



## MANUFACTURED HOUSING CONSENSUS COMMITTEE

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# DRAFT MINUTES MHCC TECHNICAL SYSTEMS SUBCOMMITTEE MEETING

September 27, 2016

Via Teleconference

# DRAFT MINUTES

## MANUFACTURED HOUSING CONSENSUS COMMITTEE (MHCC)

### TECHNICAL SYSTEMS SUBCOMMITTEE MEETING

September 27, 2016

Via Teleconference

#### Call to Order

This is a meeting of the Manufactured Housing Consensus Committee (MHCC) Technical Systems Subcommittee and the meeting notice was published in the August 23, 2016 *Federal Register*, Vol. 81, No. 163. Chairman, William Freeborne, called the meeting to order at 1:05 p.m. (Eastern). Kevin Kauffman, Program Manager of the Administering Organization (AO) Home Innovation Research Labs, called the roll and announced that a quorum was not present. Due to the lack of quorum, all actions taken by the subcommittee will be followed by letter ballot following the meeting. See [Appendix A](#) for a list of meeting attendees.

Chairman Freeborne noted the meeting was to review the actions taken by the NFPA 70-2014 Task Group.

#### Approval of the Minutes

Mark Weiss requested that his name be added to the NFPA 70 Task Group on page 4 of the minutes.

#### **Motion to Approve as Modified the December 2, 2015, MHCC Technical Systems Subcommittee Meeting Minutes.**

Maker: James Demitrus  
The motion carried.

Second: William Freeborne

Mark Weiss also asked for clarification regarding the following statement from page 4 of the May 25, 2016 NFPA 70-2014 Task Group Minutes.

*“Frank Brubaker said based on cost research between the 2008 and 2014 NEC, there will be an average of \$300 per house in product costs, as standard breakers cost about \$2 and arc breakers about \$27. Manufacturer costs will be less than a homeowner going to a box store.*

*Al Spencer said there is an average of \$580 of added cost, based on his review of the NEC 2005-2008-2014.”*

Mr. Weiss wanted to know if the \$580 is producer or retail level added cost of the home. Mark defined “retail cost” as the final cost to the consumer that includes the upcharge.

James Demitrus answered that it was based on retail costs as it was based on a cost sheet produced from Ohio.

Kevin Kauffman (AO) informed the Subcommittee that Home Innovation Research Labs (AO) will follow up with Alan Spencer regarding this topic after the meeting.

## NFPA 70-2014 Update by Sections (Task Group Update)

A summary of recommendations submitted by the NFPA 70-2014 Task Group were provided to the subcommittee for their review (see [Appendix B](#)). DFO Danner provided background on the recommendations submitted by the Task Group. John Weldy submitted a list of proposed modifications/amendments to the Task Group for consideration if the NFPA 70-2014 was to be approved as a reference standard by the MHCC. The following recommendations submitted by the Task Group are based on the *assumption* that the NFPA 70-2014 would be approved as a reference standard by the MHCC.

Manuel Santana asked if anyone had checked to see if there were any Log Items already approved on these items. DFO Danner said that there were Log Items, however, any recommendations voted on by the subcommittee and approved by the MHCC would take precedence.

- a. *§210.8 – Ground-Fault Circuit-Interrupter Protection for Personnel*  
*Motion to recommend that the MHCC Technical Systems Subcommittee approve the NFPA 70-2014 §210.8 as written without modification.*

Lois Starkey asked if the intent is to replace 3280 Subpart I with NEC in its entirety. Leo Poggione also asked for clarification.

James Demitrus said 3280 is a poorly written document that is difficult to use. He would like NFPA 70-2014 to be the only required document for electrical wiring.

**Motion to recommend that the MHCC approve NFPA 70-2014 §210.8 as written without modification.**

Maker: James Demitrus

Second: Rick Hanger

Meeting Vote: 4-0-0

*In accordance with the Bylaws, this preliminary action will be followed-up by letter ballot of the entire Subcommittee.*

- b. *§210.12(A) – Arc-Fault Circuit-Interrupter Protection*  
*Motion to recommend that the MHCC Technical Systems Subcommittee approve NFPA 70-2014 §210.12(A) as written without modification.*

Chairman Freeborne noted the Arc-Fault Circuit-Interrupter Protection (AFCI) is primarily to protect against faulty extension cords and appliances that could potentially cause a fire in the home.

