Washington State Building Code Council

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STATE BUILDING CODE OPINION NO. 24-19

CODE: 2021 International Mechanical Code

SECTION: ASHRAE 15-2022 Section 7.5.1.2, Refrigeration Systems in Public Corridors and Lobbies

BACKGROUND: IMC Chapter 11 does not include restrictions for refrigerants in a public corridor or lobby. ASHRAE 15-2019 Section 7.5.1.2 only allows unit systems with acceptable quantities of Group A1 or B1 refrigerants to be installed in a public corridor or lobby. ASHRAE 15-2022 Section 7.5.1.2 provides basis for installing Class 2L, 2, or 3 refrigerating systems to serve a public corridor or lobby.

The maximum refrigerant charge for R-32 and R-454B (two common A2L refrigerants manufacturers are using for unit systems) will only allow a maximum refrigerant charge of 2.02 lbs. (19.1*0.106) and 1.96 lbs. (18.5*0.106) in accordance with ASHRAE 15-2022 equation 7-7a. LFL values above are based on ASHRAE 34-2022 Addendum a.

QUESTION 1**:** The IMC does not contain similar requirements for refrigeration systems located in a public corridor or public lobby. IMC only includes provisions for where refrigerant piping is prohibited to be installed in 1109.2.3. Do refrigeration systems with A2L refrigerants need to comply with ASHRAE 15-2022 Section 7.5.1.2 Item c?

ANSWER 1: Yes.

QUESTION 2**:** Does ASHRAE 15-2022 Section 7.5.1.2 only apply to refrigeration systems where the equipment is located within the lobby or corridor?

ANSWER 2: Yes. This section applies to unit systems where the equipment is located in the public corridor or lobby. This would not apply to unit systems installed outside of the corridor or lobby such as a rooftop packaged unit serving the corridor.

QUESTION 3**:** Is it correct that there is no correction for the effective dispersal volume for refrigeration systems with A2L refrigerants that must comply with Item c of ASHRAE 15-2022 Section 7.5.1.2?

ANSWER 3: Yes. In accordance with ASHRAE 15-2022 Equation 7-7a there is no correction for the effective dispersal volume for unit systems installed in a public corridor or lobby. See ASHRAE 15-2022 for definitions of refrigeration system, unit system, self-contained system, lobby, and waiting room.

QUESTION 4**:** ASHRAE 15 does not provide a definition for "public" only definitions for "corridor" and "lobby". Is the IBC definition for "Public-use areas" the appliable definition for ASHRAE 15-2022 Section 7.5.1.2?

ANSWER 4: Yes. Public-Use Areas are defined by IBC as "Interior or exterior rooms or spaces that are made available to the general public". See ASHRAE 15 for the following definitions:

- **Corridor: an enclosed passageway that limits travel to a single path.**
- **Lobby: a waiting room or large hallway serving as a waiting room.**

SUPERSEDES: None

REQUESTED BY: City of Bellevue