IFC-SC Committee Hearing Agenda  
June 18th, 2019 2pm-5pm  
City and County of Denver, Room 4i5

1. Roll Call and Introductions

2. Discussion and voting on Section 909 of DBC-IFC  
   a. P139 105.7.27 (Moved to this committee from IFC)  
   b. F16 909.1  
   c. F17/201 909.10.1(8) (Pulled from Block Vote)  
   d. P114 909.10.2.2  
   e. (F20)204 909.15 (Tabled from Block Vote)  
   f. P115 909.15.1.2  
   g. P97/F88: 909.15.3, 909.15.4, 909.15.5 TABLED (TO BE ADJACENT TO OTHER PROPOSAL FOR SECTION 909.15)  
   h. (F21)205 909.15.1.3 (Tabled from Block Vote)  
   i. (F22)206 909.15.2.3 (Tabled from Block Vote)  
   j. (F23)207 909.15.3.3 (Tabled from Block Vote)  
   k. (F24)208 909.15.3.4 (Tabled from Block Vote)  

3. Discussion and voting on Section 909 of IFC  
   a. P165 909.10.3  
   b. P162 909.10.3.2  
   c. P163 909.10.5  
   d. P164 909.10.6  
   e. P120 909.13.7  
   f. P113 909.15.1.3  
   g. P116 909.15.1.3  
   h. P130 909.15.3  
   i. P131 909.15.6  

4. Discussion and voting on Appendix N of IFC  
   a. P158 N103.6  
   b. P159 N103.6.1.1  
   c. P160 N103.6.1.1  
   d. P161 N103.6.1.2  
   e. P117 N103.6.1.1.4  
   f. P118 N103.6.1.2

Please note that any items that we do not get to in this hearing will be automatically transferred to the next scheduled hearing date and will be the first items on the agenda for that hearing.
Proposal # P139
The base code is vague on maintenance topics and this language helps steer contractors in the proper direction regarding smoke control systems.

Public Testimony in Support: None
Public Testimony in Opposition: None
Questions from the Committee to Proponent: None
Committee Discussion: None

Original Motion: A/S with Intent to Modify (ASM)

Modification – Add an exception 3 defines what’s acceptable without a permit.
Specific Wording: Minor work not impacting intent of the system such as circuitry or software, but allows adjustments of dampers. (Use wording from P137)

Support:
Would like to keep consistent with what we have done on fire alarms and fire sprinklers.

Minor work not impacting the intent or infrastructure: software such as the like for like replacement of more than 3 damper actuators, damper linkage door closures.

In favor of proposed change, have some questions on buildings that are already CO and would have to come back for permit a year later. How does this get done? You go back to the original contractor and hope they will do it. Need to be very clear what needs to be tested in that building. Adjust VFD does whole system get re commissioned? That’s a large percentage if you’re talking 50% coming back in for permit review under this. More time, more permits, more testing.

All critical life safety matters. 320-250 buildings with smoke control systems right now. Currently 3 people reviewing those in a year

Opposition:
One concern is if I test and door pulls above 30 that’s a safety issue that needs to be addressed now. Replacement of inoperable (set aside as broken not just newer technology)

Door closures is the term more commonly used.

Issue is making a specific measurement with in an exception.

Modification is: Exception #3 “Minor repair work not impacting the safety function, infrastructure or software of the system such as like for like replacement of damper actuator (not more than 3), damper linkage and door closures”

Put a mechanical test panel for their inspections, when you have inspection and you fail something, the contractor makes adjustments to help fire dept, instead of keeping up with re inspections. This panel would make it more efficient for fire dept to view what’s going on with the building.

Vote on Modification 10-0 Passes

Final Motion: As Modified (AM)
Final Vote: AM 10-0 Passes
Additional staff or committee comments for the record:
Proposal # F16
At the design exhaust rates and the configuration of high-rise smoke control systems, reaching tenable capability is not possible. Tenability would imply all egress routes would maintain smoke 6’ above floor levels.

Public Testimony in Support: None
Public Testimony in Opposition: None
Questions from the Committee to Proponent: None
Committee Discussion:
Don’t agree with striking this language from the paragraph.

Could we modify this to say tenability is not required in fire origin. Some confusion over what that statement means relative to the zone of origin.

