

Residential Sprinklers Study Group Meeting Summary

December 15, 2021 9:00 a.m. – 10:05 a.m.

Virtual Meeting: <https://vadhcd.adobeconnect.com/va2021cdc/>

ATTENDEES:

VA Department of Housing and Community Development (DHCD) Staff:

Cindy Davis: Deputy Director, Division of Building and Fire Regulations (BFR)

Jeanette Campbell: Administrative Assistant, BFR

Jeff Brown: State Building Codes Director, State Building Codes Office (SBCO)

Richard Potts: Code Development and Technical Support Administrator, SBCO

Paul Messplay: Code and Regulation Specialist, SBCO

Florin Moldovan: Code and Regulation Specialist, SBCO

Study Group Members:

Mike Eutsey: First Vice President of Virginia Building and Code Officials Association (VBCOA) and Assistant Chief Building Official for Hanover County

Jimmy Cszmadia: Secretary of Virginia Fire Prevention Association (VFPA) and Inspector with the Prince William County Fire Marshal's Office

Garrett Dyer: Virginia Department of Fire Programs (VDFP)

Mike Poole: American Institute of Architects (AIA) Virginia and Principal of Poole & Poole Architecture

Overton McGehee: Habitat for Humanity

Reid Walters: Town Manager of the Town of Independence

Mike Nannery: Assistant Director of Engineering and Development for Chesterfield County Utilities

Meredith Raetz: Planning Engineer with Virginia American Water

Andrew Clark: Homebuilders Association of Virginia (HBAV)

Other Interested Parties:

Andrew Milliken: Virginia Fire Chiefs Association (VFCA), Virginia Fire Services Board (VFSB) - Chairman of Fire Codes and Standards Committee

Keith Johnson: VFCA, VFSB Vice Chair and on the Board of Housing and Community Development (BHCD)

Sean Farrell: VBCOA and BHCD

Jason Lewis: VBCOA

Timothy Loscomb: Vice President of American Fire Sprinkler Association (AFSA) – Virginia chapter

Todd Strang: Spotsylvania County Fire Official

Study Group Members not in attendance:

Ellis McKinney: Virginia Plumbing and Mechanical Inspectors Association (VPMIA)

Robbie McCraw - Carroll County Board of Supervisors and E&L Diamond Electric, Heating, Cooling and Plumbing

AGENDA AND DISCUSSION ITEMS:

Power Point presentation is available on the DHCD website, with a link on the cdpVA website

1) Welcome

Jeff Brown: Welcomed participants to the Adobe Connect meeting. He noted that these meetings will be recorded. There will be breaks after each hour, although today's introductory meeting probably will not be much longer than one hour. DHCD staff is available for technical assistance. Please keep microphones muted if not speaking, and introduce yourself if you are speaking. Please be professional, respectful and concise when speaking. Meetings are open for anyone to attend, but discussions should only include Study Group members.

2) Introductions

DHCD staff members introduced themselves. Study Group members introduced themselves.

3) Overview of VA Code Development Process

Jeff Brown: The Virginia code development cycle runs about every 3 years, starting with the latest international codes and considering state amendments proposed by stakeholders during the development process. The Board of Housing and Community Development makes decisions on each proposal and adopts the final Virginia building and fire regulations. The 2018 building and fire regulations became effective July 1, 2021.

Jeff gave an overview of the 2021 Virginia Code Development Cycle with approximate dates by month of when each of the steps happen, i.e.: cdpVA opened for proposals in October 2021; Notices of Intended Regulatory Action (NOIRAs) were published in November 2021; groups meet to discuss code change proposals between December 2021 and June 2022; BHCD considers code change proposals in September 2022 and proposed regulations in December 2022. The 2021 codes become effective in Virginia in the fall or winter of 2023.

The BHCD approved a new policy for 2021 to limit new code change proposals to the proposed phase and not after the proposed regulations have been published. New code change proposals will not be accepted in the final phase, which is limited to errors or minor corrections. Anything new that arrives in the final phase will be considered during the 2024 code development cycle.

va.cdpass.com is the Virginia online code development system, which accepts code change proposals from anyone. In addition, all of the information provided and captured during the process is available for viewing.

