

In-Building Emergency Communications Study Group

Meeting Summary: February 24, 2022 9:00 a.m. to 10:26 a.m.

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

ATTENDEES:

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

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*

Travis Luter: *Code and Regulation Specialist, SBCO*

Jeanette Campbell: *Administrative Assistant, Division of Building and Fire Regulations (BFR)*

Study Group Members:

Jamie Wilks: *Madison County Building Official; VA Building and Code Officials Association (VBCOA) committee member; prior Building Official in Matthews County; Retired from Norfolk fire department*

Robert (Jonah) Margarella: *Architect at Baskervill (Studio Director); 24+ years in architecture; member of State Building Code Technical Review Board (SBCTRB)*

Steve Shapiro: *Retired Building Official, City of Hampton-34 years; LLC Shapiro Associates; Apartment & Office Building Association (AOBA); prior President of International Code Council (ICC)*

Dana Buchwald: *Senior Account Manager (in-building signal for emergency responders) at Backhaul Engineering*

Debbie Messmer: *Virginia Department of Emergency Management (VDEM)*

Andrew Milliken: *VA Fire Chiefs Association (VFCA), VA Fire Services Board (VFSB) Chairman of Fire Codes and Standards Committee, (also submitted a proposal on this issue)*

Tammy Breski: *Broadband Project Manager, VA DHCD Division of Community Development; prior Verizon Construction Manager*

Other Interested Parties:

Ron Clements: *VFSB Chairman of Fire Codes and Standards Committee*

Sean Farrell: *Prince William County*

Study Group Members not in attendance:

Troy Knapp: *Electric Plan Reviewer with VA Department of General Services (DGS), Division of Engineering and Buildings (DEB), 20+ years Electrical Engineer*

Joseph (Tread) Willis: *International Association of Electrical Inspectors-VA (IAEI)*

Dwayne Tuggle: *Amherst, VA Mayor; VA State Police-retired*

Jim Crozier: *Virginia Association of Counties (VACO)*

Patrick Green: *Virginia State Police (VSP)*

Jodi Roth: *Virginia Retail Federation*

Robert Melvin: *Restaurant, Lodging & Travel Association (VRLTA), Director of Government Affairs*

Joshua (Jay) Davis: *Virginia Department of Fire Programs (VD FP)*

Gerry Maiataco: *Virginia Fire Prevention Association (VFPA)*

DISCUSSION:

Welcome

Jeff Brown: Welcomed everyone to the meeting, reminded the group that the meeting will be recorded. Asked members to stay muted when not speaking, and identify themselves when they do speak. There will be a 5 minute break each hour, and an hour for lunch from 12-1pm, if the meeting runs that long. The meeting is open to the public, but the discussion is limited to the Study Group members. Group members are listed in a pod at the bottom of the Adobe meeting room.

Andrew Milliken Proposal

Jeff: This proposal basically changes responsibility of installation of the in-building emergency system to the building owner. It also references IFC sections 510.4 and 510.5 for the design and installation of the systems. Andrew did get input from some study group members since the last meeting. He would like to complete the draft after today's discussion. If there are any co-proponents to the proposal, they will be added when it's ready to be submitted.

Andrew Milliken: He did get some group feedback and not many changes have been made. He wants to bring system responsibility to building owners, as it is in most parts of the country. There is a sentence added to the end of section 918.1.1, saying that the requirement is no greater than what is already being provided by the jurisdiction. This language from the model code would not be incorporated in 510.4 and 510.5, and would be the basis for the requirements. He's interested in hearing any additional comments or suggestions from the group.

Steve Shapiro: He and Robert Melvin, and those they represent all agree that they do not want the responsibility to be on the business owner.

Jeff: Will send an email after today's discussion to get a vote from all Study Group members to see who supports or does not support the proposal. Co-proponents will be added to the proposal, and all the notes will be included in the final report.

Jamie Wilks: He supports this proposal, and he doesn't think the responsibility should be on the individual localities. The systems are very important for the first responders and for the safety of all.

Steve: Asked for confirmation that the people who do not support the proposal will be noted somewhere, and that the Board will know that there is not full consensus for the proposal.

Jeff: Yes, there will be a summary report prepared by DHCD to the Board indicating the reasons for non-consensus, including names of proponents and non-proponents.

Dana Buchwald: Would like to know what reasons the non-supporters have.

Steve: The cost for the building owner, including equipment installation and upgrades.

Dana: She thinks that the building owner should pay. She thinks that the cost of the system is minimal relative to the entire cost of the building.

Jamie: In all due respect to Steve and his constituents, he thinks building owners should pay for the systems as a matter of public safety, and it should not be the responsibility of the localities.

