

An Indoor airPLUS Quality Assurance Checklist shall be completed during each quality assurance file review and field review (QA review) of buildings being certified through the Indoor airPLUS program in accordance with the policies and procedures of the Home Certification Organization (HCO)¹. This QA checklist is mandatory for buildings certified under Version 2. Review complete instructions on page 4.

Indoor airPLUS Gold Quality Assurance Checklist

QA Review Review Type: 🗆 File 🗆 Field QA Reviewer: Date of Review:				
Verifier Name: Status of building: "Pre-drywall "Final construction				
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For Multifamily: Unit Number: Common Spaces:				
Original Verification Verifier Company Name:				
Pre-Drywall Inspection: Verifier Name: Da	te:			
Final Inspection: Verifier Name: Da	te:			
Building Address: City: State: Zip Code:				
Building Name (Multifamily only): Number of	Jnits:			
Building Classification		Classifie	ed Correctly	
New Construction ² Climate Zone (0-8): Moisture Zone (A-C): Radon Zone (1-3):		Yes	No	
□ Gut Rehabilitation ² Termite Probability: □Very Heavy □ Moderate to Heavy □ N/A				
Action Items / Summary of QA	Yes	No	N/A	
If any Items below are marked "No" or "Not Verified," an action/explanation summary document shall be attached.		-		
Documentation Collection – Collect these items from the Verifier as part of the QA data file	Yes	No	N/A	
Documentation that builder had an Indoor airPLUS partnership agreement at the time of certification. If documentation of active partnership cannot be verified, contact indoor airplus@epa.gov.			-	
Documentation collected that home/building achieved ENERGY STAR certification.			-	
Verification Checklist collected, with no Items left blank or marked Must Correct.			-	
Verifier name, inspection dates and verifier initials are recorded.			-	
List of any exemptions or alternatives used by the Verifier.				
Per 2.1.1 and 2.1.2, radon test results collected, demonstrating radon levels <4 piC/L. ³			-	
Per 3.1.3 or 3.1.4, documentation collected that foundation and slab termite requirements are met.				
Per 3.3.1, for multifamily buildings, a plan or contract for integrated pest management collected.				
Per 4.1, for newly installed HAC systems, design documentation and start-up reports collected; for existing HAC systems, service record collected.				
Per 4.2.2, where Exception for CZ 4A is used, modeling results collected demonstrating < 876 hrs over 60% RH. ³				
Per 4.3.1 and 4.3.2, for newly installed HAC duct systems, duct design documentation collected.				
Per 4.6.5, documentation collected for measured dwelling unit ventilation airflow.			-	
Per 4.6.7, documentation collected for dwelling unit ventilation fan reporting sound rating maximum of 1 sone. ³				
Per 4.7.2, documentation collected for bathroom exhaust fan sound rating. Continuous = max 1 sone at no less than 20 cfm; intermittent = max 3 sones at no less than 50 cfm. ³				
Per 4.8.3, documentation collected for kitchen exhaust fan sound rating. Continuous = max 1 sone at no less than 25 cfm; intermittent = max 2 sones at no less than 100 cfm. ³				
Per 4.9.2, documentation collected of the measured ventilation airflows in common spaces.				
Per 4.11.5, where ducted electronic air cleaners are installed, documentation collected reporting ozone emission				
values do not exceed 0.005 ppm. Per 4.13.1, where gas-phase air cleaning devices are installed, documentation collected indicating ozone is not used.				
Per 4.14.1, where UVGI or other electronic air cleaners are installed for microbial disinfection, documentation				
collected reporting ozone emission values do not exceed 0.005ppm.				
Per 5.1.4, for a gut rehabilitation, where an existing chimney/flue is present, documentation collected demonstrating a				
passing result from a Level II NFPA 211 inspection.				
Per 5.1.5.2, documentation collected showing factory-built fireplaces meet the requirements of UL 127. Per 5.1.5.3, documentation collected showing wood stoves and fireplace inserts meet the requirements of section 3.8				
of UL 1482, AND meet the emission requirements of EPA's New Source Performance Standards.				
Per 5.1.5.4, documentation collected showing pellet stoves meet the requirements of ASTM E1509, AND meet the				
emission requirements of EPA's New Source Performance Standards.				
Per 6.1-6.6, for all newly installed building materials, documentation collected on VOC emission rates. Per 6.8, for a gut rehabilitation, where Verifier indicates Asbestos Containing Material (ACM) found, documentation				
collected regarding removal/encapsulation.				



