool or slag mineral wool insulation.

(3) By solid fire blocking in accordance with Section 3280.206

(4) By protecting both boxes with listed putty pads.

(5) By other listed materials and methods.

(ii) Membrane penetrations by listed electrical boxes of any materials provided that the boxes have been tested for use in fire-resistance-rated assemblies and are installed in accordance with the instructions included in the listing. The annular space between the wall membrane and the box shall not exceed? inch unless listed otherwise. Such boxes on opposite sides of the wall shall be separated by one of the following:

(1) By the horizontal distance specified in the listing of the electrical boxes.

(2) By solid fire blocking in accordance with Section 3280.206

(3) By protecting both boxes with listed putty pads.

(4) By other listed materials and methods.

(iii) The annular space created by the penetration of a fire sprinkler provided that it is covered by a metal escutcheon plate.

**3280.5 Dataplate**

Each ~~manufactured homes~~ dwelling unit shall bear a data plate affixed in a permanent manner near the main electrical panel or other readily accessible and visible location. …

**3280.103(b) Whole-house ventilation.** Each ~~manufactured home~~ dwelling unit must be provided with whole-house ventilation having a minimum…

**3280.105(a) Number and location of exterior doors.** ~~Manufactured homes~~ Each dwelling unit shall have a minimum of two exterior doors located remote from each other.

**3280.109(a)** ~~Every manufactured homes~~ Each dwelling unit shall have at least one living area with not less than 150 sq. ft. of gross floor area.

**3280.309 Health Notice on formaldehyde emissions.**

(a) Each ~~manufactured home~~ dwelling unit shall have a Health Notice on formaldehyde emissions prominently displayed in a temporary manner in the kitchen…

**3280.510 Heat loss certificate**

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| | The manufactured home manufacturer shall permanently affix the following "Certificate" to an interior surface of ~~the home~~ each dwelling unit that is readily visible to the occupant ~~homeowner.~~ ...<br>**3280.511 Comfort cooling certificate and information.**<br>(a) The manufactured home manufacturer shall permanently affix a "Comfort Cooling Certificate" to an interior surface of ~~the home~~ each dwelling unit that is readily visible to the occupant ~~homeowner~~. …<br>**3280.609(a)(2) Hot water supply.** Each ~~manufactured home~~ dwelling unit equipped with a kitchen sink, and bathtub and/or shower shall be provided with a hot water supply system including a listed water heater.<br>**3280.705(j) Gas supply connections.** When gas appliances are installed, at least one gas supply connection shall be provided on each ~~home~~ dwelling unit. …<br>**3280.802 Definitions.**<br>(20) Feeder assembly means the overhead or under-chassis feeder conductors, including the grounding conductor, together with the necessary fittings and equipment, or a power supply cord approved for manufactured home use, designed for the purpose of delivering energy from the source of electrical supply to the distribution panel board within ~~the manufactured home~~ each dwelling unit.<br>**3280.803 Power supply**<br>(a) The power supply to the manufactured home shall be a feeder assembly consisting of not more than one listed 50 ampere manufactured home power-supply cords, or a permanently installed circuit. A manufactured home that is factory-equipped with gas or oil-fired central heating equipment and cooking appliances shall be permitted to be provided with a listed manufactured home power supply cord rated 40 amperes. This section does not apply to multi-unit dwellings.<br>**3280.804 Disconnecting means and branch-circuit protective equipment.**<br>(c) *Disconnecting means*. A single disconnecting means must be provided in each ~~manufactured home~~ dwelling unit, 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~~ dwelling unit.<br>…<br>(g) Branch-circuit distribution equipment shall be installed in each ~~manufactured home~~ dwelling unit and shall include overcurrent protection for each branch circuit consisting of either circuit breakers or fuses.<br>...<br>(h) A service distribution panel shall be factory installed and connected to the subpanels on multi-unit dwellings.<br>**3280.805Branch circuits required.**<br>(a) The number of branch circuits required shall be determined in accordance with the following:<br>(1) Lighting, based on 3 volt-amperes per square foot time outside dimensions of ~~the manufactured home~~ each dwelling unit(coupler excluded) divided by120 volts times amperes to determine number of 15 or 20 ampere lighting area circuits. ...<br>**3280.114 Sound Transmission between Multi-unit dwellings**<br>**(a) Scope.**<br>This section shall apply to common interior walls, partitions and floor/ceiling assemblies between adjacent *dwelling units.*<br>**(b) Air-borne sound.**<br>Walls, partitions and floor/ceiling assemblies between stories separating *dwelling units* from each other shall have a sound transmission class (STC) of not less than ~~39~~ 34 for air-borne noise when tested in accordance with ASTM E 90 or calculated. Penetrations or openings in construction assemblies for piping; electrical devices; recessed cabinets; bathtubs; soffits; or heating, ventilating or exhaust ducts shall be sealed, lined, insulated or otherwise treated to maintain the required ratings. This requirement shall not apply to *dwelling unit* entrance doors; however, such doors shall be tight fitting to the frame and sill. |

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| | **(c)Structure-borne sound.**<br>Floor/ceiling assemblies between stories separating *dwelling units* shall have an impact insulation class (IIC) rating of not less than ~~39~~ 34 when tested in accordance with ASTM E 492.<br><br>*Add new text to 3285 as follows:*<br>**3285.603.XXXWater Connections** Each dwelling unit shall have a separate water connection.<br>**3285.603(c)(1)** An identified and accessible shut off valve must be installed for each dwelling unit between the water supply and the inlet. |
| **MHCC Reason:** | STC of 34 is a more attainable requirement. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>**8/18/2015** – MHCC Motion: Approve as Modified. |

| Log # 129 - § 3280.4 Incorporation by reference. | Date: 7/29/2015 |
|---|---|
| **Submitter:** | Structure and Design Subcommittee - Dave Tompos |
| **Requested Action:** | Revise Text |
| **Proposed Change:** | **§3280.4 Incorporation by reference.**<br><br>(e) American Forest and Paper Association (AFPA), 1111 Nineteenth Street, Suite 800, Washington, DC 20036 (previously named National Forest Products Association (NFPA), telephone number 1-800-878-8878, Web site:*http://www.afandpa.org.*<br><br>(1) AFPA, Design Values for Joists and Rafters 1992, IBR approved for §3280.304(b).<br><br>(2) AFPA PS-20-70, Span Tables for Joists and Rafters, 1993, IBR approved for §3280.304(b).<br><br>(3) ANSI/~~AFPA~~AWC NDS-~~2001~~2015, National Design Specifications for Wood Construction, ~~2001~~2015 Edition, with Supplement~~,~~: Design Values for Wood Construction, November ~~30, 2001~~2014, IBR approved for §3280.304(b).<br><br>**§3280.304 Materials.**<br>**Wood and Wood Products**<br>National Design Specifications for Wood Construction, ~~2001~~2015 Edition, with Supplement~~,~~: Design Values for Wood Construction, ~~NDS-2001, ANSI/AFPA~~ ANSI/AWC NDS-2015. |
| **Reason:** | Resolution to Action Item 3: Southern Yellow Pine Letter. Was submitted on behalf of the entire Structure and Design Subcommittee based off of discussions during the 7-15-2015 Structure and Design Subcommittee teleconference. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Unknown |
| **Cost Benefit Explanation:** | Unknown |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve (21-0-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/4/2015** – Final Action from August 18-20, 2015 meeting confirmed by MHCC Ballot III.<br>**8/18/2015** – MHCC Motion: Approve. |

| Log # 130 - § 3280.105(a)(2)(i) Exit facilities; exterior doors | Date: 8/4/2015 |
|---|---|
| **Submitter:** | John Weldy |
| **Requested Action:** | Delete Text |
| **Proposed Change:** | Propose deletion of complete paragraph 3280.105(a)(2)(i):<br>~~**3280.105(a)(2)(i)** Both of the required doors must not be in the same room or in a group of rooms which are not defined by fixed walls.~~ |
| **Reason:** | At the time the MHCSS was written, dwelling floor plans consisted of rooms normally well defined by walls. However, in today's market, families desire more open floor plans so that the whole family can be together no matter which room they're using. The housing market demands open floor plans with rooms which are not defined by walls. Current interpretation of code requires a minimum of a 6" long full height wall segment to be installed within open floor plans in order to meet the "not in the same room or in a group of rooms which are not defined by fixed walls" requirement. Homeowners do not want these stub wall obstructions in their homes which provide no advantage in fire safety. Furthermore, the current language increases liability since room division is not defined within 3280 and therefore the 6" wall segment which is currently accepted by interpretation of this section is subject to legal dispute. Substantiation: An interior wall as defined within MHCSS and as interpreted by monitoring agency does not improve fire safety. Furthermore, the International Residential Code (IRC) as adopted by nearly all States does not require two egress doors, but rather only requires a single egress door: 2015 IRC R311. Egress Door. Not less than one egress door shall be provide for each dwelling unit. In addition, the International Building Code (IBC) as adopted by States for commercial buildings requires only one egress door in residential buildings such as hotels and apartments when the occupant load is equal or less than ten occupants. (see 2015 IBC Table 1015.1 and section 1015.1). The requirement for two egress doors to be remote from each other by a prescribed minimum distance as required within 3280.105 provides the key fire safety provisions to ensure readily accessible egress. Therefore, the requirement for the doors to be located in separate rooms should be eliminated. |
| **Substantiating Documents:** | Yes |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | There will be no cost benefit or cost increase associated with the proposed code revision. |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve as Modified |
| **MHCC Modification of Proposed Change:** | **3280.105(a)(2)(i)** Both of the required doors must not be in the same room ~~or in a group of rooms which are not defined by fixed walls~~. |
| **MHCC Reason:** | The defined walls language was removed because open floor plans are in demand and stub walls were used to circumvent the provision. This simplifies the standard and allows for more open floorplans. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **4/5/2016** – Final Action from January 19-21, 2016 meeting confirmed by MHCC Ballot IV.<br>**1/19/2016** – MHCC Motion: Approve as Modified. |

| Log # 131 - § 3280.305(k)(2) Structural Design Requirements | Date: 12/9/2015 |
|---|---|
| **Submitter:** | John Weldy |
| **Requested Action:** | New Text |
| **Proposed Change:** | Add the following after **3280.305(k)(2):**<br><br>(i) Attic area as used within this section are those spaces where the maximum clear height between joist and rafters is 42" or greater or where there are two or more adjacent trusses with web configurations capable of accommodating an assumed rectangle 42" high by 24" in width, or greater, within the plan of the trusses.<br><br>The live load need only be applied to those portions of the joist or truss bottom chords<br><br>where all of the following conditions are met:<br>1. The attic area is accessible from an opening not less than 20 inches in width and 30 inches in length that is located where the clear height in the attic is a minimum of 30 inches.<br>2. The slope of the joists or truss bottom chords are no greater than 2 inches vertical to 12 inches horizontal.<br>3. Required insulation depth is less than the joist or truss bottom chord member depth. |
| **Reason:** | Statement of Problem: Final rule Section 3280.305(k) introduces an undefined "Attic area" term. In absence of a definition for attic area, it is unclear in 3280.305(k) when an attic live load shall be applied in accordance with the section. Clarification is needed to explain when a roof configuration creates an "attic area" as well as how the load is to be applied to the truss. Substantiation: Proposal adds standard definition for attic space as provided within the 2015 International Residential Code (IRC) R301.5. Borrowing proposed language from national recognized residential building code will eliminate confusion and allow standard computer truss modeling methodologies to be utilized to design trusses. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | Will result in a cost reduction by limiting truss which must be designed for attic live load under section 3280.305k to those in which use for attic storage is practical. |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **4/5/2016** – Final Action from January 19-21, 2016 meeting confirmed by MHCC Ballot IV.<br>**1/20/2016** – MHCC Motion: Approve. |

| Log # 132 - § 3285.2 Manufacturer Installation Instructions | Date: 12/9/2015 |
|---|---|
| **Submitter:** | Lois Starkey |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | **24 CFR Part 3285.2 Manufacturer Installation Instructions**<br>**c) *Variations to installation instructions.***<br>**(ii)** If designs and instructions are not available from the manufacturer, obtain an alternate design prepared and certified by a registered professional engineer or registered architect for the support and anchorage of the manufactured home that is consistent with the manufactured home design, and conforms to the requirements of the MHCSS.~~and has been approved by the manufacturer and the DAPIA~~ |
| **Reason:** | The recommended change eliminates redundant approvals by the DAPIA. The proposal retains existing language which ensures that the alternative foundations are designed and certified by a registered professional engineer or architect. This proposal does not change the requirement that a registered professional engineer or architect must prepare and certify an alternative foundation system which is consistent with the manufactured home design and which meets the HUD -Code. This change recognizes that local code offices are appropriately responsible for ensuring compliance with local site requirements, including requirements for foundations. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | The proposal will have minimal cost impact. In fact it is likely to reduce costs to homebuyers by eliminating one layer of approvals. |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve as Modified |
| **MHCC Modification of Proposed Change:** | **24 CFR Part 3285.2 Manufacturer Installation Instructions**<br>**c) *Variations to installation instructions.***<br>**(ii)** If designs and instructions are not available from the manufacturer, obtain an alternate design prepared and certified by a registered professional engineer or registered architect for the support and anchorage of the manufactured home that is consistent with the manufactured home design, ~~and~~ conforms to the requirements of the MHCSS, and has been approved by either the state, local authority having jurisdiction or the manufacturer's DAPIA.~~and has been approved by the manufacturer and the DAPIA~~ |
| **MHCC Reason:** | Additional flexibility. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **4/5/2016** – Final Action from January 19-21, 2016 meeting confirmed by MHCC Ballot IV.<br>**1/19/2016** – MHCC Motion: Approve as Modified. |

