

Indoor airPLUS Version 2 Public Comment Response Tool



INSTRUCTIONS: Please use the space below to provide any comments, feedback, or questions regarding any of the proposed Indoor airPLUS Version 2 Construction Specifications. Feedback on specific items are preferred (as opposed to general sections), but do not feel obligated to comment on all the proposed requirements. Upon completion, please email this form to Indoor_airPLUS@epa.gov with the subject of "Public Comment: Indoor airPLUS Version 2".

| Indoor airPLUS Construction Specification Item | Comment / Feedback / Questions |
|---|--|
| About the Indoor airPLUS Construction Specifications | |
| What's New in Version 2? | |
| Eligibility and Verification Requirements | <p>Although EPA is exploring a parallel path for existing homes (IAP-X), We suggest adding language to the V2 standards that address existing portions of structures that will be reused for a gut-rehabilitation. Examples include:</p> <ul style="list-style-type: none"> ○ Existing slabs/rat slabs in crawl spaces and basements (proposed item 1.3- drain and vapor barriers) ○ Existing plywood/OSB, etc., for sheathing on portions of structures that remain ○ Sections 1.1 & 1.2 Drainage requirements for existing foundation walls ○ 1.4 capillary break on top of footings for existing structures- add exception to checklist for existing structures <p>Implementation timeline should follow that of other programs, allowing a year's transition period before being made mandatory.</p> |
| Terms Used in This Document | |
| Indoor airPLUS New Construction Version 2 Verification Checklist | |
| Guidance for Completing the Indoor airPLUS Verification Checklist | |
| Indoor airPLUS New Construction Certification Specifications | |
| 1. Moisture Control | |

| | |
|--|---|
| 1.1 Site Drainage | Grading around structure - If EPA could provide guidance for structures built on steep slopes as to what is acceptable for Swales & drains- More steep sloped properties are being built on- especially on the coasts |
| 1.2 Foundation Drainage | Recommend providing some graphics for Composite Drainage Foundation systems in the BASC website |
| 1.3 Floor Drain | trapped drain in lowest portion of basement or crawl space – provide exception for existing slabs in basements/crawlspaces. |
| 1.4 Capillary Break - Footers | |
| 1.5 Capillary Break - Slab-on-Grade and Basement Slabs | |
| 1.6 Capillary Break - Crawlspace | |
| 1.7 Damp-proofing and Waterproofing Below-Grade Exterior Walls | define “appropriate water proofing” |
| 1.8 Basement and Crawlspace Conditioning | embed www.fema.gov/flood-zones . Hyperlink into checklist require that dehumidification be ENERGY STAR certified Dehumidification equipment is energy intensive, and whole house ENERGY STAR dehumidification options are limited. AS an alternative, allow project to provide space for dehumidification equipment and monitoring, after a drying out period, if humidity levels remain high, install dehumidifier |
| 1.9 Water-Managed Wall Assemblies | Advisories for drainage planes should specify that they be sealed to foundation |
| 1.10 Window and Door Openings | |
| 1.11 Gutters, Downspouts and Roof Water Drainage | |
| 1.12 Roof to Wall Intersections and Roof Penetrations | |
| 1.13 Roof Valleys and Decking | Clarify how much insulation would be required at the roof drain, and provide guidance (ex. BASC diagram) Define the distance through the roof |
| 1.14 Roof Eaves | |
| 1.15 Moisture - Resistant Backing Materials | |

| | |
|---|--|
| 1.16 Appliance Drainage | |
| 1.17 Water Supply Pipes | |
| 1.18 Water-Resistant Flooring | |
| 1.19 Class 1 Vapor Retarders | |
| 1.20 Materials with Signs of Water Damage or Mold | |
| 2. Radon | |
| 2.1 Radon Zone Identification and Strategy | |
| 2.2 Radon-Resistant Construction | |
| 3. Pest Barriers | |
| 3.1 Minimize Pathways for Pest Entry | embed IECC 2018 Moderate- Heavy termite infestation areas into checklist recommend allowing “foam plastic insulation” or identifying readily available alternatives |
| 3.2 Rodent/Bird Screens for Building Openings | |
| 3.3 Multifamily Pest Management | |

