

BEFORE THE DEPARTMENT OF LABOR AND INDUSTRY
STATE OF MONTANA

In the matter of the amendment of) NOTICE OF AMENDMENT
ARM 24.301.109 definitions,)
24.301.131 incorporation by reference)
of International Building Code,)
24.301.138 calculation of fees,)
24.301.142 modifications to the)
International Building Code applicable)
only to the department's code)
enforcement program, 24.301.146)
modifications to the International)
Building Code applicable to both the)
department's and local government)
code enforcement programs,)
24.301.154 incorporation by reference)
of International Residential Code,)
24.301.171 incorporation by reference)
of International Existing Building)
Code, 24.301.172 incorporation by)
reference of International Mechanical)
Code, 24.301.173 incorporation by)
reference of International Fuel Gas)
Code, 24.301.175 incorporation by)
reference of International Swimming)
Pool and Spa Code, 24.301.181)
incorporation by reference of)
International Wildland-Urban Interface)
Code, 24.301.201 extent of local)
programs, 24.301.203 funding of code)
enforcement program, 24.301.208)
incorporation by reference of)
Independent Accountant's Reporting)
Format for Applying Agreed-Upon)
Procedures During Audits of Certified)
City, County, or Town Building Code)
Enforcement Programs, 24.301.301)
incorporation by reference of Uniform)
Plumbing Code, 24.301.351 minimum)
required plumbing fixtures, 24.301.401)
incorporation by reference of National)
Electrical Code, 24.301.511)
definitions, 24.301.514 enforcement)
generally, and 24.301.904 site)
accessibility)

TO: All Concerned Persons

1. On August 23, 2019, the Department of Labor and Industry (department) published MAR Notice No. 24-301-347 regarding the public hearing on the proposed amendment of the above-stated rules, at page 1273 of the 2019 Montana Administrative Register, Issue No. 16.

2. On September 16, 2019, a public hearing was held on the proposed amendment of the above-stated rules in Helena. Many comments were received by the September 20, 2019 deadline.

3. The department has thoroughly considered the comments received. A summary of the comments and the department's responses are as follows:

COMMENT 1: Several commenters supported amending the rules to adopt more recent versions of nationally recognized building codes.

RESPONSE 1: The department appreciates all comments received during the rulemaking process.

COMMENT 2: One commenter requested the department amend ARM 24.301.351, Minimum Number of Required Plumbing Fixtures. The commenter stated that this rule has not been revised for some time and is not consistent with Subsection 2902.1, Minimum Number of Fixtures, of the 2018 IBC, which includes specific descriptions of certain assembly spaces, i.e., casinos, indoor and outdoor sporting events, and educational spaces, to allow for more reasonable fixture counts than in ARM 24.301.351. The commenter asked the department to consider adopting Subsection 2902.1, Minimum Number of Fixtures, of the 2018 IBC.

RESPONSE 2: The department recognizes that the table at ARM 24.301.351 is not consistent with Subsection 2902.1, Minimum Number of Fixtures, of the 2018 IBC or Subsection 422.0, Minimum Plumbing Fixtures, of the 2018 UPC. While the department did not propose amending ARM 24.301.351 in this rulemaking project, the department appreciates the commenter's point regarding the different types of assembly spaces and the number of fixtures and will review the rule for possible amendment in the future.

COMMENTS 3 THROUGH 7 PERTAIN TO ARM 24.301.146:

COMMENT 3: One commenter proposed deleting or amending Subsection 903.2.1.7, Multiple Fire Areas, of the 2018 IBC, noting that many areas in the state have inadequate water supplies to have properly functioning fire suppression systems. The commenter gave an example of a building with a 200-occupant bowling alley, a 75-occupant bar/casino, and a 75-occupant restaurant that all share the same main lobby entrance or exit. Even if each fire area had two required exits, under Subsection 903.2.1.7 of the 2018 IBC a fire suppression system would be required in all areas or occupancies. If adding to an existing building, this

subsection could require adding a fire suppression system to the existing portion of the structure. In areas without a public water supply or with an inadequate private water supply, storage tanks and fire pumps would be required as part of the fire suppression system which will add tens of thousands of dollars to the project's cost. The commenter suggested deleting Subsection 903.2.1.7 or amending it to allow each fire area to be counted separately.