| Log # 133 - § 3280.2 Reference Standards | Date: 12/9/2015 |
|---|---|
| **Submitter:** | Lois Starkey |
| **Requested Action:** | New Text |
| **Proposed Change:** | 3280.4 Incorporation by Reference<br>*(a) Materials, devices, fixtures, fittings, equipment, appliances, appurtenances and accessories shall conform to one of the reference standards in this section. Where an appropriate standard is not otherwise indicated in this section or if a standard that is not indicated in this section is preferred, the item may be used if it is listed or certified.*<br>~~(a)~~ *(b)* The specifications, standards, and codes of the following… |
| **Reason:** | This recommended change will provide for the utilization of components and materials that may not be specifically referenced. This section mirrors language in section 3280.604(a). The proposed change will allow new products and materials to be incorporated into the design and construction of manufactured homes, which are available in the marketplace, but are not referenced in the HUD-Code due to the lengthy federal rulemaking process. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | This proposal will have no cost impact, and will benefit homebuyers by making products available for use in the construction of manufactured homes. It will reduces design and construction costs by eliminating the need to seek approval through the Alternative Construction process. |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve as Modified |
| **MHCC Modification of Proposed Change:** | 3280.4 Incorporation by Reference<br>*(a) Materials, devices, fixtures, fittings, equipment, appliances, appurtenances and accessories shall conform to one of the reference standards in this section. Where an appropriate standard is not otherwise indicated in this section or if a standard that is not indicated in this section is preferred, the item may be used if it is listed or certified for its intended use.*<br>~~(a)~~ *(b)* The specifications, standards, and codes of the following… |
| **MHCC Reason:** | Additional Flexibility. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **4/5/2016** – Final Action from January 19-21, 2016 meeting confirmed by MHCC Ballot IV.<br>**1/20/2016** – MHCC Motion: Approve as Modified. |

| Log # 134 - § 3280.304(b)(1) Materials | Date: 12/15/2015 |
|---|---|
| **Submitter:** | David Tompos |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | Specification for Structural Steel Buildings - ~~Allowable Stress Design and Plastic Design -- AISC S335, 1989.~~ ANSI/AISC 360-10. ~~The following parts of this reference standard are not applicable: 1.3.3, 1.3.4, 1.3.5, 1.3.6, 1.4.6, 1.5.1.5, 1.5.5, 1.6, 1.7, 1.8, 1.9, 1.10.4 through 1.10.7, 1.10.9, 1.11, 1.13, 1.14.5, 1.17.7 through 1.17.9, 1.19.1, 1.19.3, 1.20, 1.21, 1.23.7, 1.24, 1.25.1 through 1.25.5, 1.26.4, 2.3, 2.4, 2.8 through 2.10.~~ |
| **Reason:** | Update of reference standard to the latest version. The parts that are listed as not applicable in the current language do not exist in the AISC S335-1989. They correspond to an earlier edition. The current version can be viewed here: https://www.aisc.org/WorkArea/showcontent.aspx?id=41132 |
| **Substantiating Documents:** | No |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | No additional cost is expected. |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **4/5/2016** – Final Action from January 19-21, 2016 meeting confirmed by MHCC Ballot IV.<br>**1/20/2016** – MHCC Motion: Approve. |

| Log # 135 - § 3285.603 Water supply | | Date: 12/18/2015 |
|---|---|---|
| **Submitter:** | Debra Blake | |
| **Requested Action:** | Revised Text | |
| **Proposed Change:** | **§3285.603 Water supply.**<br>(e) *Testing procedures.*<br>(1) The water system must be inspected and tested for leaks after completion at the site. The installation instructions must provide testing requirements that are ~~consistent with § 3280.612 of this chapter.~~ In accordance with the piping manufacturer's instructions | |
| **Reason:** | This change is needed because certain piping materials are not made to be tested by subjecting the system to air at 100 psi for 15 minutes without loss of pressure. CVPC materials, in particular, could be damaged or explode by this force of air. Piping manufacturers provide pressure test instructions that are different than the HUD-Code requirements in 3280.612 as referenced in the current 3285.603 language. | |
| **Substantiating Documents:** | Yes | |
| **Additional Cost:** | No | |
| **Cost Benefit Explanation:** | The proposed testing method change adds no additional cost. | |
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| **Subcommittee Recommendation:** | Approve | |
| **MHCC Action:** | Approve (19-0-0) | |
| **MHCC Modification of Proposed Change:** | | |
| **MHCC Reason:** | | |
| **Current Status:** | MHCC Final Action Submitted to HUD | |
| **Log History:** | **12/20/2016 –** Final Action from October 25-27, 2016 meeting confirmed by MHCC Ballot V.<br>**10/27/2016 –** MHCC Motion: Approve.<br>**10/27/2016 –** Regulatory Subcommittee Motion: Approve.<br>**1/19/2016 –** MHCC Motion: Refer to Regulatory Subcommittee. | |

| Log # 136 - § 3286.205 (d) Prerequisites for installation license | Date: 12/21/2015 |
|---|---|
| **Submitter:** | Michael Henretty |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | **(d)** ***Surety bond or irrevocable letter of credit and insurance.*** An applicant for an installation license must provide evidence of and must maintain, when available in the state of installation, a surety bond or irrevocable letter of credit and insurance that will cover the cost of repairing all damage to the home and its supports caused by the installer during the installation up to and including replacement of the home. HUD may require the licensed installer to provide proof of the surety bond and insurance at any time. The licensed installer must notify HUD of any changes or cancellations with the surety bond, irrevocable letter of credit or insurance coverage. |
| **Reason:** | These changes are to codify what has been discovered by the HUD-Administered Manufactured Home Installation Program as necessary to provide adequate coverage to consumers in the case of damage to or loss of a manufactured home from installation defects. The current regulations require a surety bond or insurance, suggesting that having one or the other would provide adequate coverage for damage(s). However, it has been found that neither alone is sufficient and that a combination of coverage is required to meet the intent of the law. See further explanation below. The intent of the law is to cover damages to the home up to the total value of the home, in addition to covering small damages and workmanship related issues from installation defects. This should be done at no cost to the consumers. In order to fulfill this intent with insurance-only, the insurance policy would need to cover small damages and workmanship-related issues (that are the fault of the installer) with no deductible. There is no commonly available insurance policy that fulfills the requirement to cover workmanship issues. In fact, most general liability insurance policies in the industry exclude workmanship-related issues. While it is possible to purchase an insurance policy with a zero-dollar deductible, the cost is very high. Therefor it is not realistic for an installer or company to only hold such an insurance policy. In order to fulfill this intent with a surety bond-only, the bond would need to be large enough to cover total home replacement, approximately $100,000 to $150,000. However, a bond that size may not be obtainable by many installers or companies due to policy cost and strict financial reporting requirements from the bonding company. The larger the bond, the higher the cost and requirements to obtain the policy. Therefore it is not realistic for an installer or business to hold a significantly large surety bond sufficient to cover the total replacement of a home. Based on this assessment, it has been determined that for an installer to be able to cover both workmanship issues and the total loss of a home they must hold (1) a general liability insurance policy and (2) a surety bond or irrevocable letter of credit. A general liability policy will cover the full replacement value if the home is destroyed. A surety bond or irrevocable letter of credit will cover small damages and workmanship-related issues. An irrevocable letter of credit was added as an option in place of the surety bond because a letter of credit is often used in the construction industry in place of a surety bond. An irrevocable letter of credit will afford the same coverage as a surety bond to the consumer and give installers another avenue to meet the requirements at the most affordable price possible. A cash bond was explored as an option, however, after evaluating the security issues and administrative cost of a cash bonds, this option was dismissed. In addition to providing adequate coverage for workmanship or total loss of the home, the combination option is easy and cost effective for installers or businesses to obtain. Most manufactured home installers or companies already carry a general liability insurance policy. This policy is sufficient once HUD's Office of Manufactured Housing Programs is added as an additional insured party. This will also ensure that HUD is updated when or if a policy is out of force, so action can be taken per 3286.209(vi). Therefore, installers or businesses only need to obtain the surety bond or irrevocable letter of credit to meet program requirements. At present, we do not wish to codify the monetary requirements of the insurance policy, bond or irrevocable letter of credit. The program will set limits that can then be updated by HUD as deems appropriate or necessary. All Bonds and irrevocable letters of credit are required to be able to be drawn upon for one year past the expiration or cancellation of the license. |

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| **Substantiating Documents:** | No |
| **Additional Cost:** | Yes |
| **Cost Benefit Explanation:** | Based on policies received, the additional cost of the bond is approximately $100 - $200 per year. Nation-wide coverage is available and posted on the installation website. The costs for irrevocable letters of credit vary greatly based mostly on the installers or businesses relationship with a bank. From the banks surveyed, the average cost range is $0 - $500 annually. In some cases banks required a deposit that matched the amount of the irrevocable letter of credit. |
| | |
| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve as Modified |
| **MHCC Modification of Proposed Change:** | **(d)** Insurance and either a ***Surety bond or irrevocable letter of credit ~~and insurance~~.*** An applicant for an installation license must provide evidence of and must maintain, when available in the state of installation, insurance and either a surety bond or irrevocable letter of credit ~~and insurance~~ that will cover the cost of repairing all damage to the home and its supports caused by the installer during the installation up to and including replacement of the home. HUD may require the licensed installer to provide proof of the surety bond and insurance at any time. The licensed installer must notify HUD of any changes or cancellations with the insurance coverage, surety bond, or irrevocable letter of credit ~~or insurance coverage~~. |
| **MHCC Reason:** | For clarity. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **4/5/2016** – Final Action from January 19-21, 2016 meeting confirmed by MHCC Ballot IV.<br>**1/20/2016** – MHCC Motion: Approve as Modified. |

| Log # 137 - § 3286.207 (d) Process for obtaining installation license | Date: 12/21/2015 |
|---|---|
| **Submitter:** | Michael Henretty |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | **(d)** ***Proof of surety bond or irrevocable letter of credit and insurance.*** Every applicant for an installation license must submit the name and proof of the applicant's surety bond or irrevocable letter of credit and insurance carrier and the number of the policy required in § 3286.205(d). |
| **Reason:** | These changes are to codify what has been discovered by the HUD-Administered Manufactured Home Installation Program as necessary to provide adequate coverage to consumers in the case of damage to or loss of a manufactured home from installation defects. The current regulations require a surety bond or insurance, suggesting that having one or the other would provide adequate coverage for damage(s). However, it has been found that neither alone is sufficient and that a combination of coverage is required to meet the intent of the law. See further explanation below. The intent of the law is to cover damages to the home up to the total value of the home, in addition to covering small damages and workmanship related issues from installation defects. This should be done at no cost to the consumers. In order to fulfill this intent with insurance-only, the insurance policy would need to cover small damages and workmanship-related issues (that are the fault of the installer) with no deductible. There is no commonly available insurance policy that fulfills the requirement to cover workmanship issues. In fact, most general liability insurance policies in the industry exclude workmanship-related issues. While it is possible to purchase an insurance policy with a zero-dollar deductible, the cost is very high. Therefor it is not realistic for an installer or company to only hold such an insurance policy. In order to fulfill this intent with a surety bond-only, the bond would need to be large enough to cover total home replacement, approximately $100,000 to $150,000. However, a bond that size may not be obtainable by many installers or companies due to policy cost and strict financial reporting requirements from the bonding company. The larger the bond, the higher the cost and requirements to obtain the policy. Therefore it is not realistic for an installer or business to hold a significantly large surety bond sufficient to cover the total replacement of a home. Based on this assessment, it has been determined that for an installer to be able to cover both workmanship issues and the total loss of a home they must hold (1) a general liability insurance policy and (2) a surety bond or irrevocable letter of credit. A general liability policy will cover the full replacement value if the home is destroyed. A surety bond or irrevocable letter of credit will cover small damages and workmanship-related issues. An irrevocable letter of credit was added as an option in place of the surety bond because a letter of credit is often used in the construction industry in place of a surety bond. An irrevocable letter of credit will afford the same coverage as a surety bond to the consumer and give installers another avenue to meet the requirements at the most affordable price possible. A cash bond was explored as an option, however, after evaluating the security issues and administrative cost of a cash bonds, this option was dismissed. In addition to providing adequate coverage for workmanship or total loss of the home, the combination option is easy and cost effective for installers or businesses to obtain. Most manufactured home installers or companies already carry a general liability insurance policy. This policy is sufficient once HUD's Office of Manufactured Housing Programs is added as an additional insured party. This will also ensure that HUD is updated when or if a policy is out of force, so action can be taken per 3286.209(vi). Therefore, installers or businesses only need to obtain the surety bond or irrevocable letter of credit to meet program requirements. At present, we do not wish to codify the monetary requirements of the insurance policy, bond or irrevocable letter of credit. The program will set limits that can then be updated by HUD as deems appropriate or necessary. All Bonds and irrevocable letters of credit are required to be able to be drawn upon for one year past the expiration or cancellation of the license. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Yes |

