October 24, 2022

Jeffrey D. Little  
General Deputy Assistant Secretary for Housing  
U.S. Department of Housing and Urban Development

Green and Resilient Retrofit Program: Request for Information  
Agency/Docket Number: Docket No. FR-6350-N-01

Dear Assistant Secretary Little:

AIHA, the association for scientists and professionals committed to preserving and ensuring occupational and environmental health and safety (OEHS), appreciates the opportunity to provide feedback on the U.S. Department of Housing and Urban Development’s (HUD) request for information (RFI) on the new Green and Resilient Retrofit Program. We hope you find our feedback useful and are happy to answer any questions you may have.

Indoor Air Quality and Energy or Water Efficiency Should Complement, Not Compete with Each Other

One of the major lessons reinforced during the COVID-19 pandemic is that indoor air quality (IAQ) impacts occupant health. In addition, there is evidence that IAQ affects cognition and productivity. In short, IAQ should be one of the most important considerations during a building’s construction, renovation, maintenance, and operation. IAQ should complement, not compete with energy or water efficiency.

Accordingly, we believe that retrofit projects should be designed to initially identify hazardous materials, such as asbestos, lead paint, PCBs, or mold that might be encountered and methods and policies to avoid their disturbance by abatement or other means. The scope of retrofit work will be the basis for the hazard elimination work that should be done first.

Because retrofits are typically complex, we recommend that Certified Industrial Hygienists (CIHs) with residential experience should be involved in HUD’s decision-making process. CIHs have expertise in air sampling, ventilation, biohazards, hazard communication, and more. For additional information on the CIH credential, please visit https://gobgc.org/cih/

On a more technical note regarding IAQ and infection prevention, feedback from AIHA subject matter experts indicates that the most effective vertical displacement of air to ensure the lowest potential for cross-contamination from infectious persons to others is to

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utilize a perforated ceiling supply with a raised perforated floor return plenum. However, a more practical approach is a design adjustment so that air is distributed uniformly into an occupied space “low and slow” near the floor, with uniformly distributed return outlets in the ceiling. This should be encouraged for all new building designs, with ducting inside the walls.

For existing buildings, supply ducts can be rerouted by installing vertical ducting externally along walls, ending in currently commercially available displacement diffusers at the floor, and with returns rerouted to the ceiling. Both supply and return openings should be as uniformly distributed as possible, taking advantage of Computational Fluid Dynamics as a design aid.

Along with this major HVAC design paradigm shift, emphasis should be placed on the following:

- Improved HVAC filtration for return air to at least MERV 13
- Adding supplemental portable HEPA air cleaners as necessary
- Increasing clean fresh air supply to at least 20%
- Encouraging anyone who feels ill to avoid entering any shared indoor spaces

**Conclusion and Next Steps**

AIHA thanks you for the opportunity to provide feedback on HUD’s RFI on the new Green and Resilient Retrofit Program. We hope you find our feedback useful and look forward to our continued work together, helping protect the health and safety of all workers and their communities. If you have any questions on these comments or other matters, please contact me at mames@aiha.org or (703) 846-0730.

Sincerely,

Mark Ames
Director, Government Relations
AIHA

**About AIHA**

AIHA is the association for scientists and professionals committed to preserving and ensuring occupational and environmental health and safety in the workplace and community. Founded in 1939, we support our members with our expertise, networks, comprehensive education programs, and other products and services that help them maintain the highest professional and competency standards. More than half of AIHA’s nearly 8,500 members are Certified Industrial Hygienists and many hold other professional designations. AIHA serves as a resource for those employed across the public and private sectors as well as to the communities in which they work. For more information, please visit www.aiha.org.