RESPONSE 3: The department notes that Subsection 903.2.1.7 was first added to the 2015 IBC and that comments against adopting this subsection were received during the community listening sessions. Additionally, the department recognizes that inadequate water supplies can make compliance with this subsection impracticable. Therefore, the department will not adopt Subsection 903.2.1.7 at this time. Instead the department is amending ARM 24.301.146 to delete this subsection which will effectively continue the existing requirements of the 2012 IBC.

COMMENT 4: One commenter proposed amending ARM 24.301.146(12) to require fire sprinklers in all residential occupancies as in Subsection 903.2.8 of the 2018 IBC. Since 2003, the IBC has required fire sprinklers in all residential occupancies; however, the department adopted a modified residential sprinkler requirement. The commenter stated that, under this modified residential sprinkler requirement, fire sprinklers can be eliminated in certain residential occupancies without requiring any other fire protection in the building. The commenter further stated that depending on the definition of the term "transient guestroom," a building used as a bed and breakfast would require fire sprinklers and the same building would not if used as a short-term rental. The commenter provided statistics attributed to the U.S. Fire Administration, National Fire Incident Reports System, that since 2003, 156 civilians have died in fires in residential occupancies in Montana and that 26 of those died in buildings covered by the International Building Code and fire codes. Without fire sprinklers in all residential occupancies, occupants are without protection while they are sleeping and most vulnerable. The commenter asserted that by allowing exemptions from the fire sprinklers in certain residential occupancies, the department is not fulfilling the intent of the IBC to safeguard life and property from fire and to provide for the safety of firefighters and emergency responders during emergency operations.

RESPONSE 4: The department only proposed renumbering this subsection and updating the references to the 2018 IBC, with no substantive changes. Further, the department received no comments during the community listening sessions around the state or from the Building Codes Council in favor of requiring fire sprinklers in all residential occupancies.

COMMENT 5: One commenter stated that the proposed change to ARM 24.301.146(16) is unnecessary because Subsection 1006.3.3. of the 2018 IBC pertains to R-1 and R-2 occupancies, not R-3 and R-4 occupancies. The commenter further stated that the tables and footnotes to Subsection 1006.3.3 of the 2018 IBC meet the original intent of the proposed amendment and therefore the proposed amendment should be withdrawn.

RESPONSE 5: The department agrees and will withdraw the proposed amendment.

COMMENT 6: One commenter proposed amending ARM 24.301.146(18) to revise Table 1020.1, associated with Subsection 1020.1 of the 2018 IBC, for R occupancies to: change the Occupant Load Served by a Corridor from "Greater than 10" to "All"; and change the Required Fire-Resistance Rating (hours) for R occupancies without a sprinkler system from "Not Permitted" to "1" (hour).

RESPONSE 6: The department reviewed the corridor provisions in Table 1020.1 and determined these requirements are not consistent with the automatic sprinkler provisions for "R" occupancies in ARM 24.301.146(12). The department is therefore striking "greater than 10" in the "Occupant Load Served by Corridor" column for R occupancy and inserting "greater than 8". The commenter's proposed amendment would require any corridor in an R occupancy to have both an automatic sprinkler system and a fire rated corridor. It is not practical to require fire rated corridors in all R occupancies, specifically those with an occupant load of 8 or fewer occupants.

COMMENT 7: Two commenters suggested amending ARM 24.301.146(24) that amends Subsection 3001.2 of the 2018 IBC regarding emergency elevator communication equipment systems for the deaf, hard of hearing, and speech impaired. The commenters stated that the language in the subsection is too vague because it lacks technical criteria and could result in a wide variety of communication systems. The commenters stated that the National Elevator Industry, Inc. (NEII) has worked closely with the American Society of Mechanical Engineers (ASME) Emergency Operations Committee to develop technical standards for a communication system to meet the intent of the Subsection 3001.2 of the 2018 IBC and that these standards have been approved for the 2019 edition of ASME A17.1/CSA B44 Safety Code for Elevators and Escalators. The commenters proposed amending Subsection 3001.2 of the 2018 IBC to reference the provisions of ASME A17.1/CSA B44 and National Fire Protection Association (NFPA) 72, National Fire Alarm and Signaling Code.