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| **Cost Benefit Explanation:** | Based on policies received, the additional cost of the bond is approximately $100 - $200 per year. Nation-wide coverage is available and posted on the installation website. The costs for irrevocable letters of credit vary greatly based mostly on the installers or businesses relationship with a bank. From the banks surveyed, the average cost range is $0 - $500 annually. In some cases banks required a deposit that matched the amount of the irrevocable letter of credit. |
| | |
| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve as Modified |
| **MHCC Modification of Proposed Change:** | **(d)** ***Proof of*** Insurance and either a ***surety bond or irrevocable letter of credit*** ~~***and insurance***~~**.** Every applicant for an installation license must submit the name and proof of the applicant's ~~surety bond or irrevocable letter of credit and~~ insurance carrier and the number of the policy, surety bond, or irrevocable letter of credit required in § 3286.205(d). |
| **MHCC Reason:** | Clarity. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **4/5/2016** – Final Action from January 19-21, 2016 meeting confirmed by MHCC Ballot IV.<br>**1/20/2016** – MHCC Motion: Approve as Modified. |

| Log # 138 - § 3286.209 (8) (vi) Denial, suspension, or revocation of installation license | Date: 12/21/2015 |
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| **Submitter:** | Michael Henretty |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | **(vi)** Failure to maintain the surety bond or irrevocable letter of credit and insurance required by § 3286.205(d). |
| **Reason:** | These changes are to codify what has been discovered by the HUD-Administered Manufactured Home Installation Program as necessary to provide adequate coverage to consumers in the case of damage to or loss of a manufactured home from installation defects. The current regulations require a surety bond or insurance, suggesting that having one or the other would provide adequate coverage for damage(s). However, it has been found that neither alone is sufficient and that a combination of coverage is required to meet the intent of the law. See further explanation below. The intent of the law is to cover damages to the home up to the total value of the home, in addition to covering small damages and workmanship related issues from installation defects. This should be done at no cost to the consumers. In order to fulfill this intent with insurance-only, the insurance policy would need to cover small damages and workmanship-related issues (that are the fault of the installer) with no deductible. There is no commonly available insurance policy that fulfills the requirement to cover workmanship issues. In fact, most general liability insurance policies in the industry exclude workmanship-related issues. While it is possible to purchase an insurance policy with a zero-dollar deductible, the cost is very high. Therefor it is not realistic for an installer or company to only hold such an insurance policy. In order to fulfill this intent with a surety bond-only, the bond would need to be large enough to cover total home replacement, approximately $100,000 to $150,000. However, a bond that size may not be obtainable by many installers or companies due to policy cost and strict financial reporting requirements from the bonding company. The larger the bond, the higher the cost and requirements to obtain the policy. Therefore it is not realistic for an installer or business to hold a significantly large surety bond sufficient to cover the total replacement of a home. Based on this assessment, it has been determined that for an installer to be able to cover both workmanship issues and the total loss of a home they must hold (1) a general liability insurance policy and (2) a surety bond or irrevocable letter of credit. A general liability policy will cover the full replacement value if the home is destroyed. A surety bond or irrevocable letter of credit will cover small damages and workmanship-related issues. An irrevocable letter of credit was added as an option in place of the surety bond because a letter of credit is often used in the construction industry in place of a surety bond. An irrevocable letter of credit will afford the same coverage as a surety bond to the consumer and give installers another avenue to meet the requirements at the most affordable price possible. A cash bond was explored as an option, however, after evaluating the security issues and administrative cost of a cash bonds, this option was dismissed. In addition to providing adequate coverage for workmanship or total loss of the home, the combination option is easy and cost effective for installers or businesses to obtain. Most manufactured home installers or companies already carry a general liability insurance policy. This policy is sufficient once HUD's Office of Manufactured Housing Programs is added as an additional insured party. This will also ensure that HUD is updated when or if a policy is out of force, so action can be taken per 3286.209(vi). Therefore, installers or businesses only need to obtain the surety bond or irrevocable letter of credit to meet program requirements. At present, we do not wish to codify the monetary requirements of the insurance policy, bond or irrevocable letter of credit. The program will set limits that can then be updated by HUD as deems appropriate or necessary. All Bonds and irrevocable letters of credit are required to be able to be drawn upon for one year past the expiration or cancellation of the license. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | Yes |
| **Cost Benefit Explanation:** | Based on policies received, the additional cost of the bond is approximately $100 - $200 per year. Nation-wide coverage is available and posted on the installation website. The costs for irrevocable letters of credit vary greatly based mostly on the installers or |

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| | businesses relationship with a bank. From the banks surveyed, the average cost range is $0 - $500 annually. In some cases banks required a deposit that matched the amount of the irrevocable letter of credit. |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve as Modified |
| **MHCC Modification of Proposed Change:** | **(vi)** Failure to maintain the insurance and either a surety bond or irrevocable letter of credit ~~and insurance~~ required by § 3286.205(d). |
| **MHCC Reason:** | Clarity. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **4/5/2016** – Final Action from January 19-21, 2016 meeting confirmed by MHCC Ballot IV.<br>**1/20/2016** – MHCC Motion: Approve as Modified. |

| Log # 139 - § 3280.4 Reference Standards | | | | | | Date: 01/08/2016 |
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| **Submitter:** | Lois Starkey | | | | | |
| **Requested Action:** | Revised Text | | | | | |
| **Proposed Change:** | Standard | New/ Update | Current Year | Latest Year | Title | CFR |
| | AFPA PS-20-70 | U | 2005 | 2012 | Span Tables for Joists & Rafters | |
| | AISI-S100 | N | 2007 | 2012 | North American Specification for the Design of cold-formed Steel Structural Members | 3280.304 (b)(1) |
| | ANSI A208.1 | U | 2009 | 2009 | Particleboard | 3280.304 (b)(1) |
| | ANSI Z21.5.1 | U | 2006 | 2015 | Gas Clothes Dryers Vol 1., Type 1 Clothes Dryers | 3280.703 |
| | ANSI Z21.40.1 | U | 1996 | 1996 | Gas Fired Absorption Summer Air Conditioning Appliances | 3280.703 |
| | ANSI Z21.1 | U | 2005 | 2014 | Household Cooking Gas Appliances | 3280.703 |
| | ANSI Z21.19 | U | 2002 | 2014 | Refrigerators Using Gas Fuel | 3280.703 |
| | ANSI Z21.10.1 | U | 2004 | 2014 | Gas Water Heaters Vol.1, Storage Water Heaters With Input Ratings of 75,000 BTU per hour of less | 3280.703 |
| | ANSI Z21.10.3 | U | 2004 | 2014 | Gas Fired Water Heaters Vol III, Storage Water Heaters with Input Ratings Above 75,000 BTU per Hour, Circulating and Instantaneous | 3280.703 |
| | ANSI Z21.24 | U | 2002 | 2006 | Metal Connectors for Gas Appliances | 3280.703 |
| | ANSI Z21.15 | U | 1997 | 2009 | Manually Operated Gas Valves for Appliances, appliance Connector Valves and Hose End Valves | 3280.703 |
| | ANSI Z21.20 | U | 2007 | 2014 | Automatic Gas Ignitions Systems and Components | 3280.703 |
| | ANSI Z21.21 | U | 2005 | 2012 | Automatic Valves for Gas Appliances | 3280.703 |
| | ANSI Z21.23 | U | 2000 | 2000 | Gas Appliance Thermostats, with 2003 and 2005 Addendums | 3280.703 |
| | ANSI/ASME B1.20.1 | U | 2001 | 2013 | Pipe Threads, General Purpose (inch) | 3280.304 (b)(1) |

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| ANSI/ASME B36.10M | U | 2001 | 2004 | Welding and Seamless Wrought Steel Pipe | 3280.304 (b)(1) |
| ANSI Z21.75/CSA 6.27 | N | 2001 | 2007 | CSA Standard for Connectors for Outdoor Gas Appliances and Manufactured Homes | 3280.703 |
| ANSI/HPVA HP-1-09 American National Standard for Hardwood and Decorative Plywood | U | 2004 | 2009 | Hardwood and Decorative Plywood | 3280.304 (b)(1) |
| APA E30-P | N | 2007 | 2011 | Engineered Wood Construction Guide | 3280.304 (b)(1) |
| APA D510B | N | 2007 | 2012 | Panel Design Specification | 3280.304 (b)(1) |
| APA S812 | U | 1998 | 2013 | Design and Fabrication of Glued Plywood-Lumber Beams, Supp. 2 | 3280.304 (b)(1) |
| APA S811N | N | 1995 | 2012 | Design and Fabrication of Plywood Curved Panels, Supp. 1 | 3280.304 (b)(1) |
| ASTM D4442 | U | 2007 | 2007 | Standard test Methods for Direct Moisture Content Measurement of Wood and Wood Base Materials | 3280.304 (b)(1) |
| ASTM D4444 | U | 2008 | 2013 | Standard Test Methods for Use and Calibration of Hand-Held Moisture Meters | 3280.304 (b)(1) |
| ASTM C1396/C1396M-14 | N | 2006 | 2014 | Standard Specification for Gypsum Board | 3280.304 (b)(1) |
| ASTM A53/A53M-12 | U | 2007 | 2012 | Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc Coated, Welded and Seamless | 3280.703 |
| ASTM B88 | U | 2003 | 2014 | Standard Specification for Seamless Copper Water Tube | 3280.703 |
| ASTM B280 | U | 2008 | 2013 | Standard Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service | 3280.703 |

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| ASTM B251 | U | 2002 | 2010 | Standard Specification for General Requirements for Wrought Seamless Copper-Alloy Tubes | 3280.703 |
| ASTM B42 | U | 2002 | 2010 | Standard Specification for Seamless Copper Pipe, Standard Sizes | 3280.703 |
| ASTM E119 | U | | 2014 | Standard Test Method for Fire Tests of Building construction and Materials | 3280.304 (b)(1) |
| IAPMO TSC 9-97 | U | 1997 | 2003 | Standard for Gas Supply Connectors for Manufactured Homes | 3280.703 |
| ANSI LC 1 | U | 2005 | 2014 | Gas Piping Systems Using Corrugated Stainless Steel Tubing | 3280.304 (b)(1) |
| NFPA 31 | U | 2006 | 2011 | Installation of Oil-Burning Equipment | 3280.703 |
| NFPA 720 | | 2009 | 2015 | Standard for the Installation of Carbon Monoxide Detection Equipment | 3280.304 (b)(1) |
| NFPA 58 | U | 2008 | 2014 | Standard for the Storage and Handling of Liquefied Petroleum Gases | 3280.703 |
| PS 1-09 | N | 2007 | 2009 | Structural Plywood | 3280.304 (b)(1) |
| SAE J533b | U | 2007 | 2007 | Flares for Tubing | 3280.703 |
| TPI 1 | N | 2007 | 2007 | National Design Standard for Metal Plate Connected Wood Truss Construction | 3280.304 (b)(1) |
| UL 307A | U | 2009 | 2009 | Liquid Fuel-Burning Heating Appliances for Manufactured Homes & Recreational Vehicles | 3280.703 |
| UL 1042 | U | 1994 | 2009 | Electric Baseboard Heating Equipment | 3280.703 |
| UL 307B | U | 2006 | 2006 | Gas Burning Heating Appliances for Mobil Homes & Recreational Vehicles | 3280.703 |
| UL 174 | U | 2004 | 2004 | Household Electric Storage Tanks Water Heaters | 3280.703 |
| UL 181 | U | 2005 | 2013 | Factory Made Air Ducts & Connectors | 3280.703 |

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| | UL 181A | U | | 2013 | Closure Systems for Use with Rigid Air Ducts and Air Connectors | 3280.703 |
| | UL 109 | U | 2004 | 1997 | Tube Fittings for Flammable and Combustible Fluids, Refrigeration Service, and Marine Use | 3280.703 |
| | UL 569 | U | 2000 | 2013 | Pigtails & Flexible Hose Connectors for LP Gas | 3280.703 |
| | UL 441 | U | 1996 | 2010 | Gas Vents | 3280.703 |
| | UL 103 | U | 2003 | 2010 | Chimneys, Factory Built Residential Type & Building Heating Appliance | 3280.703 |
| | UL 2034 | U | 2005 | 2008 | Standard for Single and Multiple Station Carbon Monoxide Alarms | 3280.304 (b)(1) |
| | APA U813M | N | | 2012 | Design & Fabrication of Plywood-Stressed Skin Panels | 3280.304 (b)(1) |
| | APA U814J | N | | 2012 | Design & Fabrication of Plywood Sandwich Panels | 3280.304 (b)(1) |
| | APA Y510 | N | | 1997 | Plywood Design | 3280.304 (b)(1) |