Per 6.9, where Verifier indicates lead-based paint was identified, risk assessment and mitigation documentation collected.		
For file review: documentation collected to demonstrate compliance with items not listed above.		
Verifier name, verifier inspection dates and verifier initials are recorded.		-

Verifi	cation Checklist – Mandatory during Field Review or File Review, except where noted.	Yes	No	Not Verified	N/A				
Section 1 – Moisture Control									
Water	r Managed Site and Foundation	1		1					
	1.1.1 Impermeable surfaces sloped \geq 0.25 in. per ft. away from the building.								
1.1	1.1.2 Exterior drains are free of debris.								
	1.1.3 <u>Newly installed</u> back-fill tamped and final grade sloped ≥ 0.5 in. per foot. ³								
	Exception: Swales/drains Professional verified soils Graded after settling								
	1.2.1 <u>Newly constructed</u> foundations, drain tile or CFDS is installed to discharge outside. ³								
	Exception: Derofessional verified Group I Soils								
1.2	1.2.2 Foundation walls/slabs verified to be free from moisture or otherwise mitigated.								
	1.2.3 Sump cover is mechanically attached and drain discharges \geq 5 ft. from foundation. ³								
	Exception: Discharge professionally designed or verified Group I Soils								
1.3	1.3.1 In lowest area of basement, a floor drain installed with trap seal or moisture monitoring system								
1.0	with audible alarm.								
	1.4.3 Crawlspaces without slabs in Moist (A) Zones, Class I vapor retarder installed with								
	penetrations/seams/edges overlapped and sealed.								
1.4	1.4.4 Existing slabs in Moist (A) Zones where Items 1.4.1 and 1.4.2 cannot be verified, a								
	continuous/sealed Class I or Class II vapor retarder installed on top of slab. For occupiable spaces,								
	vapor retarder is either a durable floor surface or covered by one.								
1.5	1.5.1.3 Interior surfaces of foundation walls verified for no active moisture intrusion. ⁴								
	1.6.1 Crawlspaces and basements are not vented.								
1.6	1.6.2 In Moist (A) & Marine (C) Zones active dehumidification provided in basements or crawlspaces by								
	HAC or supplemental system.								
Wate	r-Managed Wall Assemblies								
1.7	1.7.3 Weep holes for masonry veneer and/or weep screed for stucco cladding installed.								
1.8	1.8.2 Windows and doors fully close/latch; no visible moisture intrusion.				-				
Wate	r-Managed Roof Assemblies								
	1.9.1 Gutter system discharges ≥ 5 ft from foundation, into underground catchment, or								
	sewer/rainwater management system. ³				-				
1.9	Exceptions:□Slab-on-grade □Dry (B) Climates □Professional verified soils □Rock bed w/ liner								
1.9	□Rainwater harvesting systems □Continuous rubber membrane								
	1.9.2 If utilizing item 1.9.1 exception, extra protection for splash damage included.								
	1.9.3 Gutters and downspouts securely installed and clear of debris.								
1.10	1.10.2 <u>Newly installed</u> roofing includes kickout flashing installed at low end of roof-to-wall intersections.								
1 1 2	1.12.1 Existing vented attics insulated to minimum R-49. ³								
1.12	1.12.2 Between vented attics and living space, gaps and penetrations are sealed where accessible.								
1.13	1.13.1 No active leaks or water intrusion in attics and roof assemblies.				-				
Interio	or Moisture Management								
	1.15.1 Drain pan connected to a drain for condensate-producing HVAC equipment and secondary drain								
	system meets 2021 IMC 307.2.3.				-				
1.15	1.15.2 For tank type hot water heater/storage where leakage could cause damage, drain pan and drain								
	OR detection system with shutoff included.								
	1.15.3 Non-vented clothes dryers plumbed to a drain.								
1.17	1.17.1 Water-resistant flooring installed where moisture or splash damage could occur.				-				
	1.19.1 Interior surfaces verified to be mold and moisture free without signs of rot or decay or potential								
1.19	moisture intrusion.				-				
	1.19.2 Exterior wall surfaces verified to be free from degradation, rot or decay, or potential moisture								
	intrusion.				-				
Section 2 – Radon Testing									
	2.1 If radon mitigation is installed, system is: Active Passive N/A (none installed) and matches								
2.1	what Verifier documented.				-				