RESPONSE 7: The department recognizes that Subsection 3001.2 of the 2018 IBC does not reference a technical standard and therefore elevator owners, the department, and the public will lack consistency in emergency elevator communication equipment for the deaf, hard of hearing, and speech impaired. The department appreciates that the NEII and ASME have developed technical standards for a communication system to implement Subsection 3001.2 and that these standards will be included in the 2019 edition of the ASME A17.1/CSA B44 Safety Code for Elevators and Escalators. Therefore, instead of delaying the effective date of Subsection 3001.2, the department will amend the rule to reference ASME A17.1/CSA B44 and NFPA 72 as suggested.

COMMENTS 8 THROUGH 11 PERTAIN TO ARM 24.301.154:

COMMENT 8: One commenter asked the department to adopt the plumbing provisions of the 2018 IRC, specifically chapters 25 through 33. The commenter stated that the IRC plumbing provisions recognize new and innovative technologies which result in quicker installation and more flexibility in design which reduces the time and cost of construction.

RESPONSE 8: The department did not propose adopting the plumbing provisions of the 2018 IRC in the proposal notice and cannot do so in the final notice. Additionally, the Building Codes Council did not support adopting the IRC plumbing provisions.

COMMENT 9: One commenter asked the department to adopt both the 2018 UPC and 2018 IRC plumbing provisions, at Part VII and including chapters 25 through 33, and allow local jurisdictions to choose which plumbing code to adopt and enforce. The IRC plumbing provisions have been adopted in 29 other states. The commenter stated that complying with the IRC plumbing provisions would lower the cost of installing plumbing by three to nine percent for materials and eight to ten percent for labor.

RESPONSE 9: The department did not propose adopting the plumbing provisions of the 2018 IRC in the proposal notice and cannot do so in the final notice. Additionally, the Building Codes Council did not support adopting the IRC plumbing provisions.

COMMENT 10: Two commenters asked the department to adopt Appendix F, Radon Control Methods, of the 2018 IRC. The commenters noted that adoption by the department is necessary before local building code enforcement authorities could adopt and enforce Appendix F. One commenter believed that, based on the community listening sessions conducted by the department, the department intended to adopt Appendix F until the Building Codes Council recommended omitting Appendix F.

RESPONSE 10: The department did not propose adopting Appendix F, Radon Control Methods, in the proposal rulemaking notice and is unable to do so in the final notice. The Building Codes Council considered the issue and advised the department against adopting Appendix F due to the anticipated increased construction costs of complying with it. While local building code enforcement authorities cannot require compliance with Appendix F, individual property owners may choose to utilize those radon control methods in construction.

COMMENT 11: Two commenters supported the department's adoption of Appendix Q, Tiny Houses, of the 2018 IRC.

RESPONSE 11: The department is adopting Appendix Q as proposed.

COMMENT 12 PERTAINS TO ARM 24.301.175:

COMMENT 12: Two commenters asked the department to adopt Chapter 8, Permanent Inground Residential Swimming Pools, of the 2018 ISPSC. One commenter stated that residential pools are a known hazard to health and safety and that local building code enforcement authorities should permit and inspect them during construction. Without the adoption of Chapter 8, the local building codes enforcement authority cannot apply these standards. The commenter further stated that while Title 50, chapter 53, part 1, MCA, pertains to public swimming pools, the chapter does not exclude residential swimming pools and therefore should not be construed to exempt residential swimming pools from construction standards.

RESPONSE 12: The current rule at (3) provides that the ISPSC is not applicable to residential occupancies. The implemented statutes in Title 50, chapter 53, part 1, MCA, specifically state that the statutes apply to public swimming pools. Accordingly, the statute does not grant authority over private swimming pools. The department did not propose adopting Chapter 8 of the 2018 ISPSC in the proposal notice and is unable to do so in the final notice.