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| **Reason:** | These are new or updated reference standards, that are currently in use by the industry, and have minimal or no cost impact. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | Minimal or no cost impact |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve as Modified |
| **MHCC Modification of Proposed Change:** | *Approve everything in the log with the following updates:*<br>*Modifications:* |

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| APA D510~~B~~C | N | 2007 | 2012 | Panel Design Specification | 3280.304 (b)(1) |
| APA Y510 | N | | 199~~7~~ 8 | Plywood Design Specification | 3280.304 (b)(1) |

*New Text:*
APA H815G Design and Fabrication of All-Plywood Beams 2013

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| **MHCC Reason:** | Clarifying which standards should be updated. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **4/5/2016** – Final Action from January 19-21, 2016 meeting confirmed by MHCC Ballot IV.<br>**1/20/2016** – MHCC Motion: Approve as Modified. |

| Log # 140 - § 3280.403 Requirements for Windows, 3280.404, & 3280.405 | Date: 03/25/2016 |
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| **Submitter:** | David Tompos |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | **§3280.403 Requirements for windows, sliding glass doors, and skylights.**<br><br>(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.<br>(b)(1) *Standard.* All primary windows and sliding glass doors shall comply with AAMA 1701.2-~~95~~12, Voluntary Standard Primary Window and Sliding Glass Door for Utilization in Manufactured Housing, or AAMA/WDMA/CSA 101/I.S.2/A440-11 North American Fenestration Standard/Specification for windows, doors, and skylights, except the exterior and interior pressure tests must be conducted ~~at the~~ meeting or exceeding the minimum design wind loads required for components and cladding specified in §3280.305(c)(1).<br>(2) All skylights must comply with AAMA/WDMA/CSA/101/I.S.2/A440-~~08~~11: North American Fenestration Standard/Specifications for Windows, Doors and Skylights (incorporated by reference, see §3280.4). Skylights must withstand the roof loads for the applicable Roof Load Zone specified in §3280.305(c)(3), and the following wind loads:<br>(i) For Wind Zone I, the wind loads specified in §3280.305(c)(1)(i); and<br>(ii) For Wind Zones II and III, the wind loads specified for exterior roof coverings, sheathing, and fastenings in §3280.305(c)(1)(ii).<br>(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.<br>(d) *Glass.* (1) Safety glazing materials, where used shall meet Standard for Safety Glazing Materials used in Buildings—Safety Performance Specifications and Methods of Test, ANSI Z97.1-~~2004~~2009 (incorporated by reference, see §3280.4).<br>(2) Sealed insulating glass, where used, must meet all performance requirements for Class C in accordance with ASTM E 774-97, Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units. The sealing system must be qualified in accordance with ASTM E 773-97, Standard Test Methods for Accelerated Weathering of Sealed Insulating Glass Units. Each glass unit must be permanently identified with the name of the insulating glass manufacturer.<br>(e) *Certification.* All primary windows and sliding glass doors to be installed in manufactured homes must be certified as complying with AAMA 1701.2-~~95~~12 or AAMA/WDMA/CSA 101/I.S.2/A440-11. This certification must be based on tests conducted meeting or exceeding the minimum design wind loads specified in §3280.305(c)(1).<br>(1) All such windows and doors must show evidence of certification by affixing a quality certification label to the product ~~in accordance with ANSI Z34.1-1993, Third Party Certification Programs for Products, Processes, and Services.~~ from an independent product certification body accredited to ISO/IEC 17065-2012, Conformity Assessment – Requirements for bodies certifying products, processes and services.<br>(2) In determining certifiability of the products, an independent quality assurance agency shall conduct pre-production specimen tests in accordance with AAMA 1701.2-~~95~~12 or AAMA/WDMA/CSA 101/I.S.2/A440-11. Further, such agency must inspect the product manufacturer's facility at least twice per year.<br>(3) All skylights installed in manufactured homes must be certified as complying with AAMA/WDMA/CSA 101/I.S.2/A440-~~08~~11: North American Fenestration Standard/Specifications for Windows, Doors, and Skylights (incorporated by reference, see §3280.4). This certification must be based on applicable loads specified in paragraph (b) of this section.<br>(f) *Protection of primary window and sliding glass door openings in high wind areas.* For homes designed to be located in Wind Zones II and III, manufacturers shall design exterior walls surrounding the primary window and sliding glass door openings to allow for the installation of shutters or other protective covers, such as plywood, to |

cover these openings. Although not required, the Department encourages manufacturers to provide the shutters or protective covers and to install receiving devices, sleeves, or anchors for fasteners to be used to secure the shutters or protective covers to the exterior walls. If the manufacturer does not provide shutters or other protective covers to cover these openings, the manufacturer must provide to the homeowner instructions for at least one method of protecting primary window and sliding glass door openings. This method must be capable of resisting the design wind pressures specified in §3280.305 without taking the home out of conformance with the standards in this part. These instructions must be included in the printed instructions that accompany each manufactured home. The instructions shall also indicate whether receiving devices, sleeves, or anchors, for fasteners to be used to secure the shutters or protective covers to the exterior walls, have been installed or provided by the manufacturer.

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

(a) *Scope and purpose.* The purpose of this section is to establish the requirements for the design, construction, and installation of windows and approved devices intended to be used as an emergency exit during conditions encountered in a fire or similar disaster.

(b) *Performance.* Egress windows including auxiliary frame and seals, if any, shall meet all requirements of AAMA 1701.2-9512, Voluntary Standard Primary Window and Sliding Glass Door for Utilization in Manufactured Housing and AAMA Standard 1704-12, Voluntary Standard Egress Window Systems for Utilization in Manufactured Housing, except the or AAMA/WDMA/CSA 101/I.S.2/A440-11 North American Fenestration Standard/Specification for windows, doors, and skylights .

(1) Loading. Exterior and interior pressure tests for components and cladding must be conducted at the meeting or exceeding the minimum design wind loads required by §3280.305(c)(1).

(2) Dimensions. All egress systems shall have a minimum clear horizontal dimension of 20 in. and a minimum clear vertical dimension of 24 in. with a clear opening of 5 $ft^2$.

(c) *Installation.* (1) The installation of egress windows or devices shall be installed in a manner which allows for proper operation and provides protection against the elements. (*See* §3280.307.)

(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.

(d) *Operating instructions.* Operating instructions shall be affixed to each egress window and device and carry the legend "Do Not Remove."

(e) *Certification of egress windows and devices.* Egress windows and devices shall be listed in accordance with the procedures and requirements of AAMA Standard 1701.2-9512 and AAMA 1704-198512 or AAMA/WDMA/CSA 101/I.S.2/A440-11, this certification must be based on tests conducted at the meeting or exceeding the minimum design wind loads specified in §3280.305(c)(1).

(1) All such windows must show evidence of certification by affixing a quality certification label to the product from an independent product certification body accredited to ISO/IEC 17065-2012, Conformity Assessment – Requirements for bodies certifying products, processes and services.

(f) *Protection of egress window openings in high wind areas.* For homes designed to be located in Wind Zones II and III, manufacturers shall design exterior walls

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| | surrounding the egress window openings to allow for the installation of shutters or other protective covers, such as plywood, to cover these openings. Although not required, the Department encourages manufacturers to provide the shutters or protective covers and to install receiving devices, sleeves, or anchors for fasteners to be used to secure the shutters or protective covers to the exterior walls. If the manufacturer does not provide shutters or other protective covers to cover these openings, the manufacturer must provide to the homeowner instructions for at least one method of protecting egress window openings. This method must be capable of resisting the design wind pressures specified in §3280.305 without taking the home out of conformance with the standards in this part. These instructions must be included in the printed instructions that accompany each manufactured home. The instructions shall also indicate whether receiving devices, sleeves, or anchors, for fasteners to be used to secure the shutters or protective covers to the exterior walls, have been installed or provided by the manufacturer.<br><br>**§3280.405 Standard for swinging exterior passage doors for use in manufactured homes.**<br><br>(a) *Introduction.* This standard applies to all exterior passage door units, excluding sliding doors and doors used for access to utilities and compartments. This standard applies only to the door frame consisting of jambs, head and sill and the attached door or doors.<br>(b) *Performance requirements.* The design and construction of exterior door units must meet all requirements of AAMA 1702.2-~~95~~12, Voluntary Standard Swinging Exterior Passage Door for Utilization in Manufactured Housing or AAMA/WDMA/CSA 101/I.S.2/A440-11 North American Fenestration Standard/Specification for windows, doors, and skylights.<br>(c) *Materials and methods.* Any material or method of construction shall conform to the performance requirements as outlined in paragraph (b) of this section. Plywood shall be exterior type and preservative treated in accordance with ~~NWWDA I.S.4-09~~ WDMA I.S.4-09, Water Repellent Preservative Non-Pressure Treatment for Millwork.<br>(d) *Exterior doors.* All swinging exterior doors shall be installed in a manner which allows proper operation and provides protection against the elements (*see* §3280.307).<br>(e) *Certification.* All swinging exterior doors to be installed in manufactured homes must be certified as complying with AAMA 1702.2-~~95~~12, Voluntary Standard Swinging Exterior Passage Door for Utilization in Manufactured Housing or AAMA/WDMA/CSA 101/I.S.2/A440-11 North American Fenestration Standard/Specification for windows, doors, and skylights.<br>(1) All such doors must show evidence of certification by affixing a quality certification label to the product ~~in accordance with ANSI Z34.1-1993, Third Party Certification Programs for Products, Processes, and Services.~~ from an independent product certification body accredited to ISO/IEC 17065-2012, Conformity Assessment – Requirements for bodies certifying products, processes and services.<br>(2) In determining certifiability of the products, an independent quality assurance agency must conduct a pre-production specimen test in accordance with AAMA 1702.2-~~95~~12, Voluntary Standard Swinging Exterior Passage Door for Utilization in Manufactured Housing or AAMA/WDMA/CSA 101/I.S.2/A440-11 North American Fenestration Standard/Specification for windows, doors, and skylights. |
| **Reason:** | Currently the federal standards do not allow windows and doors that are certified to the same national testing standards used by traditional site-built IRC coded homes. This revision would give consumers the same options, for windows and doors, as the site-built residential industry. In addition, these revisions update several out-of-date reference standards. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | Currently the federal standards do not allow windows and doors that are certified to the same national testing standards used by traditional site-built IRC coded homes. This |

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| | revision would give consumers the same options, for windows and doors, as the site-built residential industry. In addition, these revisions update several out-of-date reference standards. |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve (17-2-0) |
| **MHCC Modification of Proposed Change:** | |
| **MHCC Reason:** | |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/20/2016 –** Final Action from October 25-27, 2016 meeting confirmed by MHCC Ballot V.<br>**10/25/2016 –** MHCC Motion: Approve. |

| Log # 141 - § 3286.409 Obtaining inspection | | Date: 3/31/2016 |
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| **Submitter:** | Lois Starkey | |
| **Requested Action:** | Revised Text | |
| **Proposed Change:** | (a) *Inspection obligations.* Ten business days prior to the completion of installation, the installer must arrange for a third-party inspection of the work performed, in accordance with subpart F of this part, unless the installer and retailer who contracted with the purchaser for the sale of the home agree, in writing, that during the same time period the retailer will arrange for the inspection. Such inspection must be performed as soon as practicable by an inspector who meets the qualifications set forth in § 3286.511. The scope of the inspections that are required to be performed is addressed in § 3286.505.<br>(b) *Contract rights not affected.* Failure to arrange for an inspection of a home within ~~5~~ 10 business days will not affect the validity or enforceability of any sale or contract for the sale of any sale manufactured home | |
| **Reason:** | The change is needed to correct a typographical error. Inspection obligations to arrange for an inspection are not intended to impact the contract rights, validity, or enforceability of the sale or contract for sale of any manufactured home. | |
| **Substantiating Documents:** | No | |
| **Additional Cost:** | No | |
| **Cost Benefit Explanation:** | There is no cost and the benefit is more clarity. | |
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| **Subcommittee Recommendation:** | | |
| **MHCC Action:** | Approve (19-0-0) | |
| **MHCC Modification of Proposed Change:** | | |
| **MHCC Reason:** | | |
| **Current Status:** | MHCC Final Action Submitted to HUD | |
| **Log History:** | **12/20/2016 –** Final Action from October 25-27, 2016 meeting confirmed by MHCC Ballot V.<br>**10/25/2016 –** MHCC Motion: Approve. | |