| | |
|---|---|
| 4. Heating, Cooling and Ventilation Systems | |
| 4.1 Heating and Cooling (HAC) Sizing and Design | |
| 4.2 Duct System Design and Installation | |
| 4.3 Location of HAC Air-Handling Equipment and Ductwork | keep the duct leakage requirement consistent with Energy Star CH and MFNC leakage rates; allow buried ductwork in the attic-- if duct work is in a vented attic, insulated with R-8 sealed and meets 4 CFM/100SF and is completely covered with full depth of attic insulation- that should suffice for now |
| 4.4 Pressure-Balanced Bedrooms | |
| 4.5 Dwelling-Unit Mechanical Ventilation | <p>Need to clarify how to quantify outside/fresh air flow- e.g., for exhaust ventilation with dampers for fresh air duct. Low volume airflows are difficult to quantify if connected to HAC systems. Also- offer guidance on best practices for connecting OA air to HAC systems in cold climates (e.g.- on the supply side of air handler). Many Mfr's will void warranty on coil or heat exchanger if cold air is introduced to a return. ASHP systems are vulnerable to freezing.</p> <p>The change from ASRHAE 62.2-2010 to ASHRAE 62.2-2013 is a significant jump. We recommend staying with ASHRAE 62.2-2010, which aligns with mechanical codes.</p> <p>Requiring MERV 13 filtration on outdoor air is likely problematic for mechanical ventilation systems. ERV/HRVs or other ventilation products just don't have the fan power to deal with that level of filtration particularly in like MF construction where large angled added filter boxes can't be accommodated. Putting a 1" MERV 13 in the filter slot of an ERV or ventilator unit I think will cause serious airflow and balancing issues. We suggest keeping this consistent with HAC at MERV 8 filtration.</p> |
| 4.6 Dwelling Unit Bathroom and Kitchen Exhaust | |
| 4.7 Common Spaces and Other Ventilation | |



| | |
|---|--|
| 4.8 Particle Filtration and Ducted HAC Serving Dwelling Units and Common Spaces | OA requires MERV 13 filter- we need confidence that the ASHP manufacturers have addressed the ability to incorporate MERV 13 filters for low and medium static air handlers. We suggest keeping the MERV 8 filtration requirement as is. |
| 4.9 Particle Filtration for Non-Ducted HAC Systems Serving Dwelling Units | |
| 4.10 Humidity Control | Requiring a control with the ability to record data is onerous for single family projects, especially when the data will not be reviewed/used |
| 4.11 Gas-Phase Air Cleaning Devices | |
| 4.12 Microbial Disinfection | |
| 5. Combustion Pollutant Control | |
| 5.1 Combustion Appliances | |
| 5.2 Carbon Monoxide Alarms | |
| 5.3 Pollutant Control from Smoking for Multifamily Buildings | |
| 5.4 Pollutant Control through Minimized Infiltration | Align cfm50/ft2 requirement with LEED, which allows 0.30 cfm50/ft2 for small dwelling units |
| 5.5 Attached Garages and Parking Structures (Enclosed) | |



| | |
|--|--|
| 6. Low-Emission Materials | <p>Make this section as user friendly as possible by giving options for meeting the low emission specs. We suggest allowing:</p> <ul style="list-style-type: none"> ○ Third-party certified products (GreenGuard, etc.) ○ Testing standards (CARB, etc.) ○ Provide a table with emission limits |
| 6.1 Composite Wood | |
| 6.2 Interior Paints, Finishes, and Coatings | |
| 6.3 Carpets and Cushions | |
| 6.4 Adhesives and Sealants | |
| 6.5 Hard Surface Flooring | |
| 6.6 Gypsum Board | |
| 6.7 Insulation | |
| 6.8 Ventilation after Material Installation | |
| 7. Occupant Education | |
| 7.1 Owner and Resident Information Kit | |
| Abbreviations | |
| References | |
| Climate Zones of the Continental United States | |

