DENVER AMENDMENT PROPOSAL FORM
FOR PROPOSALS TO THE 2019 DENVER BUILDING CODE AMENDMENTS AND THE 2021 INTERNATIONAL CODES

2021 CODE DEVELOPMENT CYCLE

1) Name: **CCD Staff** **Date:** **June 29, 2021**
Email: **Charles.bartel@denvergov.org** **Representing (organization or self): CCD**

2) One proposal per this document is to be provided with clear and concise information.

Is a separate graphic file provided ("X" to answer): ___ Yes or X_ No

3) Highlight the code and acronym that applies to the proposal

Acronym	Code Name	Acronym	Code Name
DBC-AP	Denver Building Code–Administrative Provisions	**IPC**	International Plumbing Code
IBC	International Building Code	**IRC**	International Residential Code
IECC	International Energy Conservation Code	**IFGC**	International Fuel Gas Code
IEBC	International Existing Building Code	**IMC**	International Mechanical Code
IFC	International Fire Code	**DGC**	Denver Green Code

AMENDMENT PROPOSAL

Please provide all the following items in your amendment proposal.

Code Sections/Tables/Figures Proposed for Revision:
607.6.2.1.2 Static Systems

Proposal:
Place an "X" next to the choice that best defines your proposal: __ Revision __ New Text X Delete/Substitute __ Deletion

607.6.2.1.2 Static systems is amended by deleting exceptions 2 and 3 in their entirety and replacing Exception 1 as follows:

Exceptions:

~~1. Where a static ceiling radiation damper is installed at the opening of a duct, a smoke detector shall be installed inside the duct or outside the duct with sampling tubes protruding into the duct. The detector or tubes within the duct shall be within 5 feet (1524 mm) of the damper. Air outlets and inlets shall not be located between the detector or tubes and the damper. The detector shall be listed for the air velocity, temperature and humidity anticipated at the point where it is installed. Other than in mechanical smoke control systems, dampers shall be closed upon fan shutdown where local smoke detectors require a minimum velocity to operate.~~ When the fans associated with heating, ventilation, air-conditioning, and exhaust systems are interlocked to shut down during a fire, static ceiling radiation dampers may be used within the associated systems.

~~2. Where a static ceiling radiation damper is installed in a ceiling, the ceiling radiation damper shall be permitted to be controlled by a smoke detection system installed within the same room or area as the ceiling radiation damper.~~

~~3. A static ceiling radiation damper shall be permitted to be installed within a room where an occupant sensor is provided within the room that will shut down the system.~~

Supporting Information (Required):
The exceptions to Section 607.6.2.1.2 attempt to detail requirements to shut down systems that contain static radiation dampers, and control the operation of static ceiling dampers. How would this work and does it make sense?
Exception #1 requires smoke detectors at each damper with sampling tube at the end of the duct at every diffuser outlet. That would require the damper to close upon detection of smoke.

For Exception #2, Also requires the static ceiling radiation dampers to close upon detection of smoke.
A ceiling radiation damper is just a fusible link; a static damper is essentially a link that isn't controlled. We are unsure how that would work unless it was a mechanical damper and at that point there is only one manufacturer that makes those with only one type that we have ever seen before, and they are actually listed as a dynamic damper. Is there even a motorized ceiling radiation damper that is only listed for static? We don't know.
Exception #3 requires dampers to be controlled by an occupancy sensor. If that is in a bedroom and someone goes to bed, the occupancy sensor won't sense someone is there so how does it apply and control the damper?

Current construction practice is to use a ceiling radiation damper because they are cheaper. Our current amendments allow an engineer design. The exceptions are very specific designs with limited options that don't appear to work well.

Staff met with the proponent who wrote this section for the 2021 IMC, Eirene Knott, to get clarification on the requirements. Ms. Knott noted that she was revising this section in the 2024 IMC that is being written right now, because of the same concerns raised by AMCA (Air Movement and Control Association). She explained that they would like all exceptions to be removed and just keep the wording of the main section. She also said that when she wrote the proposal she had one situation for a hotel setting that drove it and she hadn't been considering some of the affects the new language would have on apartments or other occupancies. Eirene stated that she didn't have a compromise with AMCA on the language for any of the exceptions because they were solely focused on removing them. When she was sent this proposal from staff she said that she felt it was a great solution and that she would consider using it for her final proposal for the 2024 IMC if she got full buy in from AMCA, otherwise they would likely just amend out all the exceptions and try to readdress next cycle.

Other Regulations Proposed to be Affected
N/A

Referenced Standards:
N/A

Impact:
How will this proposal impact cost and restrictiveness of code? ("X" answer for each item below)

Cost of construction:	___ Increase	_x_ Decrease	___ No Impact
Cost of design:	___ Increase	_x_ Decrease	___ No Impact
Restrictiveness:	___ Increase	_x_ Decrease	___ No Impact

Departmental Impact (City use only):
This amendment proposal increases/decreases/is neutral to the cost of plans review. Neutral
This amendment increases/decreases/is neutral to the cost of inspections. Neutral