Study Groups study specific topics, identify areas of consensus and disagreement, and determine if code change proposals or other solutions are appropriate. They may review proposals, provide analysis, make recommendations, and/or develop code change proposals. Proposals and recommendations of Study Groups are reviewed by the General Workgroups prior to BHCD consideration. Study Groups are disbanded after they complete discussions.

Sub-Workgroups Review all code change proposals within their subject topics. They make recommendations on each proposal, including negotiating compromises where appropriate, in an attempt to form a group consensus on each proposal. They may also develop new code change proposals, or support proposals submitted by others by joining the proposal as a proponent. Proposals and recommendations of Sub-Workgroups are reviewed by the General Workgroups prior to BHCD consideration.

General Workgroups are open to all public for discussion and comment. They will review all proposals received, and aim for a consensus to approve or disapprove each one. They will recommend the proposals to the BHCD in blocks, sorted by those receiving consensus to approve or disapprove, as well as non-consensus proposals. The consensus proposals are usually voted through as recommended. Non-consensus proposals go to the BHCD in their entirety, including summaries and all related documents. Recommendations from this Study Group, for example, will go to General Workgroups and then to the BHCD as outlined.

codes.iccsafe.org/codes/Virginia provides free online access to Virginia and ICC code books.

4) Background

IRC 2006: Was the first edition of the IRC that included provisions for sprinklers in residential structures or one- and two-family dwellings and townhouses. It was added as Appendix P “Fire Sprinkler System” and contained provisions for the installation of fire sprinkler systems in dwellings covered by the IRC. The Appendix is not mandatory unless specifically referenced in the adopting ordinance.

VRC 2006: No significant changes (IRC appendix not incorporated)

IRC 2009: New Section R313 “Automatic Fire Sprinkler Systems” mandates the installation of an automatic fire sprinkler system in townhouses and one- and two-family dwellings. The system is to be designed and installed in accordance with new Section P2904 “Dwelling unit Fire Sprinkler Systems” or NFPA 13D.

VRC 2009: Amends Section R313 of the 2009 IRC to make the installation of sprinkler systems optional. Section R329 “Fire Extinguishers” was added, which mandates the installation of a fire extinguisher with a rating of 2-A:10-B:C in the kitchen area, if the dwelling is not equipped with an automatic fire sprinkler system.

IRC 2012: No significant changes

VRC 2012: No significant changes

IRC 2015: Allows the NFPA 13D standard to be complied with for the design and installation of systems in townhouses (Section P2904 remains one of the options available). This change brings the townhouse requirements in line with those for one- and two-family dwellings.

VRC 2015: No significant changes

IRC 2018: No significant changes

VRC 2018: No significant changes

2018 Code Development Cycle: The Board of Housing and Community Development (BHCD) **approved** the following proposals, related to sprinkler systems, for inclusion in the 2018 VRC:

- **RB302.2.2-18** – allows water-filled fire sprinkler piping in cavity of common walls shared by townhouses.
- **RB302.2.6-18** – exempts townhouses protected by a fire sprinkler system complying with Section P2904, NFPA 13, NFPA 13R or NFPA 13D, from the structural independence requirement.
- **RB302.3(1)-18** –allows a fire-resistance rating reduction from 1 hour to 30 minutes for 2-family dwellings, if protected by an automatic sprinkler system complying with NFPA 13R or Section P2904 of the VRC

The BHCD **disapproved** proposals **RB310.11-18 and RB313.1-18**, requiring sprinkler system installation in both townhouses and one- and two-family dwellings.

Jeff: During the Board’s consideration of proposal RB313.1, a suggestion was made to amend the proposal to only require sprinklers in townhouses (and not one- and two-family dwellings). This generated a lot of discussion. Ultimately, the Board voted to not require sprinkler systems in townhouses. However, part of the Board’s motion and vote included a directive to DHCD staff to convene a group of interested stakeholders to continue the discussions regarding townhouse sprinklers during the 2021 Code Development Cycle.