Don Iverson said these breakers would cover all areas of the home except for the bathroom areas. He also informed the subcommittee that the regulation does not change in the 2017 edition of the code.

**Motion to recommend that the MHCC approve NFPA 70-2014 §210.12(A) as written without modification.**

Maker: James Demitrus

Second: Rick Hanger

Meeting Vote: 3-1-0

*In accordance with the Bylaws, this preliminary action will be followed-up by letter ballot of the entire Subcommittee.*

c. *§210.52(E)(3) – Balconies, Decks, and Porches*

*Motion to recommend that the MHCC Technical Systems Subcommittee provide an exception to NFPA 710-2014 §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.*

**Motion to recommend that the MHCC 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.**

Maker: James Demitrus                      Second: Rick Hanger

Meeting Vote: 4-0-0

*In accordance with the Bylaws, this preliminary action will be followed-up by letter ballot of the entire Subcommittee.*

d. *§406.12(A) – Tamper-Resistant Receptacles*

*Motion to recommend that the MHCC Technical Systems Subcommittee approve NFPA 710-2014 §406.12(A) as written without modification.*

Chairman Freeborne said he was at an event with little girl wondering around a house unattended and it would be reassuring to know that there was some protection to prevent an accident.

**Motion to recommend that the MHCC approve NFPA 70-2014 §406.12(A) as written without modification.**

Maker: James Demitrus                      Second: Rick Hanger

Meeting Vote: 3-1-0

*In accordance with the Bylaws, this preliminary action will be followed-up by letter ballot of the entire Subcommittee.*

e. *§550.4(A) & (B) – General Requirements*

*Motion to recommend that the MHCC Technical Systems Subcommittee provide an amendment to NFPA 710-2014 §550.4(A) & (B) by striking these two sections.*

*NFPA 70-2014 §550.4 General Requirements*

*(A) Mobil Home Not Intended as a Dwelling Unit.*

*(B) In Other Than Mobile Home Parks.*

James Demitrus clarified that this action only concerns §550.4(A) & (B) while the rest of §550.4 remains in force.

John Weldy said the order of precedence is confusing: Subpart I 3280.801, §550 in the NEC, then if it does not address electrical, then you go on the rest of the NEC. This is important because if this precedent order is accurate, then they do not apply to manufactured housing.

DFO Danner said that is the precedent under Subpart I as it is written. What is being proposed is to basically substitute NFPA 70-2014 NEC for Subpart I with the exceptions that the MHCC determines.

Chairman Freeborne concurred, but the whole section was cited back in 2005 and was carried forward in 2014.

DFO Danner said NFPA 70-2014 §550.4(A), mobile home not intended as dwelling units, is not applicable. HUD only has jurisdiction over manufactured homes intended as dwelling units.

All agreed that NFPA 70-2014 §550.4 (B) does not apply to manufactured housing.

**Motion to recommend that the MHCC provide an amendment to NFPA 70-2014 §550.4(A) & (B) by striking these two sections.**

Maker: James Demitrus

Second: Rick Hanger

Meeting Vote: 4-0-0

*In accordance with the Bylaws, this preliminary action will be followed-up by letter ballot of the entire Subcommittee.*

## Approval of the NFPA 70-2014 NEC Discussion

James Demitrus said he reviewed 3280 and found every reference to NFPA 70-2005 NEC and he finds 3280 to be unnecessary and said 3280 is not organized in a usable fashion.

Don Iverson said his understanding was that 3280 Subpart I would go away when NFPA 70-2014 was approved. It would be a simplification of the process.

Frank Brubaker and James Demitrus agreed that 3280 Subpart I is not a well-organized standard and MHCC should replace the whole section with the NEC. Mr. Demitrus said 3280 Subpart I is confusing and it would be more economical if there were one standard to use and it should be the NFPA 70 standard.

Leo Poggione asked what the cost implications would be.

Mark Weiss said it is one thing to keep 3280.801 and change/update the NFPA 70 references. However, a block replacement of 3280 Subpart I with NFPA 70-2014 NEC could have possible unforeseen costs and unintended implications. Mr. Weiss suggested deferring until the MHCC has more detailed analysis and review.

Lois Starkey agreed and reported that the MHI Technical Committee met and agreed that detailed review is needed.

Chairman Freeborne said that he has reviewed the issue and it is not really that big of a deal.