COMMENT 13 PERTAINS TO ARM 24.301.203:

COMMENT 13: One commenter asked that the department not amend ARM 24.301.203(2) and noted that department certified city building code enforcement programs have "life-safety inspectors" that conduct both construction inspections and also "occupancy inspections" to ensure existing buildings are maintained to the building code under which they were permitted. The commenter opined that certificates of occupancy do not guarantee that a building meets all building code provisions because modifications often begin with the first tenant and that city building code enforcement programs' life-safety inspectors often identify building code deficiencies requiring correction and permits. The commenter believed the city has a collaborative and team-focused life-safety inspection program and to artificially dictate responsibilities based solely on funding would be inefficient and ineffective.

RESPONSE 13: The current rule prohibits a certified city, county, or town building program from using building permit fees for any purpose other than building plan review, inspection, and code enforcement of new construction or alteration requiring a building permit. This rule implements 50-60-106, MCA, which provides that building permit fees charged by a certified city, county, or town must be used for the enforcement of building codes as adopted by the department. The statute does not grant authority to use permit fees for occupancy or maintenance inspections of existing buildings.

The department understands that occupants may modify a building to deviate from the building codes; however, certified cities must stop using building permit fees for occupancy or maintenance inspections of existing buildings. The department notes that this comment demonstrates the need for additional clarification to the rule and the department is amending the rule as proposed.

COMMENT 14 PERTAINS TO ARM 24.301.301:

COMMENT 14: One commenter supported the department adopting the UPC as proposed, stating the UPC is progressive, innovative, increasingly conservation- and sustainability-oriented, and has a demonstrated history of protecting the public health and safety for decades in Montana and for nearly 100 years since its inception.

The commenter attended all six of the department's community listening sessions around the state and believed that the plumbing industry consistently advocated for continued UPC adoption.

The commenter disagreed that adoption of the IRC plumbing provisions, known as the International Plumbing Code (IPC), or dual adoption of both the UPC and the IPC, would result in a significant savings and believed that adopting two different plumbing codes would cause confusion, tend to increase costs, and be counterproductive.

RESPONSE 14: The department agrees and is amending the rule as proposed.

COMMENTS 15 THROUGH 17 PERTAIN TO ARM 24.301.401:

COMMENT 15: One commenter supported the department's proposed exclusion of kitchens from adoption of Subsection 210.12, Arc-Fault Circuit-Interrupter (AFCI) Protection, as set out in the 2017 NEC.

RESPONSE 15: The Building Codes Council advised the department to exclude kitchens from the areas required to have AFCIs due to numerous "nuisance trips." The Building Codes Council noted that AFCIs were not required in kitchens prior to the 2014 NEC and that appliance technology may lag behind the AFCI's resulting in the nuisance trips.

COMMENT 16: Several commenters asked the department to adopt Subsection 210.12, Arc-Fault Circuit-Interrupter (AFCI) Protection, as set out in the 2017 NEC. The commenters opposed the department's proposed amendment to delete all references to "kitchen" or "kitchens," and thereby not require AFCIs in kitchens. The commenters stated excluding kitchens from AFCI protection was unnecessary and created a safety hazard.

Several commenters noted AFCIs distinguish between harmless arcs (incidental to normal operation of switches and plugs) and potentially dangerous arcs (i.e., a lamp cord which has a broken conductor) and will stop arcing before a fire can occur. They noted kitchens are a common place for electrical fires.

One commenter stated that AFCIs were first required in the 1999 NEC in bedrooms and have since expanded to include most outlets in dwelling units. Another commenter (Smith at Eaton) stated that the U.S. Fire Administration and the Federal Emergency Management Agency (FEMA) has recorded a 22% reduction nationally in residential electrical fires since the adoption and expansion of AFCI technology in the NEC.