Atrium or large space smoke 6 ft above floor level. Question is when it’s not a large space we are never going to reach tenability because we don’t design for that. Only tenability that truly applies is in an atrium.

Different smoke control systems are not all intended. Intended tenable environment towards their specific system. Ultimately this is for the evacuation of the people not the preservation of the building.

Don’t want to strike this to justify or exclude the systems we use in Denver.

Tenability hard to design to and to achieve. Deleting it this says exactly what we want here in Denver, keeping tenability in there could allow other methods that are not mechanical. Deleting makes it very clear we want mechanical systems here in Denver.

Original Motion: As-Submitted (AS) Based on reason statement provided by the proponent.
Support:
Opposition:
Final Motion: As Submitted (AS)
Final Vote: AS 7-3 Passes
Additional staff or committee comments for the record:

Proposal # P114
Revise requirements for high rise buildings annual testing.

Public Testimony in Support: None
Public Testimony in Opposition: None
Questions from the Committee to Proponent: None

1. Would this apply to acceptance testing as well?
   a. More intended for annual testing.
2. Concern as contractor now 3 floors of a test was manageable, to go in and test every floor multiple times is a bit of a challenge.
   a. No problem extending to the acceptance but not the intent.
   b. Acceptance test we go out and honor this system and then we deviate as we see fit. Not sure we want to be locked to a certain percent if things don’t go well during testing.
Committee Discussion:
Engineer should be witnessing and signing off. If every floor is tested its stretching resources, if there is a percentage it gets a little out of hand.

It has evolved to testing the same thing, but fire department has prerogative to follow their own concerns.

It should not apply to acceptance testing. This simply addresses Annual Testing.

Modification #1: Remove strike through and new language take back to original on 10.2 which will now be 10.1.1
Vote on Modification: 10-0 passes

Modification #2: 3.2 and 5.3 and change 2 floors to 3 floors. Vote 10-0 Passes

Original Motion: As-Submitted (AS)
Final Motion: As Modified (AM)
Final Vote: AM 10-0
Additional staff or committee comments for the record:

Proposal # F20
Remove the following language from requirements: Two-hour fire resistance rated duct wrap is permitted to substitute for the two-hour fire resistance rated fire barrier and/or horizontal assembly.
Public Testimony in Support: None
Public Testimony in Opposition: None
Questions from the Committee to Proponent: None
Committee Discussion:
Our manufacturers have used duct wrap 2 hour. 2 hr rating standpoint there are materials on the market that can achieve that.

Becomes difficult to inspect in the field, not good published transtion.

Serves vertical enclosures during a fire scenario. Compromised at any point, it comprises the safety of occupants.

Cost savings but it rips and they are banded every 4 feet, so it can peel right off.

3 or 4 code additions ago we were very specific with what components you had to use. We dictated what UL assembly got satisfied to that 2 hour requirement

Original Motion: As-Submitted (AS)
Final Motion: As Submitted (AS)
Final Vote: AS 10-0
Additional staff or committee comments for the record:

Proposal # P115
Remove the following language from Operation section: The drive shall not fail to a greater capacity than that associated with the control setpoint for the fan.
Public Testimony in Support: None
Public Testimony in Opposition: None
Questions from the Committee to Proponent: None
Committee Discussion:
Sentence that we are striking needs to be reworked.

Based on having dynamic controls. If not using dynamic 18 hertz upper limit in software so no one can adjust above 22.

Original Motion: As-Submitted (AS)
Final Motion: As Submitted (AS)
Final Vote: AS fails 0-10 Disapproval Passes 10-0
Additional staff or committee comments for the record:

Proposal # P165
Remove the following language from Annual Tests: Denver Fire Department representatives shall have the authority to witness any regularly scheduled annual testing of smoke control systems.

Public Testimony in Support:
This has been in 6-7 years, made my customers aware, thought it says every 5 years. When it came to invite fire dept out to witness the inspection. DFD said we put in because we had people we couldn’t trust testing so we wanted the option to come out. Doesn’t look like its been implemented.

I don’t think it hurts having it in here, if we have a troubled system and we want to come out and watch your testing, not really a big deal.

Public Testimony in Opposition:
Issue is how do we let customers know the cost $500 OR $1500

Committee Discussion:
We wanted there to be a way to notify fire dept. Just haven’t been able to make that happen.