Don Iverson agreed and said there are only a few sections in the NFPA 70-2014 NEC that apply to a manufactured home. Approving NFPA 70-2014 would update Subpart A 3280.4 Incorporation by Reference, and Subpart I Electrical Systems. We would be updating the reference standard not replacing the whole section. This action makes it much easier as 3280 Subpart I is confusing. This will only affect: 1) tamper resistant receptacles; 2) AFCI protection; and 3) GFCI protection.

Frank Brubaker and Leo Poggione agreed that there needs to be some real calculations on this cost.

John Weldy said based on preliminary data, estimates are \$400. The issue is we would be jumping multiple code revisions from the NEC 2005, where HUD modified arc faults out, and the rest of the world moved on with 2005 and then 2011. We would be jumping from 0 arc faults to all arc faults. Mr. Weldy said the cost is too high and should only be required to meet the 2011 when arc faults were required in bedrooms.

Mark Weiss asked if the \$400 is cost to manufacturer or final cost. Mr. Weldy said that is the manufacturer's cost going into the home. Mr. Weiss said we are looking at over \$1,000 cost to homeowners. Mr. Weiss suggested that the subcommittee either keep 3280 Subpart I and update the references to the NEC, or go through and specify which sections apply.

James Demitrus said the industry is already using the NEC. We are talking about a couple of new things, tamper resistant receptacles, GFIs, and arc faults. We are catching up to where the industry is going and we are building homes today that will be around for 50 or 60 years.

DFO Danner reminded the subcommittee that Don Iverson provided a cost analysis at the January 2016 Louisville meeting.

**Motion to recommend that the MHCC recommend that HUD adopt the NFPA 70-2014 as a reference standard as modified by motions noted above.**

Maker: James Demitrus

Second: William Freeborne

Meeting Vote: 3-1-0

*In accordance with the Bylaws, this preliminary action will be followed-up by letter ballot of the entire Subcommittee.*

## New Business

These Log Items were assigned to the Technical Systems Subcommittee for review.

**LOG 113: § 3280.4(b)(1) Incorporation by reference**

**LOG 114: § 3280.4(i)(20) Incorporation by reference**

Since no one on the subcommittee reviewed Log Items 113 and 114 prior to the meeting, William Freeborne volunteered to take on this task. Kevin Kauffman reminded subcommittee members that the standards referenced in both log items were available prior to the meeting in the Dropbox folder for review.

## Open Discussion

James Demitrus would like to review 3280 with the committee and how it references the NEC. There are still items included in 3280 that have come out of the codes several decades ago. Subpart I §3280.803 Power supply, still references using a 50 amp extension cord as a power supply to the home.

Kevin Kauffman (AO) reminded the subcommittee members that there is a process for submitting changes to the MHCC for approval that involves submitting Log Items for their consideration.

James Demitrus and William Freeborne along with Don Iverson said they will collaborate to create log items.

## Wrap Up

Kevin Kauffman (AO) also reminded the subcommittee that all actions taken today will be followed-up with a letter ballot.

DFO Danner thanked the subcommittee and informed them that the next meeting of the Manufactured Housing Consensus Committee meeting will be held October 25-27, 2016 at the Holiday Inn–Capitol, 550 C Street, SW, Washington, DC 20024 (notice in the *Federal Register* today).

Chairman Freeborne thanked the subcommittee for their time and looks forward to the meeting in October.

## Adjourn

The meeting was adjourned at 2:25 p.m.

DRAFT

**Appendix A:  
Subcommittee Attendees**

<b>Technical Systems</b>			
<b>3280 Subpart F, G, H, I</b>			
	<b>Name</b>	<b>Email</b>	<b>Attendance</b>
Users	Mark Mazz	mark.j.mazz@verizon.net	N
	Garold Miller	garnoldmiller@gmail.com	N
	James Demitrus	portagepacer@aol.com	Y
	Timothy O'Leary	idahoinspector@frontier.com	N
Producers			
	Leo Poggione	leo@forahouse.com	Y
	Alan Spencer	aspencer@dakotalandhomes.com	N
General Interest / Public Official			
	Robin Roy	rroy@nextenergy.com.au	N
	Debra Blake	Debra.Blake@azhousing.gov	N
	William Freeborne	WFreeborne@aol.com	Y
	Rick Hanger	Rick.Hanger@state.co.us	Y

**HUD Staff**

Pamela Beck Danner, DFO  
Leo Huott  
Jason McLury  
Patricia McDuffie  
Gregory Miller  
Demetress Stringfield