| Log # 142 - § 3286.103 DAPIA-approved installation instructions. | Date: 3/31/2016 |
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| **Submitter:** | Lois Starkey |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | (a) *Providing instructions to purchaser or lessee.* (1) For each manufactured home sold or leased to a purchaser or lessee, the retailer must provide the purchaser or lessee with ~~a copy of~~ the manufacturer's DAPIA-approved installation instructions for the home, a copy of which is shipped with the home in accordance with 3285.2. (2) If the installation requires a design that is different from that provided by the manufacturer in paragraph (a)(1) of this section, the installation design and instructions must be prepared and certified by a professional engineer or registered architect, that have been approved by the manufacturer and the DAPIA as providing a level of protection for residents of the home that equals or exceeds the protection provided by the federal installation standards in this chapter. The design and instructions must be provided to the purchaser or lessee.<br>(b) *Providing instructions to installer.* When the retailer or manufacturer agrees to provide any set up in connection with the sale of the home, the retailer or manufacturer must provide to the licensed installer a copy of the approved installation instructions required in paragraph (a)(1) of this section or, as applicable, installation design and instructions required in paragraph (a)(2) of this section. to each company or, in the case of sole proprietor, ~~to each individual who performs setup or installation work on the home.~~ |
| **Reason:** | This change is needed to clarify that the manufacturers are shipped with the home and are intended to be retained in the home when the home is sold to the homeowner. Ensure that the manufacturer's instructions are retained with the home. It also adds a requirement that any alternative set of designs or instructions for the installation of the home are also provided to the purchaser or lessee. This completes the set of installation instructions required to be given to the homeowner. It also ensures that the licensed installer is the individual who must receive the installation instructions in order to properly install the home. |
| **Substantiating Documents:** | No |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | There is no cost and the benefit is more clarity and simplicity. |
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| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve as Modified (19-0-0) |
| **MHCC Modification of Proposed Change:** | (a) *Providing instructions to purchaser or lessee.* (1) For each manufactured home sold or leased to a purchaser or lessee, the retailer must provide the purchaser or lessee with ~~a copy of~~ the manufacturer's DAPIA-approved installation instructions for the home, a copy of which is shipped with the home in accordance with 3285.2. (2) If the installation requires a design that is different from that provided by the manufacturer in paragraph (a)(1) of this section, the installation design and instructions must be prepared and certified by a professional engineer or registered architect, that have been approved by the manufacturer and the DAPIA as providing a level of protection for residents of the home that equals or exceeds the protection provided by the federal installation standards in this chapter. The design and instructions must be provided to the purchaser or lessee.<br>(b) *Providing instructions to installer.* When the retailer or manufacturer agrees to provide any set up in connection with the sale of the home, the retailer or manufacturer must provide to the licensed installer a copy of the approved installation instructions required in paragraph (a)(1) of this section or, as applicable, installation design and instructions required in paragraph (a)(2) of this section. to each company or, in the case of sole proprietor, to each individual who performs setup or installation work on the home. |

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| **MHCC Reason:** | Last sentence was struck by mistake. |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/20/2016 –** Final Action from October 25-27, 2016 meeting confirmed by MHCC Ballot V.<br>**10/26/2016 –** MHCC Motion: Approve as Modified. |

| Log # 143 - § 3280.711 Instructions | | Date: 3/31/2016 |
|---|---|---|
| **Submitter:** | Lois Starkey | |
| **Requested Action:** | Revised Text | |
| **Proposed Change:** | Operating Instructions must be provided with each appliance unless the appliance is affixed with a permanent Quick Response (QR) Code. The operating instructions for each appliance must be provided with the homeowner's manual. | |
| **Reason:** | Quick Response codes are increasingly being used to provide consumers with set of instructions that can be downloaded instantly from a smart phone or tablet. The QR code is permanently affixed to the appliance. It also provides exact instructions that the particular unit was originally shipped with. | |
| **Substantiating Documents:** | Yes | |
| **Additional Cost:** | No | |
| **Cost Benefit Explanation:** | There is a cost savings to this proposal, and a benefit to consumers who will be assured of receiving the appropriate instructions for their appliance. | |
| | | |
| **Subcommittee Recommendation:** | | |
| **MHCC Action:** | Approve (17-2-0) | |
| **MHCC Modification of Proposed Change:** | | |
| **MHCC Reason:** | | |
| **Current Status:** | MHCC Final Action Submitted to HUD | |
| **Log History:** | **12/20/2016 –** Final Action from October 25-27, 2016 meeting confirmed by MHCC Ballot V.<br>**10/26/2016 –** MHCC Motion: Approve. | |

| Log # 144 - § 3280.304(b)(1) Materials | Date: 9/21/2016 |
|---|---|
| **Submitter:** | Jeffrey Legault, Skyline Corporation |
| **Requested Action:** | Revised Text |
| **Proposed Change:** | Standards for some of the generally used materials and methods of construction are listed in the following table:<br><br>Fasteners<br><br>National Evaluation Report, Power Driven Staples, Nails, and Allied Fasteners for Use in All Types of Building Construction - NER-272, 1997<br><br>ICC-ES Evaluation Report, Power Driven Staples and Nails - ESR-1539, 2014 |
| **Reason:** | Change NER-272, 1997 to ESR-1539, 2014. NER-272 is not longer supported by ICC-ES and has been replaced with ESR-1539. At the January 2016 MHCC meeting in Louisville, KY, the Structure and Design Subcommittee recommended the adoption of ICC-ES ESR-1539, 2014. |
| **Substantiating Documents:** | Yes |
| **Additional Cost:** | No |
| **Cost Benefit Explanation:** | The number and/or size of fasteners associated with this report and not anticipated to change. Therefore there should not be a cost change. |
| | |
| **Subcommittee Recommendation:** | |
| **MHCC Action:** | Approve as Modified (19-0-0) |
| **MHCC Modification of Proposed Change:** | Standards for some of the generally used materials and methods of construction are listed in the following table:<br><br>Fasteners<br>~~National Evaluation Report, Power Driven Staples, Nails, and Allied Fasteners for Use in All Types of Building Construction - NER-272, 1997~~<br>ICC-ES Evaluation Report, Power Driven Staples and Nails - ESR-1539, 2014 |
| **MHCC Reason:** | Clarification |
| **Current Status:** | MHCC Final Action Submitted to HUD |
| **Log History:** | **12/20/2016 –** Final Action from October 25-27, 2016 meeting confirmed by MHCC Ballot V.<br>**10/26/2016 –** MHCC Motion: Approve.<br>**1/21/2016** –Action to create Log Item regarding ESR-1539 was taken in the January 21, 2016 Structure and Design Subcommittee meeting. This log item was submitted and accepted after of 2016-2017 Proposed Change deadline (03/31/2016) due to this prior action. |

| Log # 145 - § 3280.5(i) Data plate | | Date: 11/1/2016 |
|---|---|---|
| **Submitter:** | Kevin Kauffman, Home Innovation (AO) | |
| **Requested Action:** | New Text | |
| **Proposed Change:** | Added texted to Section 3280.5 Data Plate.<br>(i) <u>The statement: "TSCA Title VI Compliant"</u> | |
| **Reason:** | To be consistent with EPA Formaldehyde Rule. | |
| **Substantiating Documents:** | False | |
| **Additional Cost:** | No | |
| **Cost Benefit Explanation:** | | |
| | | |
| **Subcommittee Recommendation:** | | |
| **MHCC Action:** | Approve (19-0-0) | |
| **MHCC Modification of Proposed Change:** | | |
| **MHCC Reason:** | | |
| **Current Status:** | MHCC Final Action Submitted to HUD | |
| **Log History:** | **12/20/2016 –** Final Action from October 25-27, 2016 meeting confirmed by MHCC Ballot V.<br>**10/27/2016** - MHCC motioned to have the AO create a log item on its behalf. | |

| Ballot IV-14 – ANSI/ASHRAE 62.2 | Date: 4/5/2016 |
|---|---|
| **Submitter:** | MHCC |
| **Proposed Action:** | Modify original addition of ANSI/ASHRAE 62.2-2010 to the 2013 version for Indoor Air Quality: Optional compliance with ASHRAE 62.2 (Log 25) |

| Ballot IV-15 – SAA Funding | Date: 4/5/2016 |
|---|---|
| **Submitter:** | MHCC |
| **Proposed Action:** | Choosing Option B for SAA Funding Options |

| Ballot IV-16 – Onsite Rule | Date: 4/5/2016 |
|---|---|
| **Submitter:** | MHCC |
| **Proposed Action:** | Request HUD extend the transition period of the onsite rule to 12 months, instead of 6 months |

| Ballot V-15 – NFPA 70 | Date: 12/20/2016 |
|---|---|
| **Submitter:** | MHCC |
| **Proposed Action:** | **Recommend that HUD adopt the NFPA 70-2014 as a reference standard as modified below:**<br>• **Provide an exception to NFPA 70-2014 § 210.52(E)(3) as follows: Exception: Balconies, decks, or porches with an area of less than 20 sq ft are not required to have an additional receptacle installed.**<br>• **Provide an amendment to NFPA 70-2014 § 550.4(A) & (B) by striking these two sections.**<br>• **§ 3280.801(b) In addition to the requirements of this part and Part II of Article 550 of the National Electrical Code (NFPA No. 70-2014~~2005~~), the applicable portions of other Articles of the National Electrical Code must be followed for electrical installations in manufactured homes. The use of arc-fault breakers under ~~Articles 210.12(A) and (B), 440.65, and 550.25(A) and (B) of~~ the National Electrical Code, NFPA No. 70-2014 ~~2005 is not required~~ are only required for general lighting circuits. Smoke alarms installed on a dedicated circuit do not require arc fault protection. Wherever ~~However, if~~ arc-fault breakers are provided, such use must be in accordance with the National Electrical Code, NFPA No. 70-2014~~2005~~. Wherever the requirements of this standard differ from the National Electrical Code, these standards apply.** |

| Ballot V-16 – Formaldehyde Emission Controls for Certain Wood Products | Date: 12/20/2016 |
|---|---|
| **Submitter:** | MHCC |
| **Proposed Action:** | **10-13-2016**<br><br>**PRELIMINARY WORKING DRAFT**<br><br>**MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS**<br><br>**FORMALDEHYDE EMISSION CONTROLS FOR CERTAIN WOOD PRODUCTS**<br><br>**PART 3280—MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS**<br><br>The authority citation for part 3280 continues to read as follows:<br>**1.Authority:** 42 U.S.C. 3535(d), 5403, and 5424 |

1. Add the following definitions to § 3280.302 to read as follows:

**§ 3280.302 Definitions.**

* * * * *

Refer to 40 CFR 770.3 for definitions applicable to Subpart D and E only.

* * * * *

**§ 3280.308 Formaldehyde emission controls for certain wood products.**

(a) Formaldehyde emission levels. Refer to 40 CFR § 770.10 for maximum formaldehyde emission levels for hardwood plywood made with a veneer core, medium density fiberboard, thin medium density fiberboard, and particleboard. These emission standards apply whether the composite wood product is in the form of a panel, a component part, or incorporated into a finished good.

(b) Product certification and continuing qualification. Refer to 40 CFR §§ 770.7, 770.15, 770.20, and 770.21.

(c) Panel identification. Refer to 40 CFR § 770.45 for labeling requirements.

(d) Treatment after Certification. Deleted.

(e) Finished good certification label. Each manufactured home must be provided with a finished good certification label indicating that the home has been produced with panels or products that comply with the maximum formaldehyde emission requirements of this Part and 40 CFR Part 770.

(f) Non-complying lots. Refer to 40 CFR § 770.22.

**§ 3280.309 Health Notice on formaldehyde emissions.** Deleted.

* * * * *

**§ 3280.406 Air chamber test method for certification and qualification of formaldehyde emission levels.** Refer to 40 CFR §§ 770.15, 770.20, and 770.24.