One of the challenges we have with our systems groups, only triggered by permits, can’t keep up on those let alone separate inspections or testing.

Written in there to show owner that these tests “CAN” be witnessed by fire department. Put in so that there could be some teeth in the inspection process.

Last code cycle there was a lot of talk on dedicated systems when did we recognize a self test, a lot dropped out at that point.

Original Motion: As Submitted 0-10 Fails
Final Motion: Disapproved (D)
Final Vote: Disapproval passes 10-0
Additional staff or committee comments for the record:
Proposal # P162
Revise section on Performance Tests There is no reason to test the smoke control system in a manual mode to test minimum pressure differentials. The next item (old 2. Now 1.) covers testing for pressures required in this section.

Public Testimony in Support: None
Public Testimony in Opposition: None
Questions from the Committee to Proponent: None
Original Motion: As-Submitted (AS)
Committee Discussion:
Always confused with this, looks like it pertains to manual start fans and take pressures that way, everything operates together. Not sure how this intended to start manually.

This was put in by building engineers union. Functional Test coordinating performance and functional test.

You’d have to turn on every fan manually to confirm functional test. Item 2 gives the option to do some auto and some manually.

If you do some manually you’ve unbalanced the building. It won’t perform in the same manner. Not sure it’s good to separate which would be tested manually than those automatic.

Most times I don’t get the engineers out for training or testing, it’s the younger ones so we don’t get a real opportunity to re educate on new smoke control systems. Engineers typically don’t even understand smoke alarms. They don’t want to do any of the smoke control stuff.

We wouldn’t want to let inexperienced people decide between manual and auto testing.

For the newer systems they have to be in fire alarm mode to even test them.

Final Motion: As Submitted (AS)
Final Vote: AS 10-0 Passes
Additional staff or committee comments for the record:

Proposal # P163
It seems adding definitions for Dedicated & Non-Dedicated would be helpful. In addition, I don’t feel that smoke control systems with both Dedicated & Non-Dedicated components could tested under each section since the systems need to be tested in its totality.

Public Testimony in Support: None
Public Testimony in Opposition: None
Questions from the Committee to Proponent: None
Committee Discussion:

Might help people understand what dedicated and non dedicated are. Most smoke control systems are fully dedicated or combo of dedicated and non dedicated.

When talking about dedicated and non dedicated in IFC Pg230 they are already defined.

Original Motion: As-Submitted (AS) Fails 0-10
Final Motion: Disapproved (D)
Final Vote: D 10-0 Passes
Additional staff or committee comments for the record:

Proposal # P164
Understanding is that any smoke control system was designed as a component of the overall life safety plan for the building & that only bringing the smoke control system up to current standards may not fit with the rest of the original life safety plan.

Public Testimony in Support: None
Public Testimony in Opposition: None
Questions from the Committee to Proponent: None
Original Motion: Disapprove (D)
Support: Implied that if you make a change outside of code cycle you have to evaluate from previous code cycle adding language here is redundant. It already exists.

Part of system doesn’t work or is no longer required they want to get rid of it.
Committee agrees that this is covered in section 909.20 and this proposal is not needed.
Final Motion: Disapproved (D)
Final Vote: D 10-0
Additional staff or committee comments for the record:

Proposal # P120
DFD currently will not allow a VFD bypass. And any SCS fan that needs to run at less than 60 HZ (sometimes as low as 12 HZ for stair fans) that running at 60 HZ could cause a very high pressure, causing stairwell or elevator doors to not operate.

Public Testimony in Support: None
Public Testimony in Opposition: None
Questions from the Committee to Proponent: None
Original Motion: Disapprove (D)
Vote: 0-10 Fails
Committee Discussion:
Some confusion on whether these can be removed or not. Some can and some can’t. Some don’t have a safety within 5 ft.

This is different it’s a complete by pass

Talked to guys who sell them but when mechanic asks for them, they sell it that way knowing they are not allowed in Denver.

Would this make more sense if it excluded atrium VFD.

Would like to change it to with a manual and or automatic. Take out the word switch.
Final Motion: As Modified (AM)
Additional staff or committee comments for the record:
This item was tabled for a committee member to rework the language and bring back to the hearing on July 9th.