**AO Staff, Home Innovation Research Labs**

Kevin Kauffman  
Nay Shah  
Tanya Akers

**MHCC Members**

Loretta Dibble  
John Weldy

**Others Participating**

Mitchell Baker, California Department of Housing and Community Development  
John Westfall, California Department of Housing and Community Development  
Manuel Santana, Cavco Industries  
Frank Brubaker, CMH Manufacturing  
Mark Weiss, Manufactured Housing Association for Regulatory Reform  
Mark Ezzo, Manufactured Housing Institute  
Lois Starkey, Manufactured Housing Institute  
Don Iverson, National Electrical Manufacturers Association  
Jonathan Stewart, National Electrical Manufacturers Association





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MHCC TECHNICAL SYSTEMS SUBCOMMITTEE MEETING  
September 27, 2016

# APPENDIX B: NFPA 70-2014 UPDATE BY SECTIONS



# MHCC: Technical System Subcommittee Meeting

## NFPA 70-2014 Update by Sections & Log Items

September 27, 2016

# NFPA 70-2014 Update by Sections (Motions from Task Group Meeting)

Task Group was working under the assumption that the 2014 NEC would be recommended for approval. The following were motions on potential modifications to the 2014 NEC:

**a. §210.8 – Ground-Fault Circuit-Interrupter Protection for Personnel**

Motion to recommend that the MHCC Technical Systems Subcommittee approve the NFPA 70-2014 §210.8 as written without modification.

**b. §210.12(A) – Arc-Fault Circuit-Interrupter Protection**

Motion to recommend that the MHCC Technical Systems Subcommittee approve NFPA 70-2014 §210.12 (A) as written without modification.

**c. §210.52(E)(3) – Balconies, Decks, and Porches**

Motion to recommend that the MHCC Technical Systems Subcommittee provide an exception to NFPA 710-2014 §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.

**d. §406.12(A) – Tamper-Resistant Receptacles**

Motion to recommend that the MHCC Technical Systems Subcommittee approve NFPA 710-2014 §406.12(A) as written without modification.

**e. §550.4(A) & (B) – General Requirements**

Motion to recommend that the MHCC Technical Systems Subcommittee provide an amendment to NFPA 710-2014 §550.4(A) & (B) by striking these two sections.

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- <del>89</del> 2008, Unitary Air-Conditioning and <u>&amp;</u> 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: <a href="http://www.ahrinet.org/site/686/Standards/HVACR-Industry-Standards/Search-Standards">http://www.ahrinet.org/site/686/Standards/HVACR-Industry-Standards/Search-Standards</a>	
Substantiating Documents:	No	
Additional Cost:	Unknown	
Cost Benefit Explanation:	Unknown	
Subcommittee Recommendation:		
MHCC Action:		
MHCC Modification of Proposed Change:		
MHCC Reason:		
Current Status:	Pending Recommendation from Technical Systems Subcommittee	
Log History:	1/19/2016 – MHCC Motion: Refer to Technical Systems Subcommittee. 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 Z21.47-19902012/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: <a href="http://shop.csa.ca/en/canada/gas-fired-domestic-and-commercial-heating-equipment-and-air-conditioning/ansi-z2147-2012csa-23-2012-/inv/27020082012">http://shop.csa.ca/en/canada/gas-fired-domestic-and-commercial-heating-equipment-and-air-conditioning/ansi-z2147-2012csa-23-2012-/inv/27020082012</a>	
Substantiating Documents:	No	
Additional Cost:	Unknown	
Cost Benefit Explanation:	Unknown	
Subcommittee Recommendation:		
MHCC Action:		
MHCC Modification of Proposed Change:		
MHCC Reason:		
Current Status:	Pending Recommendation from Technical Systems Subcommittee	
Log History:	1/19/2016 – MHCC Motion: Refer to Technical Systems Subcommittee. 8/19/2015 – MHCC Motion: Table pending review of referenced standard.	



## MANUFACTURED HOUSING CONSENSUS COMMITTEE

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**To:** Technical Systems Subcommittee (TSSC)

**From:** Kevin Kauffman, AO  
Home Innovation Research Labs, 400 Prince George's Blvd, Upper Marlboro, MD 20774

**Date:** October 21, 2016

**Subject:** Circulation of Final Results of TSSC Letter Ballot 9-27-2016 – Actions as taken at September 27, 2016 TSSC Teleconference

Below are the final results from the letter ballot of actions as taken at the September 27, 2016 TSSC teleconference.