**§ 3280.407 Quality control testing for formaldehyde levels.** Refer to 40 CFR §§ 770.20(b).

**PART 3282—MANUFACTURED HOME PROCEDURAL AND ENFORCEMENT REGULATIONS**

The authority citation for part 3282 continues to read as follows:

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

1. Add new section 3282.212 to read as follows:

* * * * *

3282.212 TSCA Title VI Recordkeeping Requirements. Manufacturers must maintain bills of lading, invoices or comparable documents that include a written statement from the supplier that the component parts or finished goods are TSCA Title VI compliant for a minimum of three years from the date of purchase.

| | |
|---|---|
| | * * * * *<br><br>2. Add new section 3282.257 to read as follows:<br><br>* * * * *<br><br>**3282.257 TSCA Title VI Recordkeeping Requirements.** Retailers and distributors must maintain bills of lading, invoices or comparable documents that include a written statement from the supplier that the component parts or finished goods are TSCA Title VI compliant for a minimum of three years from the date of purchase.<br><br>**Questions for publication with the rule-making for comments:**<br><br>Motion to recommend that HUD include the following questions in the proposed rule's preamble for Formaldehyde Emission Controls for Certain Wood Products:<br><br>1. Should HUD continue to require formaldehyde testing for treatment after certification of surface finishing post EPA rulemaking? Can this testing be done in a large or small chamber?<br><br>2. If testing for treatment after certification of surface finishing is to continue, what should the formaldehyde limits be?<br><br>3. If the testing for treatment after certification is eliminated, should the whole house ventilation be increased? What effect would this have on indoor air quality?<br><br>4. What sort of measures could HUD take to assess or mitigate sources of formaldehyde? |

| **Ballot VI-1 – Interpretative Bulletin Comments to HUD** | **Date: 2/6/2017** |
|---|---|
| **Submitter:** | MHCC |
| **Proposed Action:** | Submit the following 13 comments on the Interpretative Bulletin to HUD<br>1. Tone of the IB needs to be more positive.<br>2. The focus of the IB should be to inform and educate.<br>3. The IB should focus on compliance with 3285.<br>4. The IB should be simplified (too lengthy).<br>5. Add definition for frost free foundation (FFF) and frost protected shallow foundation (FPSF).<br>6. Clarify if the IB is intended to be site specific.<br>7. Target audience should be installers, local jurisdiction, regulators, and manufacturers.<br>8. The problem doesn't seem to appear in all states and how to solve that problem.<br>9. Ensure additional cost are not incurred due to IB.<br>10. Reference to actual designs and specific engineering language in the IB should be removed.<br>11. Ensure IB doesn't exceed reasonable acceptable engineering practice as required in 3285.312(b)(2).<br>12. Remove reference to the SEBA report from the IB. |

| | |
|---|---|
| | 13. Remove local authority having jurisdiction (LAHJ) where the plan approval is not required and in HUD administered states (3286.3 HUD administered installation program) from the IB. |

| **Ballot VI-2 – Redlined comments on Interpretative Bulletin to HUD** | **Date: 2/6/2017** |
|---|---|
| **Submitter:** | MHCC |
| **Proposed Action:** | Submit redlined comments on the Interpretative Bulletin to HUD (see Appendix A) |

**APPENDIX A: Ballot VI-2 Attachment - Redlined comments on Interpretative Bulletin**

**DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**

**24 CFR PART 3285**

**(Docket no. FR-xxxx-X-xx)**

**Interpretative Bulletin for Model Manufactured Home Installation Standards**

**Foundation Requirements in Freezing Climates**

**24 CFR Part 3285.312(b)**

**Agency:** Office of the Assistant Secretary for Housing-Federal Housing Commissioner, HUD.

**Action:** Notice of Proposed Installation Interpretative Bulletin I-1-17

**Summary:** The purpose of this proposed Interpretative Bulletin is to provide guidance for designing and installing manufactured home foundations in areas subject to freezing climates with seasonal ground freezing, in accordance with 24 CFR § 3285.312(b) of the Model Manufactured Home Installation Standards, wherever soil conditions are susceptible to frost heave. Specifically, this guidance is being provided for installing manufactured home foundation systems in areas where frost susceptible seasonally frozen ground conditions are encountered and when footings do not extend below the frost depth at the site. These types of foundation systems are often called "frost-free foundations" (FFF), or "frost-protected shallow foundations" (FPSF). In addition, guidance is also being provided for installing manufactured homes where non-frost susceptible soil conditions are available at the site to protect foundations against the effects of frost heave.

**DATES:** Comment Due Date: [Insert date 60 days from the date of publication in the FEDERAL REGISTER].

**ADDRESSES:** Interested persons are invited to submit comments regarding this Interpretative Bulletin to the Regulations Division, Office of General Counsel, Department of Housing and Urban Development, 451 Seventh Street, SW, Washington, DC 20410-0500. 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 20410-0500.

**2. Electronic Submission of Comments**. Interested persons may submit comments electronically through the Federal eRulemaking Portal at 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 website 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.

**FOR FURTHER INFORMATION CONTACT:** Pamela Beck Danner, Administrator, Office of Manufactured Housing Programs, Office of Housing, Department of Housing and Urban Development, 451 Seventh Street, SW, Washington DC 20410; telephone (202) 708-6409 (this is not a toll free number). Persons with hearing or speech impairments may access this number via TTY by calling the toll free Federal Information Relay Service at1-800-877-8389.

**SUPPLEMENTARY INFORMATION:**

II. Background

The National Manufactured Housing Construction and Safety Standards Act of 1974 (42 U.S.C. 5401-5426) (the Act) as amended in 2000 authorizes the Department to establish Model Manufactured Home Installation Standards (Installation Standards) and establish an installation program to enforce those Installation Standards. Section 604(a)(3) of the Act as amended in 2000 also created the Manufactured Housing Consensus Committee (MHCC), in which section

604(b)(3) of the Act directs HUD to provide the consensus committee with an opportunity to review any HUD proposed Interpretative Bulletin and to provide written comments to the Department for a period of up to 120 days.

As a result of problems and inquiries related to the proper design, use, and installation use of frost protected foundation systems in areas subject to freezing climatic conditions, HUD commissioned a study and report to assess both design and installation practices of manufactured homes located in climates with seasonally frozen ground. HUD provided the consensus committee with a report of its findings on October 26, 2016, entitled "An Assessment of Design and Installation Practices For Manufactured Homes in Climates with Seasonally Frozen Ground" prepared by SEBA Professional Services, LLC (see Appendix), and announced it would form the basis for an Interpretative Bulletin to be issued on the subject.

The study and resulting report found some key factors needed for long-term and consistent success require special considerations that are often neglected, particularly for FFF designs and installations that rely on well-drained and non-frost susceptible soil conditions. These factors include appropriately engineered installation details, site investigation practices, fulfillment of responsibilities by all parties associated with manufactured home installation, and verification procedures to ensure that important design conditions are actually being achieved in practice. Accordingly, this Interpretative Bulletin was developed for the purpose of clarifying requirements and providing practical guidance for the manufactured housing industry when designing or setting foundations for manufactured homes in locations subject to freezing climates with seasonal ground freezing.

HUD also indicated at the October 26$^{th}$ meeting of the MHCC, that it would consider any comments received from the consensus committee on the report and scheduled a teleconference on November 28, 2016, with the Regulatory Subcommittee of the MHCC and with the MHCC on December 12, 2016, to receive feedback and recommendations from the subcommittee and MHCC. As a result of those discussions, the Regulatory Subcommittee recommended that HUD draft an Interpretative Bulletin for the December 12, 2016, teleconference with the full MHCC, taking into consideration the comments from the Regulatory Subcommittee teleconference and comments from the MHCC. A large part of the discussion focused on what constitutes acceptable engineering practice. Some members of the subcommittee expressed concerns on whether the SEI/ASCE 32-01 Standard should exclusively define accepted engineering practice or if other engineering alternatives should be allowed. HUD has considered comments from the Regulatory Subcommittee and the MHCC and included them where it deemed appropriate in the text of the Interpretative Bulletin.

II. The Interpretative Bulletin.

This guidance is being issued in response to numerous requests, inquiries, and questions regarding how to comply with HUD's requirements for foundations in freezing climates, in accordance with 24 CFR § 3285.312(b) of the Model Manufactured Home Installation Standards, when footings do not extend below the frost depth at the site. Engineered foundations designs such as "frost-free foundations" (FFF) including monolithic slab systems (3282.321(b)(2) that rely on non-frost-suceptible soil conditions) and frost-protected shallow foundations (FPSF) including insulated foundations (3282.312(b)(3) that rely on insulation to prevent ground freezing) have great appeal and potential in freezing climates as a cost-effective means of installing manufactured homes on seasonally-frozen ground. Understandably, their use has been promoted and increased in recent years as a means for reducing manufactured housing installation costs when compared to using conventional or proprietary foundation support systems in freezing climates. However, some key factors important to their long-term and consistent success require special considerations that are often neglected, particularly for FFF designs and installations. These factors include appropriately engineered installation details, site investigation practices, and verification procedures to ensure that important design conditions are actually being achieved in practice.

Important factors or design considerations in any frost-protected foundation include:

- clarity of technical requirements;
- definite criteria for determining soil frost susceptibility and soil moisture sub-surface drainage conditions; and
- guidance on water table depth to determine if the site is suitably well drained.

In addition, for foundations being placed on non-frost susceptible soil, it is also necessary to provide guidance on appropriate site-specific details such as the depth of non-frost-susceptible soil or fill layers required for the frost depth encountered at the site and the layout of sub-surface drainage, when sub-surface site conditions are not well drained. Clarification and accuracy of roles during the site testing and installation process also plays an important part in ensuring that frost-protected foundation designs meet the requirements of HUD's Manufactured Home Model Installation Standards.

The HUD commissioned study reviewed a selection of representative FFF designs in current use for consistency with the HUD code, the SEI/ASCE 32-01 (ASCE 32) standard titled *Design and Construction of Frost Protected Shallow Foundations,* and generally accepted engineering practice. These reviews and additional technical information (including terminology and technical references) are included in an engineering assessment report located in the Appendix. Thus, the Appendix provides the technical basis for the guidance and recommendations included herein.

A summary of key findings from the engineering assessment in the Appendix are as follows:

- One of the reviewed FFF designs demonstrated an appropriate application of the HUD code and ASCE 32 standard's technical requirements for frost protection of foundations. Thus, it is possible to develop a compliant FFF design in accordance with acceptable engineering practice or ASCE 32..
- All other reviewed FFF designs contained a number of flaws or non-conformances, including:
    - A lack of clarity of technical requirements in manufacturer installation instructions, details, and notes
    - Missing or vague criteria for identification and measurement of soil frost susceptibility
    - Missing or vague guidance for determining soil moisture, sub-surface drainage conditions, and water table depth in relation to determining if the site is "well drained" and suitable for an FFF installation.
    - Missing guidance to direct appropriate site specific adjustments of important installation details (e.g., depth of non-frost-susceptible soil or fill layers and lay-out of sub-surface drainage when required).
- A number of the FFF installation designs reviewed showed a pattern of confused roles and responsibilities, often assigning design decisions and site engineering evaluations to local regulatory officials who are typically neither qualified nor trained in foundation engineering or soil mechanics and engineering. Furthermore, they are not charged for such responsibilities because it may pose a conflict of interest (i.e., enforcers making design and construction decisions or judgments on matters they will be enforcing) and a potential conflict with state engineering practice laws (i.e., conducting engineering or design activities for which they are not licensed). Consequently, this practice can lead to an incorrect selection of the proper foundation and drainage system for the site.

Consequently, most of the reviewed FFF designs were found to be not in conformance with the HUD Code and the ASCE 32 reference standard for frost-protection of shallow foundations. In addition, one state's installation rules were reviewed and provisions related to FFF design and installations were found to be similarly non-compliant. Thus, a need exists to clarify requirements and provide guidance for proper and compliant applications of FFF designs as an alternative to a conventional (frost depth) footing or a conventional FPSF design using insulation to protect against ground freezing per the ASCE 32 standard.

In view of the above, each organization involved in the process of foundation design, approval, and installation has responsibilities that must be met. These responsibilities are described in more detail in the Interpretative Bulletin.

- Manufacturers need to ensure their foundation designs fully comply with 24 Code of Federal Regulations (CFR) 3285, Model Manufactured Home Installation Standards (HUD Code) by use of acceptable engineering practice or applicable provisions of the SEI/ASCE 32-01 Standard, Design and Construction of Frost-Protected Shallow Foundations (ASCE 32). In general, acceptable engineering practice is defined in and is consistent with ASCE 32.
- Manufacturers also need to review and, as appropriate, delete or revise any installation instructions that rely exclusively on surface drainage to prevent the effects of frost heave and inform installers that prior to beginning the installation, a site-specific soil test is required to determine soil frost susceptibility, the water table level, and sub-surface drainage conditions.
- Retailers need to verify that the installations are performed only by licensed installers. Additionally, retailers need to notify HUD of any new manufactured home sales within or into a HUD-administered state by filing the required HUD forms.
- Design professionals and Design Approval Primary Inspection Agencies (DAPIAs) need to ensure that foundation designs comply with all aspects of the HUD Code as provided in 24 CFR 3285 as well as the ACSE 32 standard incorporated by reference. Designs that rely on surface drainage exclusively or do not specify the means of assessing frost susceptibility of soils and their sub-surface drainage characteristics need to be disapproved or revised to meet the provisions of this Interpretative Bulletin. Additionally, design and installation responsibilities may not be delegated to local regulatory authorities.
- Installers should consider all sites in freezing climates as frost susceptible unless a soil test or other evidence is provided to prove the site is non-frost susceptible.
- Installers should never install a new home on a site that has conditions not covered in the manufacturer's installation instructions or the engineered foundation plan, and should bring the site conditions to the engineer or architect of record or any licensed architect or engineer for design consideration. Once the plan is updated to address site conditions and sealed, it is to be sent to the manufacturer and its DAPIA for approval as well as the Local Authority Having Jurisdiction (LAHJ), as applicable. Installers should not use any design that has them take on the responsibility of assessing frost susceptibility and sub-surface drainage conditions without proper soil analysis.