2018 VRC: for townhouses and one- and two-family dwellings, automatic fire sprinkler systems are optional. Where installed, automatic fire sprinkler systems can be designed and installed in accordance with NFPA 13, NFPA 13R, NFPA 13D or VRC Section P2904.

2021 IRC: No significant changes

In other states: Sprinklers are required in all new townhouses and one- and two-family dwellings in California, Maryland and Washington DC. Sprinklers are required in some (based on size /height) townhouses and one- and two-family dwellings in New York and Massachusetts. Approximately 20 states allow local jurisdictions to mandate the installation of sprinklers in townhouses and one- and two-family dwellings.

Jeff: This is the latest information we were able to locate based on reports from NFPA and HBAV. He asked that if anyone has any updates or corrections, to please let DHCD know. These statistics are also not specific to

townhouses, so if anyone is able to provide information on states and localities that only require sprinklers in townhouses, it would be very helpful.

Study Group Objectives: Gather information and data for review and discussion. Identify areas of agreement and/or disagreement. Summarize findings or recommendations. Review any related proposals submitted during the 2021 cycle.

Jeff: There is a lot of information and data available from various sources, regarding the cost and effectiveness of residential sprinklers. This group will need to look at that data and identify or highlight the most helpful data to assist the Board in making decisions. Again, if anyone is able to provide data specific to townhouses, it would be helpful. Based on previous discussions around this topic, there will be areas of disagreement and those areas will need to be identified. If the group is able to resolve any of those disagreements during discussions, that would be even more helpful to the Board.

Jeff: Findings and/or recommendations will need to be summarized, keeping in mind that any recommendations developed by this group will be provided to all stakeholders for review and comment, prior to the Board making any final decisions on residential sprinkler related proposals.

Important discussion topics (future meetings): Safety impact of residential sprinklers. Cost(s) of residential sprinklers. Cost impact of residential sprinklers. Other?

Jeff: Has named a few topics that he believes are critical for the group to discuss and attempt to provide some clarity around. This is not intended to be an exhaustive list. These are topics where a lot of questions typically come up when discussing residential sprinklers, and he thinks it will be important for this group to discuss them, as he assumes that these will be some of the topics discussed by the Board when they consider any proposals in this cycle. If this group can help provide some clarity on any of these items, he thinks it will be very helpful to the Board. He doesn't expect anyone to be prepared to discuss them in depth today, but as data and information is gathered related to these topics, the group should be preparing for more in-depth discussion at future meetings.

5) Discussion

Mike Nannery: As a utility engineer, he's curious if there was any data compiled and discussed, during the 2018 cycle discussions on fire events that happened regionally (as a result of heating, kitchen fires, etc), which those in the Study Group can review.

Jeff: There was not a lot of discussion or review by stakeholders before proposals came before the BHCD and decisions were made. When the sprinkler proposals came to Workgroups, the proponents weren't available to discuss. They went forward as non-consensus. There was not much discussion about stats, which lead to board hesitancy on code changes. He suggested the group look at cdpVA to see what was submitted with the proposals last cycle. Jeff also asked the group to find and bring stats to the next meeting.

Mike: His concern is that he doesn't want to start from scratch if there were already statistics available from the original business case for these discussions.

Jeff: The initial proposals were for sprinklers in 1- and 2-family dwellings and townhouses. They were non consensus, but there was additional discussion around requiring sprinklers only in townhouses. This group's discussions will continue to focus on townhouses, so it would be good to search for data in other localities that is specific to townhouses.

Garrett Dyer: Is there a preferred way to organize or present the research and data collection at the next meeting?

Jeff: Asked everyone to think about what they want to discuss and submit it to DHCD before the next meeting (see assignments section). This will help DHCD to organize the data collected and prepare the agenda for the next discussion.

Andrew Clark: Thanked Jeff and Cindy for getting this group together. It is good to dig into some issues that were not addressed significantly in the last code cycle. He would like to know if this group will be able to

schedule meetings around the General Assembly meetings, as it may result in a scheduling conflict for him and some others in the group.