One commenter noted that Underwriters Laboratories, LLC (UL) is a safety testing and certification company approved by the U.S. Occupational Safety and Health Administration as a Nationally Recognized Testing Laboratory. The

commenter stated that UL first issued a standard for AFCIs, UL 1699, twenty years ago and that AFCIs have been widely recognized for contributing to fire safety in homes. UL 1699 addresses four different types of arcing events, including series and parallel arcing with different types of supply/load conductors and electrical insulation failure conditions. There are comprehensive unwanted operation tests, also known as "nuisance tripping" tests, such as challenging the AFCI with inrush currents, normal operation arcing, non-sinusoidal waveforms, and light bulb burnouts. Additionally, there are tests of the AFCI representing operation inhibition, environmental conditioning, overloads, and short circuits. To earn UL certification, AFCIs must pass all these tests. If there are concerns regarding the performance of a UL-certified AFCI, a Product Incident Report (PIR) may be filed with UL at www.ul.com/ahjreport allowing UL to confirm the facts and determine if any corrective actions are warranted. In 2018 through September 10, 2019, UL has received no reports of nuisance tripping of UL-certified AFCIs in household kitchens.

Two commenters stated that the National Electrical Manufacturers Association (NEMA) collaborates with both UL and the Association of Home Appliance Manufacturers (AHAM) to field reports of unwanted tripping of branch circuits protected by AFCI technology. One commenter stated that, although there are an estimated 50,000+ branch circuits in Montana protected with AFCI technology, they have not received any reports of unwanted tripping.

Two commenters stated that there is a web resource, www.afcisafety.org, for installers and homeowners to report unwanted AFCI tripping to AFCI manufacturers. After a report is made, the specific AFCI manufacturer will follow up appropriately until the problem is solved. One commenter speculated that Montana homebuilders may not be aware of this resource.

One commenter stated that there is a free web-based course, www.afcisafety.org/ul-training-course/, developed by NEMA and UL and updated by UL that provides information and troubleshooting methods for AFCIs.

RESPONSE 16: The department notes that the Building Codes Council provided anecdotal information about nuisance trips. Specific information regarding any attempts to report nuisance trips to UL, NEMA, or AHAM and the outcome of those attempts was not provided.

Other jurisdictions have adopted the NEC with amendments providing that AFCIs are not required in kitchens, for refrigeration appliances, etc. to eliminate nuisance trips.

Oregon adopted the 2017 NEC, but the Oregon Electrical Specialty Code (OESC) amended Subsection 210.12 to provide that AFCI protection shall not be required on branch circuits supplying receptacles located in kitchens or laundry areas, for dedicated outlets that supply equipment known to cause unwanted tripping of AFCI devices, or for branch circuits that serve an appliance that is not easily moved or that is fastened in place. See OESC 210.12 in Table 1-E at Or. Admin. R. 918-305-0105.

Both Arkansas and New Jersey adopted the 2014 NEC with amendments to provide that AFCI protection is not required in kitchens or laundry areas. See Ark. Reg. 010.13-008 and N.J.A.C. 5:23-3.16(b).

North Dakota adopted the 2017 NEC but amended Subsection 210.12(A) to provide that AFCI protection is not required for refrigeration appliances provided that a single receptacle on a dedicated circuit is installed. See N.D. Admin. Code § 24.1-06-02-10 (NEC 210 Branch Circuits).

Idaho adopted the 2017 NEC, but amended Subsection 210.12 to provide that, in dwelling units, AFCI protection shall only be required on branch circuits and outlets in bedrooms. All other locations in dwelling units are exempt from the requirements of 210.12. See IDAPA 07.01.06.011.01.r.

Also, the National Association of Home Builders (NAHB) developed proposed amendments to the 2017 NEC at Subsection 210.12(A) to remove AFCI protection for residential dwelling units while leaving it in place for hotels, motels, and dormitories. NAHB noted that, when AFCIs initially appeared in the 1999 NEC, including AFCIs was largely based on several U.S. Consumer Product Safety Commission (CPSC) reports which appeared to overstate the number of incidents because it was several times higher than in later reports. Additionally, NAHB noted that while the AFCI protection requirement applies predominately in new homes, the highest incidence of electrical distribution fires was in dwellings over 40 years old according to the June 2015 issue of the U.S. Fire Administration's Topical Fire Report Series. The NAHB stated that the data did not show that AFCIs were necessary when they were first introduced in the NEC and has not supported the continued expansion of AFCIs in successive versions of the NEC. See NAHB 2017 National Electrical Code Suggested Amendments issued 5/1/2017.

There is sufficient evidence that nuisance trips of AFCIs are a problem. Accordingly, the department is amending the rule as proposed and as consistent with the Building Codes Council recommendation.