- Regulatory officials and inspectors need to reject installation plans that require them to take on any aspect of design responsibility. If a site is claimed to have soil that is non-frost susceptible and that is well-drained, soil tests or other evidence must be provided to the regulatory official and/or inspector.
- Installation plans including engineered foundation plans need to be available on-site during inspections. If these plans are not available, the home cannot pass inspection.
- In areas where no set local frost depth is determined, the depths corresponding with the Air Freezing Index (Figure 1) may be used.
- Installation rules in both states and local municipalities should be compared to the ASCE 32 standard and the HUD Code to ensure conformity.

In view of the above described concerns, this Interpretative Bulletin was developed for the purpose of clarifying requirements and providing practical guidance for the manufactured housing industry when designing or setting foundations for a manufactured home in locations subject to freezing climates with seasonal ground freezing. This guidance is intended for first-time installations, not replacement installs when current foundations exist on site.

In summary, in order to resolve the identified problems and previously discussed concerns in this Preamble associated with frost protected shallow foundations designs and installation practices, it will be necessary for all responsible parties in the process to follow and adhere to the guidance in this Interpretative Bulletin. These concerns and issues involve designers, DAPIAs, manufacturers, installers, and regulatory authorities. The most important factor in reducing problems is a properly designed installation instruction giving appropriate direction and details for installers to implement and regulatory officials to verify and inspect. Because this over-arching concern is applicable to all methods of installation related to foundation frost-protection, specific recommendations and guidance for various design and installation options are provided in the Interpretative Bulletin.

**INSTALLATION INTERPRETATIVE BULLETIN I-1-17**

**FOUNDATION REQUIREMENTS IN FREEZING CLIMATES**

(insert definitions of FFF and FPSF)

(remove all references to ASCE 32 where possible)

This Interpretative Bulletin is being issued to provide guidance for all parties associated with designing and installing manufactured home foundation systems in areas subject to freezing climates in accordance with 24 CFR 3285.312(b) of HUD's Model Manufactured Home Installation Standards. A detailed review of several systems outlined in the report provided in the Appendix indicate that many Frost Free Foundation (FFF) designs and practices are not conforming to the requirements outlined in 24 CFR part 3285.312(b) , and as such are not in conformance with acceptable engineering practice or SEI/ASCE 32-01, *Design and Construction of Frost-Protected Shallow Foundations*. ~~In general, the basis for acceptable engineering practice is described and defined by consensus in the SEI/ASCE 32-01 Standard~~.

These non-conformances are largely due to lack of consistency in design approaches, insufficient or nonexistent instructions in Manufacturers Installation Instructions related to FFF designs, the lack of understanding of best practices for installation site analysis and foundation installation, and an overreliance on localities that often do not possess officials with specialized knowledge of FFF designs and requirements. These shortcomings can be improved by establishing consistent, well-documented best practices and supplemental guidelines for the use of FFF designs.

**I. Recommended Practices and Procedures**

The following recommendations, practices and procedures need to be followed by all parties involved in manufactured home installations in order to ensure that foundations installed in freezing climates are not subject to frost heave.

1. Recommendations for Manufacturers:

Manufacturers should require that design professionals who submit plans to them for approval, as required by 24 CFR Part 3285.2 (c) (1) (ii), develop foundation frost-protection installation methods that comply with applicable provisions of the HUD's Model Manufactured Home Installation Standards, 24 CFR 3285~~0~~.312(b)(2) or (3). To ensure consistent and effective conformance, options with detailed guidance for complying designs are provided below and need to be followed. ~~These directions should also be incorporated into their Manufacturer Installation Instruction manual as required by 24 CFR Part 3285.2 (c)(2).~~

- Current Frost Free Foundation (FFF) installation instructions that rely exclusively on surface drainage as a means of foundation frost-protection ~~are to be~~ should be deleted from the manufacturer's installation instructions or immediately revised.
- Manufacturer installation instructions for FFF designs need to indicate that, prior to commencement of installation; a site-specific soil test is required in order to determine if the site soil is non-frost-susceptible and that the soil is "well-drained" with a water table depth consistently and sufficiently below the frost line.
- Manufacturer installation instructions should indicate that a ground water assessment needs to be done prior to commencement of installation.
- Manufacturer's installation instructions need to identify what steps need to be taken to ~~confirm~~ identify unusual soil conditions or frost susceptible soil as required by local jurisdictions or the installer ~~that the site soil is non-frost-susceptible~~. ~~If a soil test is not done to prove that the soil is non-frost-susceptible, then the site must be assumed to be frost-susceptible and must be developed accordingly, as such tests must be done prior to commencement of installation.~~
- To facilitate installations in locations subject to freezing, manufacturer instructions should have at least one example of an acceptable foundation system for frost and non-frost susceptible soil conditions for use in freezing climate locations. These designs must have a design professional's seal, and if not previously part of the manufacturer's instructions, be approved by the manufacturer and its Design Approval Primary Inspection Agency (DAPIA).

~~Recommendations for Retailers and Park Owners Operating as Retailers:~~

- ~~Retailers and park owners operating as retailers must provide buyers with a copy of the required consumer disclosure which indicates that new manufactured homes must be installed by licensed installers and need to verify and employ only installers that have the proper licenses and training to install manufactured homes within the state of each home's installation.~~

~~For new home installations in HUD-Administered Installation States, retailers and park owners acting as retailers must notify HUD of the certification and location of each home installation (HUD 305 form) and the completion of the installation certification (HUD 306 form) after each installation must be inspected by a qualified inspector (see 24 CFR § 3286.511(a)) and the acceptability of the installation verified on a HUD approved inspection form (HUD 309 form).~~

2. Recommendations for Design Professionals and DAPIAs:

   Foundation frost-protection methods used for installation designs must comply with HUD's Model Manufactured Home Installation Standards by use of acceptable engineering practice or the ASCE 32 standard. To ensure consistent and effective conformance, alternatives with detailed guidance for development of complying designs by manufacturers and for DAPIA review and approval are provided in the next section of this Interpretative Bulletin, *"Design Options, Compliance Checklists, and Installation Practices"*.

   - FFF installation designs that rely exclusively on surface drainage as a means of foundation frost-protection are not acceptable. Any existing installation designs of this type should be removed for use and DAPIA approval withdrawn.
   - FFF installation designs that do not specify appropriate means of assessing the frost-susceptibility of soils and their sub-surface drainage characteristics on a site-specific basis ~~need to~~ should be removed from use and the manufacturer's installation instructions and DAPIA approval withdrawn.
   - ~~FFF installation designs that assign design responsibilities to local regulatory authorities, such as assessing site drainage, water table depth, or soil frost-susceptibility are also not acceptable and need to be disapproved.~~

3. Recommendations for Installers

   When installing a new home on a site that has conditions not covered in the manufacturer's installation manual or an engineered foundation plan, the special site conditions should be brought to the attention of the engineer or architect of record. If there is no engineer or architect of record, a licensed engineer or licensed architect should be retained to evaluate the conditions and then design a plan to install the home. Once this plan is finalized and sealed, it must be sent to the manufacturer and its DAPIA for approval per 24 CFR Part 3285.2(c)(1)(ii). ~~The plan should also be submitted to the Local Authority Having Jurisdiction (LAHJ) for approval if applicable.~~

   - Installers should never install manufactured homes using FFF installation designs that rely exclusively on surface drainage as a means of frost protection.
   - Installers should never initiate a FFF installation where the instructions require them to take on design responsibility of assessing soil frost-susceptibility and sub-surface drainage conditions without proper soil testing and analysis. Instead, installers should verify that appropriate soil testing and site assessment for

use of a FFF design has been completed prior to initiating an installation. Refer to the next section for guidance.

- Prior to installation of an engineered system that is not included in the manufacturer's installation instructions, installers need to verify that the installation plan is stamped by an engineer or architect of record as well as approved by the manufacturer and its DAPIA. ~~In addition, an LAHJ may require that the plans be reviewed and sealed by an engineer or architect that is licensed in the state where the installation is occurring.~~
- ~~Installers should only use foundation~~ Frost-Free Foundation plans that have been approved ~~by the manufacturer and its DAPIA on or after~~ prior to January 1, 2009, ~~the effective date of HUD's installation program~~ should be reviewed and reapproved by the manufacturer and DAPIA.

4. Recommendations for Local Regulatory Officials and Inspectors:

   Regulatory officials and inspectors should verify compliance with 3285.312. ~~reject installation plans that require them to execute a design responsibility such as assessing the subsurface drainage, water table depth, or frost-susceptibility of soils on a given site. Freezing-climate installation plans that rely exclusively on surface drainage as a means of frost protection should not be approved by local regulatory officials.~~

   - Where a site is claimed to have non-frost-susceptible and "well-drained" soils as a basis for setting foundation pads or footings above the design frost depth, evidence should be required including soils tests and site sub-surface drainage and groundwater investigation by a qualified soils laboratory or soils engineering professional or geologist. Single site soil samples may be taken in HUD administered states by the installer or by qualified soil engineering professionals with the soil tests done by a qualified soils engineering laboratory or soils engineering professional.
   - Regulatory officials should assure that the approved installation plans and the manufacturer installation instructions are on site and available during inspections. If approved installation plans are not available and on site during inspections, the home cannot pass inspection.
   - In areas where the local frost depth is unavailable, local regulatory officials should consider permitting design frost depths to be determined in accordance with Table 1. Design Frost Depth for Footings and Figure 1. U.S. Air Freezing Map Index.

## II. DESIGN OPTIONS, CHECKLISTS AND INSTALLATION BEST PRACTICES

### OPTION #1: Checklist for Conventional Footings in Freezing Climates

HUD Code, 24 CFR Part 3285.312(b)(1)

- Obtain the local-design frost depth for footings from either one of the following:
    - The local authority having jurisdiction (LAHJ),
    - Use Table 1 with the site's Air-Freezing Index (AFI) from Figure 1[1], or
    - Consult with a registered professional engineer, registered architect, or registered geologist.
- When using Table 1 and Figure 1 to determine frost depth for footings, the depth of interior pier footings complying with footnote (b) of Table 1 may be taken as one-half the depth required in Table 1 ~~with approval of the LAHJ~~.
- Based on the required frost depth for footings, dig the footing to the frost depth.
- Check the soil bearing at depth of the footing with a torque probe, pocket penetrometer or other suitable testing device.
- Based on the tested soil bearing value, properly size the footing according to the manufacturer's installation instructions or use Table to 24 CFR Part 3285.312 in the HUD Code.
- Place footing pads and construct piers or supports at locations specified in accordance with the manufacturer's installation instructions.
- Backfill as needed and grade the site as required for drainage:
    - Crown the finish grade at the centerline of the foundation
    - Slope grade a minimum of ½-inch per foot for a minimum distance of 10 feet away from the home perimeter.

[1] A list of AFI values for various states and counties can be found in the 2015 International Residential Code (IRC), Table R403.3(2), published by the International Code Council, Inc., and used as the model building code for most states.

**TABLE 1. DESIGN FROST DEPTH FOR FOOTINGS[a]**

| AIR-FREEZING INDEX [See Figure 4] | MINIMUM DEPTH[b] (inches) |
|---|---|
| ≤ 50 | 3 |
| 250 | 9 |
| 350 | 12 |
| 500 | 16 |
| 1000 | 24 |
| 1500 | 32 |
| 2000 | 40 |
| 2500 | 45 |
| 3000 | 52 |
| 3500 | 57 |
| 4000 | 62 |
| 4250 | 65 |

a. These design frost depths are intended to be used for protection of building foundations against frost heave and are not applicable to site or street utilities or other non-building applications.

b. These design frost depths for footings shall be permitted to be halved for footings interior to the building perimeter and located within an enclosed space. Where skirting is used to enclose the space, the skirting shall be insulated to a minimum R-5 (1000 to 2500 AFI) or

R-10 (>2500 AFI) and vents shall be capable of ~~automatically~~ closing at outdoor temperatures below 40 deg F (which necessitates use of a ground vapor barrier).