[TSSC Ballot 9-27-2016 – Actions as taken at September 27, 2016 TSSC Teleconference](#)

**9 Members Eligible to Vote**

**7 Ballots Returned**

**2 Ballots Not Returned – Tim O'Leary, Robin Roy**

The number of votes required to pass an item with a 2/3rds majority is based on number of ballots returned minus the number of abstentions. All items on this ballot received at least the required number of affirmative votes, thus all items passed.

The final voting results are summarized in the table below.

Ballot Item No.	TSSC Meeting Action	Affirm	Negative	Abstain
I-1	Motion to approve the December 2, 2015, MHCC Technical Systems Subcommittee Meeting Minutes as modified.	6	0	1
I-A	Motion to recommend that the MHCC approve NFPA 70-2014 §210.8 as written without modification.	7	0	0
I-B	Motion to recommend that the MHCC approve NFPA 70-2014 §210.12(A) as written without modification.	6	1	0

Ballot Item No.	TSSC Meeting Action	Affirm	Negative	Abstain
I-C	Motion to recommend that the MHCC 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.	7	0	0
I-D	Motion to recommend that the MHCC approve NFPA 70-2014 §406.12(A) as written without modification.	6	1	0
I-E	Motion to recommend that the MHCC provide an amendment to NFPA 70-2014 §550.4(A) & (B) by striking these two sections.	7	0	0
I-2	Motion to recommend that the MHCC recommend that HUD adopt the NFPA 70-2014 as a reference standard as modified by motions noted above.	7	0	0

All comments received are organized by Ballot Item Number and can be seen below.

### Ballot Item I-1

**Motion to approve the December 2, 2015, MHCC Technical Systems Subcommittee Meeting Minutes as modified. (4 Affirm, 0 Negative, and 1 Abstain)**

#### Comment(s) Received – 2

##### Affirmative – 1

Alan Spencer – I agree with the action of committee.

##### Negative – N/A

##### Abstain – 1

Gary Miller – Not appointed or present at 2015 meeting, therefore have no knowledge of discussion.

### Ballot Item I-A

**Motion to recommend that the MHCC approve NFPA 70-2014 §210.8 as written without modification. (5 Affirm, 0 Negative, and 0 Abstain)**

#### Comment(s) Received – 1

##### Affirmative – 1

Alan Spencer – I agree with the action of committee.

##### Negative – N/A

##### Abstain – N/A

### Ballot Item I-B

**Motion to recommend that the MHCC approve NFPA 70-2014 §210.12(A) as written without modification. (4 Affirm, 1 Negative, and 0 Abstain)**

**Comment(s) Received – 1**

**Affirmative – N/A**

**Negative – 1**

**Alan Spencer** – While there has been some cost analysis provided I would recommend we have a more complete review of the application and necessity of ALL the NFPA 70-2014 implications.

**Abstain – N/A**

### Ballot Item I-C

**Motion to recommend that the MHCC 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.**

**(5 Affirm, 0 Negative, and 0 Abstain)**

**Comment(s) Received – 1**

**Affirmative – 1**

**Alan Spencer** – I agree with the action of committee.

**Negative – N/A**

**Abstain – N/A**

### Ballot Item I-D

**Motion to recommend that the MHCC approve NFPA 70-2014 §406.12(A) as written without modification. (4 Affirm, 1 Negative, and 0 Abstain)**

**Comment(s) Received – 1**

**Affirmative – N/A**

**Negative – 1**

**Alan Spencer** – While there has been some cost analysis provided I would recommend we have a more complete review of the application and necessity of ALL the NFPA 70-2014 implications.

**Abstain – N/A**



## Ballot Item I-E

**Motion to recommend that the MHCC provide an amendment to NFPA 70-2014 §550.4(A) & (B) by striking these two sections. (5 Affirm, 0 Negative, and 0 Abstain)**

**Comment(s) Received – 1**

**Affirmative – 1**

**Alan Spencer** – I agree with the action of committee.

**Negative – N/A**

**Abstain – N/A**

## Ballot Item I-2

**Motion to recommend that the MHCC recommend that HUD adopt the NFPA 70-2014 as a reference standard as modified by motions noted above. (5 Affirm, 0 Negative, and 0 Abstain)**

**Comment(s) Received – 1**

**Affirmative – 1**

**Alan Spencer** – I agree with the action of committee.

**Negative – N/A**

**Abstain – N/A**