



Comparison of the ENERGY STAR Multifamily New Construction Program to ENERGY STAR Single-Family New Homes

While the Multifamily New Construction program documents are similar to the Single-Family New Homes program documents, this comparison document summarizes the most significant changes, between MFNC Revision 02 and SFNH Revision 11.

1. National Program Requirements, MF Reference Design and Target Procedure

- a. Eligibility includes most configurations of MF. Only single family detached and 2-family dwellings will remain with Single-Family New Homes. Townhouses will be able to choose either program (i.e., Checklists), but the Reference Design will be the one from Single-Family New Homes.
- b. If one unit in a building fails, none of the units in the building can be certified, even if they met the requirements on an individual basis.
- c. Modified the online orientation training for the Builder/Developer Partner.
- d. Changed the criteria for individuals completing the HVAC Commissioning Checklist and re-named it Functional Testing. Created mandatory online orientation training for this 'Functional Testing' agent.
- e. Developed a MF version of the ENERGY STAR Rater Training.
- f. Three paths are available: ERI, Prescriptive, ASHRAE. The ASHRAE Path requires an ASHRAE energy modeler who has completed online orientation.
- g. ERI Path is still under the oversight of the Home Certification Organization, but a Multifamily Review Organization is needed for the Prescriptive and ASHRAE Paths
- h. Some modifications to the Reference Design (i.e., what's used to model the ERI Target and the basis of the Prescriptive Path):
 - Infiltration switched to compartmentalization, with a de-rate
 - Insulation levels based on commercial wood-frame
 - Added Class AW window options
 - 90% Tier I lighting (i.e., CFL)

2. Rater Design Checklist

- a. Separated from the Rater Field Checklist and added blanks for project name and # of units.
- b. Moved Rater check of the entity doing Functional Testing (i.e., contractor doing Commissioning Checklist in Single-Family New Homes) to the Rater Field Checklist.
- c. Added a Rater check of the ASHRAE modeler, to ensure they have taken the mandatory online orientation.
- d. Expanded the high-performance fenestration and insulation sections to include common spaces. Requirements generally align with commercial code requirements, with levels dependent on the Path chosen.
- e. Based on changes to the HVAC Design Report, slight changes to what the Rater reviews
- f. Added an optional, but recommended section, on construction document review.

3. Rater Field Checklist

- a. Separated from the Rater Design Checklist and added blanks for project name and # of units.
- b. Allow a licensed professional to verify certain noted items.



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Thermal Enclosure System (Sections 1, 2, 3, & 4)

- c. Based on new common space high-performance fenestration and insulation requirements, added Rater checklist items to include those spaces.
 - For Prescriptive Path: Window-to-wall ratio <30%
- d. Added insulation requirements for heated plenums and garages.
- e. For reduced thermal bridging, required R-5 on elevated slabs, like garage podiums and projected balconies, with a UA option for balconies without a thermal break.
- f. For continuous insulation, clarified what specifically can be exempted (e.g., fasteners, projected balconies, PTAC openings), and what portions of the walls cannot (e.g., intermediate floor perimeters, steel columns).
- g. For calculating total UA, clarified how fasteners and other interruptions in continuous insulation must be calculated.
- h. Added an option for continuous interior insulation for gut rehabs, where exterior rigid is not feasible.
- i. Added requirement to test dwelling units for compartmentalization and for entry doors to have a doorsweep, weatherstripping, or equivalent gasket.
 - If using non-ducted returns with AHU closet on exterior wall, 5 Pa pressure differential test also required.

HVAC System (Sect 5: Heating & Cooling Equipment & Sect 6: Duct Quality Installation)

- j. Added 10 new items. Two new items establish the minimum efficiency for equipment in common spaces and dwelling units following the Prescriptive Path.
- k. Added a Rater check on the entity doing Functional testing, to ensure they have taken the mandatory online orientation.
- l. Added requirements on equipment controls & hydronic distribution, that are based on mandatory requirements from commercial code.
- m. Bedroom pressure-balancing is limited to bedrooms with 150+ CFM design airflow.
- n. Established reduced TOTAL duct leakage allowances for dwelling unit systems without ducted returns AND added a pressure differential test, where the allowance increases with system tonnage.
- o. Still require DLTO test for Townhouses, but not for other MF units.
- p. No duct testing required if total SUPPLY is <10 ft and contained within conditioned space.
- q. Central exhaust ducts (serving 4 or more units) must be tested for leakage.

Dwelling Unit & Common Space Ventilation Systems (Section 7)

- r. Require ASHRAE 62.1 rates in common spaces and allow a non-Rater to measure the ventilation airflows in those spaces, if overseen and in the presence of the Rater.
- s. Require that measured ventilation rates meet or exceed ASHRAE 62.2-2010 rates in dwelling units
- t. Added efficiency requirements to central exhaust fans used for dwelling unit ventilation.

Local Mechanical Exhaust (Section 8)

- u. Added local mechanical exhaust requirements from ASHRAE 62.1 for a few key common spaces, including garages, which also have CO/NO2 sensor requirements.

Filtration & Combustion Appliances (Section 9 & 10)

- v. More restrictions on the use of unvented heating/DHW equipment and appliances.



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New Sections 11-14 on DHW, Lighting, Appliances, and Building Data

w. DHW:

- added efficiency requirements for Prescriptive Path equipment
- added a heat trap requirement for in-unit storage water heaters
- added an R-3 DHW piping insulation requirement
- added a Rater-measured delivery temperature requirement
- Prescriptive Path: WaterSense bath faucets & showerheads required in dwelling units

x. Lighting:

- Added common space & shared garage lighting controls, efficacy, and lighting power density requirements
- Prescriptive Path: dwelling units must have 90% ENERGY STAR Certified light bulbs or fixtures and less than 0.75 W/ft²

y. Whole-Building Data:

- For large MF buildings, a strategy to obtain whole-building data must be confirmed prior to certification. Strategy can include no-cost measures such as lease agreements where resident agrees to release data or at-cost measures, like whole-building energy monitors or agreement with utility to access whole-building data annually.

4. HVAC Design Report

- a. Expanded ventilation design to include common area compliance with ASHRAE 62.2.
- b. Added local mechanical exhaust design to the report, for both dwelling units and common space.
- c. Still require room-by-room loads for townhouses; but other units can do unit-level.
- d. Where dwelling unit loads are required (most ducted systems), added parameters to be documented related to occupant gains and non-occupant internal gains.
- e. Added reporting requirement of common space loads & equipment selection, but also allows use of Single-Family New Homes HVAC Design Report to reduce data entry
- f. For improved visibility, added HVAC related items to the Design Report.
- g. Created an Appendix of tables, to document extra spaces or systems as needed.

5. HVAC Functional Testing Checklist (replaces HVAC Commissioning Checklist)

- a. Identified the list of credentials that one must have to complete the Functional Testing checklist. While credentialed contractors can still verify the sections that are the same as Single-Family New Homes, they cannot complete the other sections.
- b. Provides an alternative to Section 3 (Indoor HVAC Fan Airflow) for systems with total supply ductwork 10 ft or less, where a Rater may instead complete Item 4.2 (Room-by-room airflows)
- c. Added Sections 5-9 to add in-unit functional testing for all in-unit and common space equipment as well as specific tests for central systems.

6. Water Management System Requirements

- a. Rather than 'Builder', used the term 'Partner' to encompass both Builder and Developer Partners.
- b. Added an exemption from the capillary break for open garages or garages with ventilation.