Jeff: DHCD will work with Andrew to finalize the proposal and will send a poll to the group. Proponent's names will be included on the proposal when it goes forward.

Andrew: He thanked everyone for their participation.

Staff Proposal

Jeff: Based on feedback from the group, the current code requirements do not provide much guidance on the technical requirements of the system. This proposal is intended to provide that guidance, and not to address the question of responsibility. Section 918.1.1 was rearranged and broken down into two sections: installation and responsibility. The installation section references installation in accordance with IFC sections 510.4 and 510.5. Section 918.2 says that the locality shall do the acceptance testing, however IFC 510.5.4 says that the building owner shall do the testing. He asked the group to discuss. Paul provided a link in the chat box to IFC section 510.5.4. There is a certain order of precedence in VCC Chapter 1 in that most administrative things in the reference codes and standards are superseded by the VCC, except for some testing and inspection requirements.

Part of this amendment references the IFC. There may be an opportunity to provide an exception stating that the locality is responsible for the acceptance testing.

Andrew: Asked Jeff to clarify the 'except for...' language suggested for the acceptance testing. He thought the guidance from 510.4 and 510.5 was being followed, but it seems like 918 would override that.

Jeff: He would leave 918.2 as it is, but put an exception after 918.1.1 that exception testing should be the responsibility of the locality.

Andrew: Acceptance testing should be done by the designer, who provided the system and who needs to be properly trained. Localities may not be certified.

Steve: Sees the potential conflict, but in 918.2 now, the localities are responsible for the acceptance testing. He thinks that the solution Jeff offered in the language would work.

Andrew: Is thinking of a situation where the locality doesn't provide equipment and doesn't have the technical expertise to do the acceptance testing. Sections 510.4 and 510.5 outline the steps for the process, but in this case, it would not apply and the locality would have to come up with their own process.

Jeff: Without a change, the locality would be doing it anyway.

Dana: Agrees with Andrew. She doesn't think that localities would be prepared to do the testing, since there's certain expertise required for each system.

Jeff: Says that the localities are doing it now. He asked the group how localities are doing it now, according to 918.2.

Andrew: Section 918.1.1.1 looks like it has a lot of existing language. Is there a way to outline in the proposal where it comes from, because right now it looks like a brand new section? He doesn't want to confer that the group is endorsing responsibility on the building owner, instead of simply revising the section and changing the order of the language.

Jeff: DHCD can put it back into one paragraph, if it makes it cleaner and easier for some group members to support.

Andrew: Thinks it should be left as it was.

Jeff: Does anyone object to the formatting? Leaving 918.1.1 as it was in the 2018 Code? Since there's no objection, it will be left. He still would like to hear from the group about sections 510.4 and 510.5.

Steve: Asked Jeff if he wanted to explain the deletion of the IBC section at the bottom of the page.

Jeff: IBC 2702.2.3 has some requirements for emergency or stand-by power. IFC and NFPA both already have those requirements, so it was stricken, since it is redundant. In section 918.1.1, when localities provide the equipment, they will do the acceptance testing, and building owners will provide space and access for that testing. Once completed, it will be sent out with a poll and if everyone supports it, we'll put it forward as a proposal from the Study Group. If it isn't fully supported, that will be noted.

Andrew: Adopting those particular sections would work without an additional exception.

Steve: In Andrew's proposal, exception # 6 was stricken, but it's still in this proposal. Does Andrew still support this proposal?

Andrew: Responsibility per sections 510.4 and 510.5 are a broader discussion. In this case, he supports for the purpose of consensus. Changing the first sentence to reference the IFC is fine.

Jaimie: We have two proposals, are we discussing moving both proposals forward?

Jeff: Some will support both, but we will explain the intent of both. This proposal focuses on one change in bringing in section 510.4 and 510.5. Most will support it. Andrew's proposal changes the responsibility to the building owner.

Jaimie: Thinks there may be some confusion moving forward with both proposals.

Jeff: If some are not comfortable supporting Andrew's proposal, the other one could still go through with consensus. Both proposals plus a Study Group report and meeting summaries will be provided to the Workgroups.

Jeff: There were questions about the FCC licenses. The IFC seems to reference two different licenses. One that allows the locality to operate on a certain frequency. The other says that there is also a general radio license required. Is this standard or is it something new?

Dana: This is standard everywhere. There needs to be someone on site with a GROL general radio operator's license.

Jeff: How does incorporation of NFPA 1221 correlate with the IFC? He doesn't think there's a conflict and the IFC should take precedence. He asked the group if there is any other discussion about this.

Dana: No significant differences that she noticed.

