

**Residential Sprinklers Study Group**  
**Meeting Summary: May 17, 2022 9:00 a.m.**  
Virtual Meeting: <https://vadhcd.adobeconnect.com/va2021cdc/>

**ATTENDEES:**

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

**Jeff Brown:** *State Building Codes Office 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:**

**Andrew Clark:** *Homebuilders Association of Virginia (HBAV)*

**Keith Johnson:** *Virginia Fire Chiefs Association (VFCA), Virginia Fire Services Board (VFSB) Vice Chair, and member of the Board of Housing and Community Development (BHCD)*

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

**Ron Clements:** *Chesterfield County Building Official, Virginia Building and Code Officials Association (VBCOA)*

**Jason Laws (Stand-In for Mike Eutsey):** *Chesterfield County Deputy Building Official; VBCOA*

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

**Other Interested Parties:**

**Andrew Milliken:** *VFCA, VFSB Chairman of Fire Codes and Standards Sub-Committee*

**Jeffrey Shapiro:** *International Code Consultants*

**John Ainslie**

**Sean Farrell:** *Prince William County*

**Glenn Dean**

**Study Group Members not in attendance:**

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

**Reid Walters:** *Town Manager of the Town of Independence*

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

**Meredith Raetz:** *Planning Engineer with Virginia American Water*

**Overton McGehee:** *Habitat for Humanity*

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

## **AGENDA AND DISCUSSION ITEMS:**

### **Welcome**

Jeff Brown: Agenda and documents were sent earlier to Study Group members, and are also in the file pod. The meeting is being recorded. DHCD staff can help with any technical problems. There will be a break every hour, and an hour for lunch from 12-1 if the meeting runs that long. Only Study Group members will discuss topics in the meeting, but others are welcome to sit in and listen and contact Study Group members outside of the meeting.

### **Discussion**

#### **Townhouse Sprinkler Plans:**

Staff shared a set of plans, previously submitted by Jimmy Csizmadia on the screen for the group.

Jeff: Explained the at the first couple of items on the agenda (townhouse sprinkler plans and documents submitted by Andrew Clark) were continued from the last meeting. Opens the floor for comments.

Keith Johnson: Sprinkler systems being allowed to use a single pipe in a row of townhouses is a huge benefit. Not having to install a window well is a huge cost savings. When you look at these plans, these aren't the only way to do business. There are lots of tradeoffs that can be done when looking at the installation of a sprinkler system. It's very hard to get plans from the sprinkler contractors since there's so much competition.

Andrew Clark: Asks Jeff Shapiro to send out his presentation that presented to interested group members prior to today's meeting. Some of these plans include 1" water meters and costs from localities for upsizing to a 1" meter is costly. These plans validate some of the concerns about the key driver of costs, which are water connection fees and meter fees. The incentives mentioned for developers are great, but they are outside the scope of the building code. Thanks, Jeff Shapiro, for the presentation.

Keith: The cost in Loudon County to upsize to a 1" meter is not expensive at all.

Andrew: I compiled costs from localities. We found places like Henrico got up to \$17,000 when you move up to a 1" meter. Chesterfield went up to \$14,000. This is one of those rare incidences where Loudon is on the low-end of the cost spectrum. To Keith's point, it does run the gamut, but it does jump up significantly in some localities.

#### **Documents submitted by SG Member Andrew Clark:**

Jeff: Turns the floor over to Andrew to provide any comments on the documents he submitted.

Andrew: What I attempted to do in these documents is show how the industry approaches not only sprinklers but building codes in general. The data here is fascinating, which has

been done by the general assembly. On Page 6 you'll see a number of households where housing is a cost burden, which is the threshold where housing costs become unsustainable. Nearly 30% of households are facing those cost burdens. On page 8 you'll see a table that shows the median home sales prices increasing. We're seeing a crisis where people can't afford houses. When we're approaching codes, we try to find a balance of costs and try and fit it into a bigger picture. We pulled these documents together to show some insight. This isn't anything to do with profit. These are costs passed on to the consumer. I know we'll probably disagree on the code proposals but it's at least important to know where folks are coming from. The first document is related to fire data. It's important to support the department of fire programs to help pull together all of these essential data points from localities to find where the pain points are so we can evaluate that as a committee or as the Board of Housing every time we have a code cycle to really prioritize our initiatives and figure out what are the best ways to tackle the problems that we're seeing in VA. That's outside of this discussion but hopefully this information is helpful.