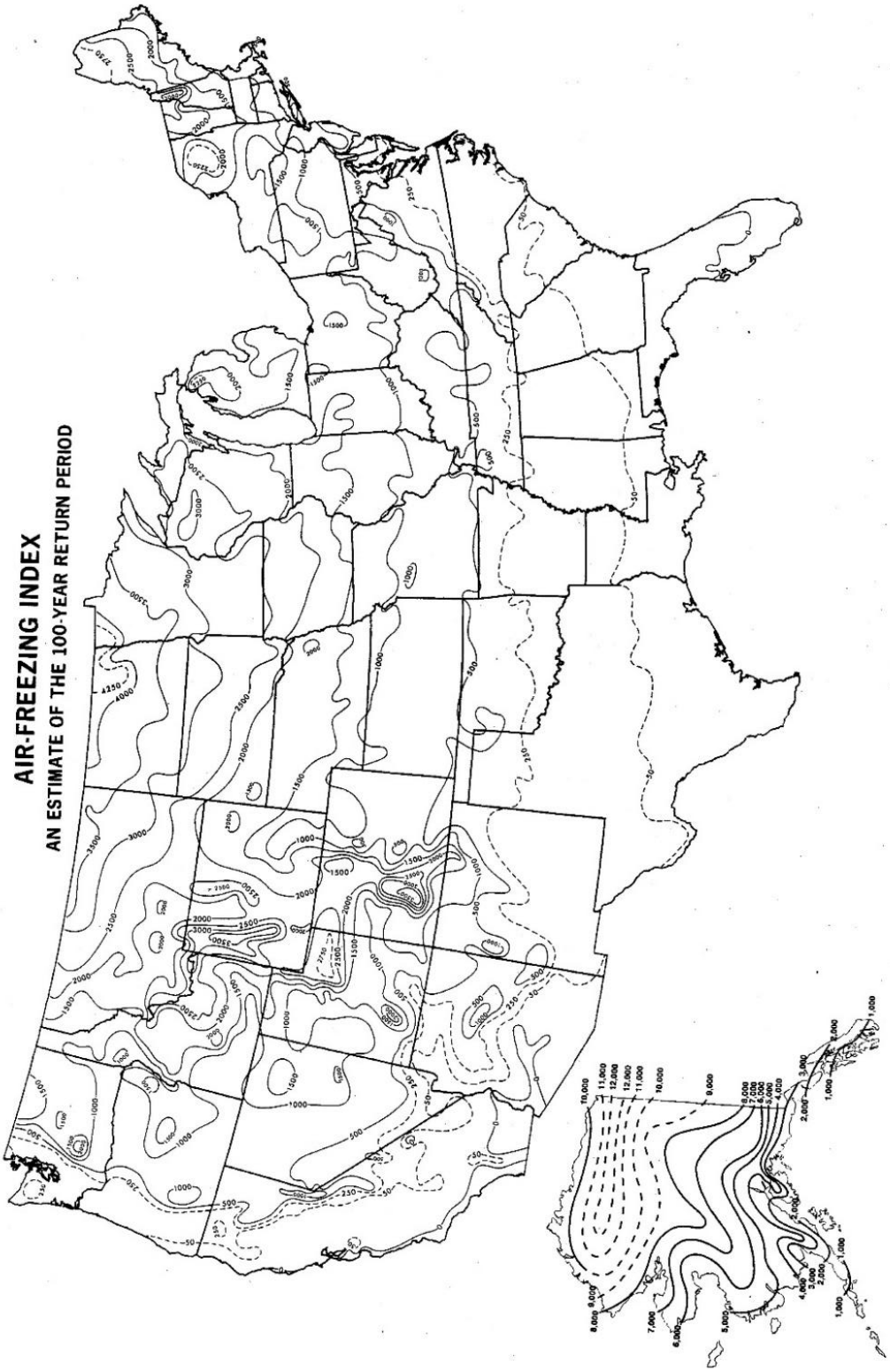

**Figure 1.** U.S. Air Freezing Index Map (based on Steurer, 1989 and Steurer and Crandell, 1995)

***OPTION #2: Checklist for Monolithic Slab Systems in Freezing Climates ("Frost Free Footing")***

HUD Code, 24CFR Part 3285.312(b)(2)

Pre-Installation Preparations:

- Before initiating installation, verify that the installation instructions are designed (sealed) by a registered professional engineer or registered architect, and approved by the manufacturer and its DAPIA. The LAHJ can require that the plans also be reviewed and sealed by an engineer or architect in the state where the installation is to occur.
- Verify that the LAHJ has accepted and approved the foundation and installation plan and all applicable permits are obtained. An approved installation design needs to comply with one of the following conformance options for the proposed installation design as permitted in HUD's Model Manufactured Home Installation Standards:
    - Complies with acceptable engineering practice or the ASCE 32 standard by use of non-frost-susceptible fills or existing soils (adequately tested and verified as defined in ASCE 32) and that such fills or soils extend to the local frost depth with provision for adequate surface drainage and, in addition, subgrade drainage where underlying soils are poorly drained and/or the water table is within two feet of the design frost depth.
    - Complies with acceptable engineering practice to prevent the effects of frost heave in a manner equivalent to the ASCE 32 standard. Equivalent alternative accepted engineering practices include: (1) the specification of an alternative criteria for testing the frost susceptibility of soils (e.g., different fines content allowances based on substantiating data), and (2) different frost depth determination based on thermal modeling of the climatic, soil, and foundation conditions

*NOTE: Reliance solely on surface drainage to prevent frost heave without verification of non-frost-susceptible fill materials or existing non-frost susceptible soils to frost depth does not comply with the SEI/ASCE 32 standard or HUD Code's allowance for "acceptable engineering practice to prevent the effects of frost heave."*

- For designs that rely on well-drained sites and use of existing soils to frost depth that are non-frost susceptible, verify the following before initiating installation:
    - The non-frost-susceptible condition of existing soils above the frost depth (and below the base of the proposed slab) have been tested in accordance with ASTM D442 and determined to have a fines mass

content of less than 6% passing a #200 sieve for the specific installation site or the development as a whole. A soils report should be provided by the engineer or soil lab of record for verification.

- Alternatively, conduct such testing as follows:
  - Obtain a minimum of two soil samples per installation site (one at each end of the foundation area) and from any borrow materials on site used as fill. A materials report from a quarry may be used when material is supplied from a licensed quarry.
  - When conducting borings for soil samples, take a minimum of one pint (plastic bag full) of soil from depths of one foot and at the locally prescribed frost depth or as determined from Table 1, Design Frost Depth for Footings. Continue each boring to two feet below the locally-prescribed frost depth (as measured from the proposed finish grade) to determine if the water table is present.
  - Deliver or send the soil samples to a soils laboratory for particle size testing per ASTM D442.
  - If the soils laboratory report indicates greater than 6% fines by mass passing a #200 sieve then the soil at the site is frost susceptible and either footing to frost depth or one of the alternative foundation options (see Appendix) for frost susceptible soil conditions must be used.
- The water table condition of the site has been assessed by the engineer or architect of record and documentation provided of the water table being at least two feet below the local frost depth. Alternatively, make this determination using soil borings as described above.
- If the water table is higher than two feet below the local frost depth, a network of drainage pipes sloped to drain to daylight must be placed at the base of non-frost-susceptible fill (e.g., clean gravel or crush rock) placed to a depth equal to the local frost depth.
- Alternatively, a site specific foundation design can be prepared and sealed by a professional engineer or registered architect or geologist and approvedby the manufacturer and its DAPIA.
- Save documentation of all of the above and provide to the LAHJ for verification.

- For designs that rely on well-drained sites and use of fill materials to frost depth that are non-frost susceptible, verify the following before initiating installation:

- The slab base and foundation fill materials are specified by the engineer or architect of record as non-frost susceptible such as clean gravel or crushed rock or other suitable material with no more than 6% fines by mass passing a #200 sieve per ASTM D442 test method. Non-frost susceptible subgrade materials are to be filled from the frost depth to the slab base for the entire extent of the slab plus any over dig.
- The water table condition of the site has been assessed by the engineer or architect of record and documentation provided of the water table being at least two feet below the local frost depth. Alternatively, make this determination using soil borings as described above.
    - If the water table is higher than two feet below the local frost depth, a network of drainage pipe sloped to drain to daylight must be placed at the base of non-frost-susceptible fill (e.g., clean gravel or crush rock) placed to a depth equal to the local frost depth.
- Save documentation of all of the above and provide to the LAHJ for verification.

<u>Installation Phase:</u>

- Excavate slab area to frost depth or only to the bottom of the slab's non-frost-susceptible base layer if existing soils have been determined to be non-frost susceptible down to frost depth during the pre-installation preparation phase (see above).
- Place foundation drains sloped to drain to daylight at the bottom of the non-frost-susceptible base or fill material layer.
- Place the non-frost-susceptible fill and base materials, compacting as required by the manufacturer's installation instructions and/or the engineer or architect of record. Do not initiate fill placement where compaction requirements and methods are not specified. Obtain compaction requirements, as needed, from the engineer or architect of record. The minimum requirement is 90% compaction per 24 CFR Part 3285.201 although the engineer or architect of record or LAHJ may require a higher compaction level based on the fill material used.
- Construct the reinforced monolithic slab in accordance with the manufacturer's installation instructions or according to the manufacturer and DAPIA approved plans.
- Backfill as needed and grade the site as required for drainage:
    - Slope grade a minimum of ½-inch per foot for a minimum distance of 10 feet away from the home perimeter.

*NOTE: The above procedures also apply to designs where a monolithic slab is not used and pier footing pads are placed directly on non-frost-susceptible fill materials (e.g., clean gravel or crushed rock).*

**OPTION #3: Checklist for Frost Protected Shallow Foundations (Insulated Foundations).**

HUD Code, 24 CFR Part 3285.312(b)(3)

Pre-Installation Preparations:

- Before initiating installation, verify that the installation instructions are designed (sealed) and certified by a registered professional engineer or registered architect, approved by the manufacturer and its DAPIA.
- Also, verify that the instructions include an approved installation design complying with one of the following basis for the proposed installation design, as permitted in the HUD Code:
    - Complies with acceptable engineering practice or the SEI/ASCE 32-01 standard by use of properly-specified insulation materials and sized in accordance with the local climate and located around the perimeter of the foundation (including insulated skirting with vents capable of closing at temperatures below 40 degrees) or the entire foundation pad is insulated where there is no skirting or the skirting is un-insulated or the skirting has non-closing vents. Non-frost-susceptible base materials are used at a minimum thickness required by acceptable engineering practice or SEI/ASCE 32, and insulation materials are protected against damage in accordance with acceptable engineering practice or SEI/ASCE 32.
    - Complies with acceptable engineering practice to prevent the effects of frost heave in a manner equivalent to the insulation provisions in the SEI/ASCE 32 standard. Equivalent alternative accepted engineering practices include: (1) the specification of an alternative insulation amounts based on dynamic thermal modeling of the climatic, soil, and foundation conditions specific to the site, and (2) alternative insulation materials or types with data substantiating long-term R-values in below-grade applications.

*NOTE: Designs which place insulation materials in a discontinuous fashion, such that exposed slab edges or other types of thermal bridging occurs, do not meet the requirements of the SEI/ASCE 32 standard or the HUD Code provisions that allow the use of "acceptable engineering practice to prevent the effects of frost heave."*

- Obtain foundation insulation materials as specified in the installation instruction and verify the correct type is received. Commonly accepted insulation materials include Extruded Polystyrene (XPS) and Expanded Polystyrene (EPS) of various "types" in accordance with ASTM C578 and ASCE 32 standards.
- Insulation material conformance with the specified type should be verified by product labels or a certification from the insulation manufacturer. Materials commonly stocked in supply stores may not be the correct "type" even though it may be the correct "kind" (e.g., XPS or EPS).

*NOTE: There is no need to determine the frost susceptibility of underlying soils to frost depth in the insulated foundation design approach when the provisions of ASCE 32 are satisfied.*

Installation Phase:

- Excavate the foundation area to the correct shallow foundation depth as indicated in the manufacturer's installation instructions or by the engineer or architect of record (generally the foundation depth need not exceed 12" to 16" below finish grade).
- Place specified non-frost-susceptible base material and provide drainage pipes around the perimeter, at a minimum of 4 inches (within the base material layer) as required by the installation instructions. Pipes need to be run to day-light or have a mechanical means of draining the water (see detail in Appendix) .
- Sequence the foundation slab or pad construction and insulation placement in accordance with the design approach indicated on the manufacturer's installation instructions. Where sub-slab insulation is required, this will need to be placed before slab construction. Perimeter insulation may be placed after slab construction (see detail in Appendix).
- After construction of the slab and supports and placement of the home, construct the insulated skirting with automatically closing vents as required by the manufacturer's installation instructions. Where the foundation slab is entirely insulated with horizontal below ground insulation (the design does not rely on perimeter insulation only), no skirting is required. (See detail in Appendix).

- Place wing insulation (extending outward horizontally underground from the perimeter of the foundation) as required by the installation instructions. Depending on the design approach and climate severity, wing insulation may or may not be required.
- Provide protection of any exposed exterior insulation or within 10 inches of the finish grade surface. (see detail in Appendix )
- Backfill as needed and grade the site as required for drainage:
    - Slope grade a minimum of ½-inch per foot for a minimum distance of 10 feet away from the home perimeter.

This Interpretative Bulletin is issued pursuant to 24 CFR 3285.2 and 3285.312(b) of HUD's Model Manufactured Home Installation Standards.

**Date: _____**

_____
Ed Golding
Principal Deputy Assistant Secretary for Housing

# APPENDIX

# MANUFACTURED HOMES IN FREEZING CLIMATES

## An Assessment of Design and Installation Practices

**For Manufactured Homes in Climates with Seasonally Frozen Ground**

**Prepared by: SEBA Professional Services, LLC**

**For**

**The U.S. Department of Housing and Urban Development**

**Office of Manufactured Housing Programs**

**Under Contract #DUIOOH-14-C-04**