Sectio	Section 3 – Pests								
	3.1.1 Exterior penetrations and joints sealed.				-				
3.1	3.1.2 No signs of active termite infestation or structural damage.				-				
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	3.2.1 Corrosion-proof pest screens installed at openings that cannot be fully sealed.				-
3.2	3.2.2 Corrosion-proof screen, louver, or grille for all ventilation termination fittings.				-
3.2	3.2.3 Dryer ducts include weather-resistant termination or louver.				
	3.2.4 Screens provided for all operable windows.				
3.3	3.3.3 Multifamily buildings include sanitary floor drains in common trash/recycling rooms.				
3.4	3.4.1 No evidence of pest-contaminated materials within building.				-
Sectio	n 4 – HVAC Systems				
Heatii	ng and Cooling Design and Inspection				
4.1	4.1 Manufacturer model number matches the design and documentation.				
	4.2.1 Humidity monitoring provided in the main living area of the dwelling unit is: ³				
	□ Integrated with HAC controls □ A standalone hygrometer				-
	Exception: RH monitoring by building management platform				
4.2	4.2.2 Moist (A) CZ 1-4: Equipment installed to maintain RH at or below 60% is: ³				
	□ Ventilating or whole-home dehumidifier □ RH sensor is integrated w/ cooling system(s)				
	Exception for CZ 4A: 🗆 Humidity data recording, modeling & dehumidification readiness				
	4.3.5 Where visible, ducts inspected to be dry, with no evidence of mold and without	[_		_
	tears/disconnections.				
	4.3.6 Where visible, dwelling-unit ducts sealed at joints, seams, penetrations with compliant material.				
4.3	4.3.8 Dwelling unit ducts tested to meet total duct leakage requirements.				
	4.3.9 Dwelling unit ducts tested to meet leakage to outdoors requirements. ³				
	Exceptions: DLTO testing not required where all ducts are within pressure boundary				
	☐ Total duct leakage ≤4 CFM25 per 100 sf of CFA or ≤ 40 CFM25				
	4.4.1 Air-handling equipment and/or ductwork is not located in garages. ³		_	-	_
4.4	□ Systems providing independent garage heating and/or ventilation				
	4.4.2 All HAC equipment and ductwork is located within thermal and air barrier boundary. ³				
	4.5.1 Bedrooms with ducted HAC systems are pressure-balanced.		_	-	_
4.5	□ Moist (A) climate zones 1-3 verified ±3 Pa □ All other climate zones verified ±5 Pa				
Mech	anical Ventilation				
	4.6.1 Balanced mechanical ventilation is installed in the dwelling unit being reviewed.				-
	4.6.2 Ventilation override control is labelled. For one-and two-family buildings and townhouses,		_		
	override control is also readily accessible.				-
	4.6.3 Air inlets verified to pull air directly from outdoors.				
	4.6.4 Outdoor air inlets ≥ 2 ft. above grade or roof deck; ≥ 3 ft. from dryer exhausts and contamination	-	_	_	_
	sources exiting the roof; \geq 10 ft. from all other contamination source exits.				
4.6	4.6.5 Ventilation is measured at both supply and exhaust in accordance with ANSI/RESNET/ICC Std. 380				
	and meets Section 4 of ASHRAE 62.2-2019 and is measured within 20 cfm of the verifier's				-
	measured airflow.				
	4.6.6.1 Outdoor air passes through a ≥ MERV 13 filter prior to distribution.				
	4.6.6.2 Outdoor air filters are readily-accessible for maintenance.				
	4.6.7 Manufacturer model number matches the documentation collected for dwelling unit ventilation				_
	fan sound rating.				
	4.7.1 Bathroom ventilation exhausts directly outdoors meeting ASHRAE 62.2-2019 Section 5.				
	4.7.2 Manufacturer model number matches the documentation collected for bathroom exhaust fan				
4.7	sound rating.				
	4.7.3 Bath fans integrated with dwelling-unit ventilation have on/off controls labeled.				
	4.7.4 Demand-controlled bath fans include occupancy/humidity sensor.				
	4.8.1 Demand-controlled kitchen exhaust is located at the cooktop or range, vented to outdoors, and				
	measured to meet ASHRAE 62.2-2019 Section 5 at speed setting rated at ≤ 2 sones. ³	_		_	_
	Exception to exhaust at cooktop:				
	Exception to measurement: Microwave-range hood meets additional requirements				
4.8	4.8.2 If continuous exhaust is present in the kitchen, grille meets cooktop separation distance and has	_	<u> </u>		
	MERV 3 or washable filter.				
	4.8.3 Manufacturer model number matches documentation collected for kitchen exhaust fan sound		_		