Keith Johnson: What Andrew is saying regarding affordable housing was forefront at the BHCD retreat and meeting last week, and I agree that we should look toward affordable housing to not price any homebuyer out of the market. I don't think you can blame the fire services for those costs. My ask was to look for affordable safe housing. It's the charge of fire and building codes. If I, as a fire chief, have a way to prevent injuries and deaths to civilians and firefighters, that's my charge. That's what I'm going to do. I can't put a price on a life or an injury. What I will offer is that the incentives offered by the building codes will help offset the cost of these systems. The ultimate goal is to not cost anything more for these systems and I think we can get there through the incentives and some of the insurance and tax credits for these systems.

Andrew: Would anyone from the fire services side agree that the development incentives are outside of the building code and are local-driven?

Keith: We mentioned the developer cost savings vs the building cost savings and many times those are the same entity. Those incentives are built into the building codes now, so there's nothing we need to do to put them in the code. I always get confused when we talk about costs because if we are saving money for the developer, certainly the builder is going to pay less because of the development process and ultimately the consumer will pay less.

Andrew: The land development side incentives are options provided by the locality, correct? I get that there are some references to them in the code, but there's nothing that requires, say, Halifax County to provide development incentives for a developer for residential sprinklers. Reduction in street widths, connectivity requirements, all of which would be beneficial, but none of that is required. That's purely at the discretion at the local gov't.

#### **Documents submitted by SG Member Keith Johnson:**

Jeff: Turns the floor over to Keith to provide comments on the documents he provided.

Keith: Just a couple of things. The HFSC Fact Sheet complements the NFPA documents I provided. I don't need to go through the benefits of sprinklers since everyone agrees on the benefits, so I'll focus on costs. Things have changed since the early 80's. Lumber is different,

furnishings in the home are different. Residents have less than 2 minutes to get out of a house in the event of a fire. When sprinklers are present, 96% of fires are kept in the room of origin. Sprinklers aren't designed to totally put the fire out, but they are designed to get civilians out of homes. There's also data that shows that homebuyers, especially millennials who make up 80% of homebuyers, want sprinklers in their homes once they learn about them, but builders aren't offering them. There are two different documents I'd encourage the group to focus on: US Fire Experience with Sprinklers and US Fire Loss Data. From 2015-2019 sprinklers operating in home fires contained 96% of fires to the area of origin. The data that's all provided goes into great detail in the reduction of fires civilian injury and death, and firefighter injury and death.

Jimmy: Wants to go on the record stating that the presentation from Jeff Shapiro this morning was great and the documents provided by Keith are great.

Keith: To touch on Andrew's incentives question earlier. The incentives are built into the code so aren't the localities providing those incentives? How can a locality deny that?

Ron Clements: We need to separate the building code incentives from the site work incentives. The way the fire prevention code is set up, in section 503, that's the only provision I can find for building code incentives, which isn't to say there aren't others, but section 503.1.1 does allow an exception to the maximum distance a building can be from the fire apparatus road when an NFPA 13d or 13r system is provided in a building. The problem is, if you look at 503.1, the first exception allows the locality to have their own access road requirements, which they may not allow those exceptions. And Ch. 1 of the fire prevention code allows localities to have more restrictive ordinances. It may be a worthy conversation to have to look into that. Is there more that could be done on the site side? Should there be some limitation put into Title 27 with regard to localities overriding the fire prevention code with more restrictive requirements.

Keith: Also references 507.5.1.2 for incentives.

Jimmy: The problem is with the developers – they want to put as many homes as possible in a given area.

Ron: Just to clarify what I meant by the exception. I do not see any such exception in 507 similar to 503 that allows a local written policy to override these sections. The broader point is in 101.5, which allows a locality to override the requirements of the fire prevention code via local amendment. It may be worth looking at this at the statutory level to prohibit removing sprinkler incentives in local regulations.

Jeff: The regs do say the localities can do something more restrictive. When dealing with things like fire roads and fire hydrants, which are outside the scope of construction, the localities could do something with those. If we want to guarantee these tradeoffs should be made available to everyone, that's something we should look at further.