Jeff: The tentative second meeting date for this group is January 11th, which is right before the General Assembly Session starts. Rather than wait until Session ends, he may send a poll to members of this group, and schedule the next meeting for the date that most members can attend.

Meredith Raetz: Wants to know if there is any intention to reach out to other states to see what they adopted and what happened with implementation. We may be able to leverage from their experiences, especially states physically close to us, which may have had similar challenges or demographics.

Jeff: We do hope to do some of that. For now, the general homework assignment is to gather readily available information. Perhaps after the next meeting, we'll be more prepared to reach out to other localities. DHCD will also do some research and bring to the group to fill in some blanks as we move forward. It would be great if we can find data from localities that mandated sprinklers for townhouses only. Most of the information he has now is general to one- and two-family dwellings and townhouses. He knows that some members of this group have studied this issue in the past, and can bring some data we can start with. We'll definitely be interested in the various costs and fees of systems and installation and also challenges for places without public water.

Keith Johnson: Stated that he is in a unique position because he sits on the BHCD and wanted to give some overview. He is grateful for this group because he doesn't think that big issues like this can be solved year after year in the final code development or code approval process. He said a group like this one is needed to gather all the facts and data. There are several new members on the board this year, who were not part of this discussion last cycle. It's about education; there are pros and cons, costs and accurate information and data to present to the Board, because they make the final decisions. He says that when they get to the final vote for the non-consensus items that there is so much to discuss with misconceptions and facts and figures being thrown about and it becomes mind-boggling, especially for people without a fire background. He is grateful if this group can get all the facts first, so that the board can be educated and discuss with correct information.

Jeff: It will be key for this group to gather all the information and sort through it so that it doesn't have to be done at the last minute, while trying to make decisions. The group won't decide anything for the board, but will clarify the data so that the board can make their decisions.

Mike Nannery: Please clarify the charge for this 2021 Study Group – is it to consider townhouses and 1- and 2-family dwellings, or only townhouses?

Jeff: Based on the last discussion and the BHCD directive, it's about townhouses. Some of the data available is from other states that address both dwelling types, so some data may or may not be relevant and helpful to us.

Mike: There's a new housing product called 2 over 2 condos. From a utility standpoint, we see that they have been sprinkled. Will they also be discussed?

Jeff: It sounds like they may be treated as multi-family dwellings.

Jimmy Csizmadia: They are multi-family, which already require sprinklers because they are 4 stories.

Mike Poole: Confirmed that the 2 over 2 buildings fall under the IBC because they are 4 stories and do not necessarily have an independent fire wall between them. He works in multiple localities in the country and maintains a code spreadsheet based on projects in the various states. He can help provide information on other states. Some states that have adopted a state-wide building code, the smaller localities are not applying their own exceptions. In other states that have not adopted a state-wide building code, exceptions can range wildly in the interpretations. He is happy to share information, since they do track based on various building types. Single family rentals are a unique product coming into the marketplace now, which opens a lot of questions when dealing with the tenant instead of the owner. Will there be other discussion besides sprinklers? There are other safety measures that can be used and we should also mix them into our discussions.

Jeff: That information will be very helpful as we discuss the proposals. Please provide what is available for the next meeting.

Mike pool will be happy to share that information.

6) Assignments and Next Steps

Prior to the next meeting, please:

- Reach out to other members and/or DHCD staff with any questions related to information discussed today
- Identify areas of interest or concern that you would like to discuss at the next meeting (Provide to DHCD by December 27th)
- Identify and provide helpful/relevant information (reports, data, etc.) for the group to review (Provide to DHCD by December 27th)

Note: If any member wants to share information with the group between meetings, please send it to DHCD staff and we will distribute it to our email list to make sure we do not miss any interested parties that might be added to our list as we go along.

7) Next Meeting

January 11, 2021 9:00 am to 3:00 pm

(Lunch break from 12:00 pm to 1:00 pm)

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