	rating.				
	4.9.1 Common space ventilation air provided directly from outdoors.				
	4.9.2 Common space ventilation and exhaust measured to meet or exceed ASHRAE 62.1-2019. ⁵				
4.9	4.9.3.1 Common space ventilation outdoor air passes through MERV 13 or higher filter prior to				
	distribution.				
	4.9.3.2 Outdoor air intake, filter, fan unit are accessible for maintenance.				
4.10	4.10.1 Central vacuum systems exhaust to outdoors and ≥ 10 ft. from ventilation air inlets.				
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	4.10.2 Vented clothes dryers exhaust to outdoors.							
Filtration and Air Cleaning								
	4.11.1 Filters rated MERV 13 or higher installed prior to final inspection.	_		_				
	Exception for <u>existing</u> HAC systems in dwelling units: MERV 8 plus portable air cleaner.							
	4.11.2 HAC return air filters are accessible for cleaning and/or replacement.							
4.11	4.11.3 Filter access panels are gasketed and/or sealed.							
	4.11.4 All return air and mechanically supplied outdoor air pass through the filter.							
	4.11.5 Where ducted electronic air cleaners are installed, model number(s) match documentation.							
	4.11.6 Ozone generators or devices intentionally using ozone not installed.				-			
4.12	4.12.1 One of the following filtration methods provided for homes/apts. with no ducted HAC system:							
4.12	□ MERV 13 or higher □ Portable air cleaners □ Transfer fan w/ MERV 13 or higher.							
4.13	4.13.1 Where installed, gas-phase air cleaning devices model numbers match documentation.							
4.14	4.14.1 Where provided, UVGI or other electronic air cleaners (e.g., plasma generators, PCOs, etc.) model							
4.14	numbers match documentation.							
Sectio	n 5 – Pollutant Control							
	5.1.1 Combustion furnaces, boilers, water heaters mechanically drafted or direct-vented. ³							
	5.1.2 Fireplaces mechanically drafted or direct-vented.							
	5.1.2.1 Liquid or gas-burning fireplaces have permanently affixed glass front or gasketed door.							
	5.1.3 No unvented combustion appliances other than cooktops/ovens.				-			
5.1	5.1.5 Solid fuel-burning appliances meet the following requirements (check where applicable):							
	\Box site-built masonry fireplaces sealed to prevent use or retrofitted							
	factory-built wood burning fireplaces have dedicated outdoor air & meet UL 127							
	wood stoves/inserts meet UL 1482 Section 3.8 and EPA Performance Standards							
	pellet stoves meet ASTM E1509 and EPA Performance Standards							
	5.2.1 CO alarms installed in all dwelling units and located as follows:							
	5.2.1.1 In the same room as permanently installed fuel burning appliances; and				-			
5.2	5.2.1.2 Centrally located on every habitable level; and	_]				
5.2	5.2.1.3 Within 21' of any door to a sleeping room							
	5.2.3 CO alarms are hardwired with battery backup.							
	5.2.4 CO alarm sounds when the test button is pushed.				-			
	5.3.2 For multifamily buildings, smoking/vaping prohibition is posted in common areas.							
5.3	5.3.3 For multifamily buildings, where provided, designated outdoor smoking/vaping areas located a							
	minimum of 25 ft from entries, outdoor air intakes, and operable windows.							
	5.4.1 Airtightness testing in accordance with ANSI/RESNET/ICC Std. 380 is met:	_	_	_				
5.4	□ Detached homes > 1,000 ft ² , ≤ 3 ACH50				-			
	\Box All other homes/units \leq 0.23 CFM50/sf encl.							
	5.5.1 Doors between garages and occupied spaces are gasketed/weather-stripped and automatic door							
	closers installed.							
	5.5.2 Detached one- and two- family homes and townhouses with attached garages:	_	_	_	_			
5.5	Pressure test conducted to verify effectiveness of garage-to-house air barrier; OR							
	□ Exhaust fan installed in garage and measured airflow ≥ 100 cfm							
	5.5.3 For multifamily buildings, shared parking garage exhaust systems with CO/NO2 controls and							
	continuous ventilation rate \geq 0.05 cfm/ft2 in standby and \geq 0.75 cfm/ft2 otherwise.							
	5.6.1 No combustible liquid or gas fuels stored within the building's thermal/pressure boundary.				-			
5.6	5.6.2 Supplemental portable combustion equipment not operated or stored within the building's				-			
	thermal/pressure boundary upon final verification.	_						