## **Other Documents and Considerations**

### **Code Change Proposals:**

Jeff: The three proposals have been submitted in cdpVA and will be discussed at the June General Stakeholder Workgroup meetings. Since they are related to townhouse sprinkler systems, we wanted this group to have an opportunity to discuss them today, ahead of the June meetings, so we can capture any comments in the study group report. We will look at each of these and see if there's any thought or discussion surrounding them. If you see

something you really like, we can look into the study group supporting it. We will allow code change proponents to provide an overview of their proposal and answer related questions from study group members.

**RB313.1-21 – Andrew Milliken**

Andrew M.: Provides an overview of the proposal, which requires automatic fire sprinkler systems in townhouses.

Andrew Clark: When we started this initial conversation, and Keith has mentioned it on several occasions, our focus was going to be only on townhouses. Now, we have proposals for townhomes and single-family homes - I thought the intent of this workgroup was to focus on townhomes.

Keith: All three proposals cover townhomes, but Glenn Dean's also covers single-family homes. When you look at the different types of systems, the code allows them to be installed in accordance with P2904, 13D, or 13R. So that's up to the builder.

Andrew Clark: Maybe we can pull up the meeting minutes from one of our prior discussions, but I thought the comment was made that there was no point in having a conversation about 13R.

Jeff: This is just intended to be an opportunity for this group to look at and discuss these residential sprinkler proposals that were submitted in cdpVA by individuals that are not part of this study group. If a member does not want to support a proposal because they feel it is outside of the scope, they are welcome to do that.

Keith: I would be fine recommending disapproval for proposals that deal with single-family homes and having the focus of the group being only townhomes.

Jeff: Asks the group how they want to proceed with proposals that reference single-family homes.

Keith: Fine with removing single-family dwelling discussions.

Andrew Clark: We can make it clear that the group did not discuss single-family and two-family system design. Or we move the single-family proposals as consensus for disapproval. This was a workgroup for townhomes and here we are covering the entire gamut of houses.

Jeff: We do not expect an official recommendation on these proposals from this group. Our thought is to collect comments on these proposals from this group to provide to the Board. If we feel like we do have complete consensus and we want to shift gears and make a recommendation we can do that, but the intent was never to make a recommendation. The intent is only to collect comments to provide to the Board.

Andrew Clark: I'm good with that. I'll respect the process. If the workgroup will not make a formal recommendation, then I'm good with that. I'll let the proponents figure out how they want to handle their individual proposals.

Andrew Milliken: Just to clarify. This proposal does not change or modify anything with regard to P2904, 13D or 13R. That's existing

language not being changed by this proposal. That's good feedback if there's a desire to limit it to P2904 and 13D systems.

Keith: In the spirit of collaboration, I agree with Andrew Clark 100%. This workgroup has not spoken about and will not be speaking about residential sprinkler systems in residential single-family homes. We are focusing on P2904 and 13D systems. 13R is existing language.

Jeff: Staff will capture everyone's thoughts on that and will be clear on that in the report. We will have the group review it and provide any feedback or needed corrections. We will get that report drafted and sent out to the group as soon as we can to give everyone 4 or 5 days to review it and provide comments.

Jimmy: I agree with excluding residential single-family homes. Andrew, I think the biggest thing here is that there are townhouses now that require a 13R system. That's why the NFPA standards are there. Once you get above 3 stories, it's got to be a 13R system.

Andrew Clark: If the 13R system language is in there, could a locality require the home be built to that standard?

Jimmy: We can't arbitrarily pick which system we want the builder to use. It's based on the design of the building. We can't force a builder to use a 13R system.

Ron Clements: The permit applicant or the designer would choose which system to use. The code official does not have the authority to pick the system.

Mike Nannery: My recollection for the task of the workgroup is to focus on townhouses, not single-family homes.

**RB313.1(2)-21** – Glenn Dean

Jeff: Opens the floor to Glenn Dean

Glenn: Given the discussions so far, no further comments at this time.

**RB313.1(3)-21** – Jeff Shapiro

Jeff Brown: Opens the floor to Jeff Shapiro.