COMMENT 17: Two commenters asked the department to consider requiring a dedicated branch circuit for a receptacle outlet in a kitchen if an AFCI would not be required. The commenters stated the dedicated circuit should use rigid metal conduit, intermediate metal conduit, electrical metallic tubing, Type MC or steel armored Type AC cables meeting the requirements of Subsection 250.118 of the 2017 NEC with metal outlet and junction boxes between the branch-circuit over current device and the dedicated receptacle outlet to prevent damage to the circuit during construction and the use of the dwelling.

RESPONSE 17: Using dedicated branch circuits instead of AFCIs is allowed under the 2014 NEC as adopted by the department and would be allowed under the proposed adoption of the 2017 NEC. Additionally, requiring dedicated branch circuits for receptacle outlets in kitchens will increase the cost of construction without a significant showing of improved safety for the public.

As stated in Responses 15 and 16, the Building Codes Council advised the department to exclude kitchens from the areas required to have AFCIs due to numerous nuisance trips. Additionally, several other states have adopted the NEC with amendments to exclude AFCIs from kitchens, refrigeration appliances, etc. The NAHB noted that the data did not show that AFCIs were necessary when they were first included in the NEC and has not supported the continued expansion of AFCIs in

successive versions of the NEC. See NAHB 2017 National Electrical Code Suggested Amendments issued 5/1/2017.

The department will continue to monitor the situation but is amending the rule as proposed.

4. The department has amended ARM 24.301.109, 24.301.131, 24.301.138, 24.301.142, 24.301.154, 24.301.171, 24.301.172, 24.301.173, 24.301.175, 24.301.181, 24.301.201, 24.301.203, 24.301.208, 24.301.301, 24.301.351, 24.301.401, 24.301.511, 24.301.514, and 24.301.904 exactly as proposed.

5. The department has amended ARM 24.301.146 with the following changes, stricken matter interlined, new matter underlined:

24.301.146 MODIFICATIONS TO THE INTERNATIONAL BUILDING CODE APPLICABLE TO BOTH THE DEPARTMENT'S AND LOCAL GOVERNMENT CODE ENFORCEMENT PROGRAMS (1) through (11) remain as proposed.

(12) Subsection 903.2.1.7, Multiple Fire Areas, is deleted in its entirety.

(12) through (15) remain as proposed but are renumbered (13) through (16).

~~(16) Subsection 1006.3.3, Single Exits, item 4, is amended to read: "4.~~

~~Group R-3 and R-4 occupancies shall be permitted to have one exit or access to a single exit if equipped throughout with an automatic sprinkler system or there are no sleeping rooms above or below the level of the exit discharge."~~

(17) remains as proposed.

(18) For "R" occupancies that are exempt from the requirements of a fire sprinkler system, pursuant to ARM 24.301.146~~(15)~~(16), Table 1020.1, referenced in subsection 1020.1, shall be amended in regard to "R" occupancies by the deletion of the language "Greater than 10" and insertion of the language "Greater than 8" under the heading "Occupant Load Served By Corridor." ~~"Not Permitted"~~ under the heading ~~"Required Fire Resistive Rating (hours) — Without sprinkler system"~~ for "R" occupancies with an occupant load served by corridor of greater than ten. Under that same location where ~~"Not Permitted"~~ is to be deleted, the language "1" shall be inserted instead, which will require those corridors to have one-hour fire resistive ratings.

(19) through (23) remain as proposed.

(24) Subsection 3001.2, Emergency elevator communication equipment systems for the deaf, hard of hearing, and speech impaired, is amended as follows: "Emergency elevator communication systems for the deaf, hard of hearing and speech impaired. An emergency two-way communication system shall be provided in accordance with the provisions of ASME A17.1/CSA B44 and NFPA 72." shall become effective on January 1, 2021.

(25) through (44) remain as proposed.

/s/ DARCEE L. MOE

Darcee L. Moe
Rule Reviewer

/s/ GALEN HOLLENBAUGH

Galen Hollenbaugh, Commissioner
DEPARTMENT OF LABOR AND INDUSTRY

Certified to the Secretary of State November 26, 2019.