Costs

Jeff: There was some discussion about costs in general, but there were no specifics. Steve did gather some more specific information for the group to review.

Steve: He reached out to an associate at Siemens, who collected costs based on real life data. This is the current cost for the building owner, not including anything for the locality. Based on the type of project, the costs were anywhere from \$0.10 to \$0.38 per square foot for the system. (Attachment provided: "IBEC Costs – Steve Shapiro)

Jeff: DHCD will include the information in the final report.

Steve: The costs were not much different in 2003 or 2004, when the General Assembly addressed the issue.

Tammy Breski: Asked if anyone has given thought to wireless, or is that an add-on. In one case, retrofit of wireless on top of a DAS system added a significant cost when both antennas were put together.

Jeff: Building owners are adding wireless more and more. The group focus has been on IBEC, but wireless may come into play.

Dana: Cellular and public safety DAS are frequently done together, but they do need to be a certain distance apart from each other.

Responsibility

Jeff: DHCD noticed that the responsibility for the installation is addressed by the code, but not necessarily the design of the system. Typically the building owner has been responsible for the design and putting the cabling in. However, the VCC is not clear on the other aspects of the system, such as who designs the system and gets it up to a point where the locality installs their additional equipment. He asked the group to discuss what they have seen in the field.

Steve: Doesn't think AOBA has any issue with this being the building owner's responsibility, but he is not sure how this has been handled in the various localities.

Jeff: It does seem like the building owners are responsible for system design. If localities are providing equipment and perform the acceptance testing, do they also have input on the design of the system?

Dana: The owners usually use software called ibWave to assist with the system design. The owners would provide a ROM (Rough Order of Magnitude) prior to the build. The manufacturer, or independent contractor would provide the design.

Jeff: Is it up to the building owner to pick a vendor? Who handles that? Would the locality have a say?

Dana: There can't be too many chiefs. Especially in new construction. The ultimate desire would be for the architect to include the system design in their specs. The industry is heading in that direction, but is not there yet.

Jeff: If Andrew's proposal goes through, it would change the responsibility. If the other proposal goes through, it would not change responsibility.

{BREAK – 10:03 – 10:08}

Radiating Cable

Jeff: This was mentioned by the group during previous meetings, but there was not much discussion. Section 918 says that the building owner shall install radiating cable, which is now outdated. He asked if the group thinks that this should be addressed, since it seems to indicate that radiating cable is the only option.

Dana: She thinks that type of cable is usually used for long tunnels, but not necessary for buildings.

Steve: Thinks that using radiating cable may defeat the purpose because it doesn't work inside of a conduit.

Jamie: Thinks that the language should be corrected if it is outdated, and that it should be more inclusive or open ended so that it doesn't have to continue to be changed with new technology.

Jeff: Asked if anyone could suggest better language for this section.

Steve: Will ask the Siemens engineer that provided the cost estimates and send Jeff an email response.

Jeff: Asked if anyone is familiar with Backbone cable mentioned in NFPA 1225.

Tammy: Not necessarily answering the question about backbone cable. However, most cabling on DAS systems are a plenum-rated cable, and some are using a Cat 5 cable. Perhaps generic language should be used, not identifying the type of cable.

Jeff: He asked Tammy to clarify if she was saying that since there are different types of cabling that could be utilized, did she mean to say that generic language should be used in the proposal, such as “the owner should provide cabling”?

Tammy: Yes.

Dana: Usually ½” plenum cable is used. There has been pushback about how much conduit is needed and if it needs backbone or horizontal runs. The language in the proposal could encompass everything under just the word “cabling”.

Jeff: It sounds like it should just say “the building owner shall install cabling”. He asked for thumbs up or down poll now, and he will follow up with a poll to the entire group. Three thumbs up and none down. Should this be included in the DHCD-drafted proposal? Or should there be a stand-alone proposal for this language?

Steve: The safest thing would be to make this a separate change.

Jeff: That sounds good. DHCD will send a poll, and if the full group supports, it will be a separate SG proposal to change the language to read “cabling”. If the full group is not in support, it will be a proposal with proponents named.

Next Steps

Jeff: DHCD will get proposals drafted and put out on cdpVA, noting who supports them. DHCD will get the SG report drafted and out to the group, then to the public before the report and proposals go to the Workgroup.

Steve: What are the dates for the Workgroup?

Jeff: There’s a 30 day cutoff for proposals before Workgroup meets, so any from this group will need to be submitted by March 12 for the April meetings. Otherwise, they will be done before May 1, for consideration in the June Workgroup meetings.

Jaimie: Thanked the SG members. He considers both proposals to be an improvement over what is there now.

Jeff: Yes. Thanks to all.