Instructions for Performing Quality Assurance Review

- This checklist is used to document the quality assurance review of the items confirmed by the Verifier in an Indoor airPLUS Certified home or multifamily building.
- For a multifamily building, a single dwelling unit and a sample of common spaces are subject to review. One checklist shall be used to document all applicable items for the one dwelling unit and the common spaces. While the QA Reviewer is not required to verify compliance for each applicable component/system/appliance installed in the building, the QA Reviewer shall verify compliance for the component/system/appliance serving the dwelling unit being reviewed and in addition, the QA Reviewer shall verify compliance for a minimum of two systems/appliances that serve a common space. Where the item applies to a building component rather than system, this shall be verified in at least one common space.
- During File or Field Review, complete the Action Items / Summary of QA, Documentation Collection, and Verification Checklist sections. As with original Indoor airPLUS verification, items for QA may be verified visually on-site during construction/rehabilitation, by reviewing photographs taken during construction/rehabilitation, by reviewing material or equipment documentation, or through equivalent methods as appropriate.
- In accordance with the HCO's policies, a limited amount of the required QA Field Reviews may be performed at the pre-drywall stage. Mark items that are not yet installed as "N/A." ¹
- Where a checklist item cannot be verified because it is not visible, not accessible, cannot be tested, or there are other extenuating circumstances, mark the box in the column
 "Not Verified," and include an explanation in an attached document.
- Additional items may be reviewed at the reviewer's discretion and included in the Additional Checklist Items and Exemptions report below.
- Items found to be out of compliance shall be corrected. If correction is not possible, the building's certification is required to be withdrawn (please contact indoor airplus@epa.gov for guidance).

Footnotes

- 1. Home Certification Organizations (HCOs) are independent organizations recognized by EPA to implement the Indoor airPLUS certification program. Learn more and find a current list of HCOs at <u>energystar.gov/partner_resources/residential_new/working/other_participants/hco</u>.
- 2. Where building is classified as a "gut rehabilitation", items for "existing" components shall be verified during the QA review. These components are not required to be verified where the building is classified as "new construction". Items for "newly installed" components shall be verified during the QA review for buildings classified as "new construction" and where the Verifier's checklist indicates the component was newly installed and verified as part of the gut rehabilitation.
- 3. This item has/is an exemption or alternative. Refer to the Verification Checklist for details. When an item is properly met using an exemption or alternative, mark the item as "Yes" and record a description in the Additional Checklist Items and Exemptions table.
- 4. This requirement is modified from the original program requirement in order to be applicable in the context of a finished home/building.
- 5. For Item 4.9.2, while the QA Reviewer is not required to verify compliance with the ventilation requirements in each common space, the QA Reviewer is required to review the Verifier-provided common space ventilation test results for compliance. The QA Reviewer is then required to directly measure ventilation airflows for the lesser of 5 or 20% of the reported values.



Additional Checklist Items and Exemptions

Use this space to list additional Items reviewed and describe any exemptions or alternatives that were used (attach additional pages, if needed)								
Section Name	Item #	Notes	Yes	No	Not Verified	N/A		