Jeff Shapiro: Would like to bring up a couple of points. The terminology used in VA – I'm not sure why you vary from the model code. Model code language is "automatic sprinkler system" instead of "automatic residential fire sprinkler system." I would like to point out that the model codes do not include NFPA 13 or 13R. When I submitted my proposal last cycle, I was told that I had to include NFPA 13 and 13R. I think it would be better to remove 13 and 13R. My proposal here is a bit different than Andrew's. I looked at the approach taken in Washington State, which over the course of two cycles eventually passed a statewide requirement for townhouses to be fully sprinklered. My proposal provides an exception to only require townhouses to be sprinklered when they are over three townhouse units to accommodate smaller builders in rural areas. My desire was to provide an option to build townhouses without sprinklers up to three units.

Andrew Clark: Has the department of fire programs weighed in on these proposals? Do they support one over the other? Are they neutral?

Keith: No, the codes and standards committee is meeting today so they will be looking at them today.

Andrew Clark: So that is the Board, correct? But what about the department?

Keith: The department itself? No. The Fire Services Board is a part of the Department of Fire Programs and the Codes and Standards Committee is a part of the Fire Services Board. And I just wanted to comment on Jeff's proposal that the nuances of Virginia's code and the model codes are interesting and I appreciate those being brought up. The exception in the proposal for more than three townhomes is another example of trying to get consensus between all of the stakeholders. I don't know what else we can do to try and improve the civilian safety, firefighter safety, and building safety in our communities.

Andrew Clark: It would be nice to figure out what the position of the Fire Services Board is. I don't know what we do about the group expanding its scope beyond its original intent from focusing to townhomes to include single-family homes.

Keith Johnson: The VFCA is in support of both Andrew Milliken's proposal and Jeff Shapiro's proposal.

Andrew Clark: Asks staff to send him the audio and minutes from the previous meeting to review comments by Keith Johnson regarding 13R systems.

Jeff Brown: It seems like there is consensus from the group to remove 13 and 13R systems from the proposals. What does everyone think about that?

Keith: Can we ask the proponents of both code proposals if they are okay with that?

Jeff Brown: Yes. Andrew Clark, would that help with some of your concerns if the proponents did that?

Andrew Clark: Yes, it would certainly bring us consistent with the intent of the workgroup. I'd ask to strike the one and two-family language as well.

Jeff Brown: Andrew Milliken, would you be comfortable suggesting that floor amendment when we get to June on your proposal?

Andrew Milliken: Sure, I would have no objection to that.

Jeff Brown: Jeff Shapiro, are you in agreement with suggesting that floor amendment in June?

Jeff Shapiro: Actually, it would be best to just strike Virginia's amendment to get us back to the model code. It should be done in townhouses and one- and two-family dwellings.

Jeff Brown: Basically, what we are recommending is taking R313.1.1 and reverting it to the model language: "Automatic sprinkler systems for townhouses shall be designed and installed in accordance with Section P2904 or NFPA 13D." Andrew Milliken are you good with that for your proposal, as well?

Andrew Milliken: Yes.

Jeff Brown: We will get those floor amendments in a document based on discussions from the study group. I know Andrew Clark had concerns with one- and two-family dwellings in Glenn Dean's proposal, but he's not here right now so we can't ask him for a friendly amendment. Andrew Clark, we will capture your comments regarding the scope and intent of the study group.

Keith Johnson: I'm happy to meet with Andrew Clark and Glenn Dean to discuss removing that part from his proposal.

## **Other**

Andrew Clark: I should know this, but are the June workgroup meetings in person, virtual, or hybrid?

Jeff Brown: They will be virtual

Andrew Clark: Alright, and there's opportunity from anyone from the public to speak on any of the proposals that are submitted or should folks submit public comment prior to that through cdp? How do you anticipate comments during that meeting?

Jeff Brown: Those will be open to anyone who wants to attend. We will always accept written comments via email. If there are comments in cdp VA before the agenda goes out, we will include those.

Andrew Clark: Thanks DHCD staff for all the work they do.

Jeff Shapiro: Wants to know the end time for the general workgroup meetings?

Jeff Brown: So far, we've just gone through the items on the agenda and some have been completed in a few hours. We typically try to wrap up around 3pm. It will not go past 5pm. If we have to end for the day without addressing everything on the agenda, we will take care of those at another date. I'd say mark your calendar to at least 3pm and 5pm at the latest.