

**Draft PDS-01 MINHERS Addendum 45**

**Chapter 2 Updates**

**Chapter 2 - RESNET NATIONAL STANDARD FOR INSTRUCTION, ASSESSMENT AND CERTIFICATION**

***Revise the following sections as shown below.***

# Purpose and Scope

* 1. Purpose

The purpose of ~~these~~ this standard~~s~~ is to ensure that ~~Home Energy~~ RESNET Certified ~~Rater~~ Training is consistent and robust; to increase the credibility of the Training and Quality Assurance Providers with consumers, ~~the~~ housing and mortgage finance industry, federal government, state governments, local governments, utility companies, and the private sector~~; and to~~. Credibility promotes voluntary participation in an objective, cost-effective, sustainable home energy rating process.

* 1. Scope

This document defines the requirements of Accredited Training Providers, Certified Rater Instructors, Candidate Field Assessors, and Certification Candidates. RESNET shall confirm that the requirements defined in this standard have been met when accrediting Training Providers and certifying Rater Instructors. Accredited Training Providers and ~~Certified~~ Candidate Field Assessors shall confirm that the requirements defined in this standard have been met when certifying individuals. This enhances the goal of producing a nationally recognized and uniform program.

# General Provisions

* 1. Definitions and Acronyms

See Appendix B- Glossary of Terms.

# Accredited Training Providers

* 1. Achieving Accreditation

Training Providers are accredited in accordance with the Accreditation Process specified in Section 910.2 Provider Accreditation Process. Training Providers shall complete the RESNET Rater Training Provider Application.

* 1. Maintaining Accreditation

In order to maintain their accreditation in good standing, all Accredited Training Providers shall fully ~~discharge~~ execute the following duties and responsibilities. Failure to properly ~~discharge~~ perform any of these duties and responsibilities constitutes grounds for disciplinary action in accordance with Section 911 - Probation, Suspension, and Revocation of Accreditation.

* + 1. Renew their accreditation in accordance with the renewal process found in Section 910.3 - Accreditation Renewal Process.
		2. Maintain Certified Rater Instructors. Only RESNET Certified Rater Instructors can offer rater training through a RESNET Accredited Training Provider.
		3. Hold the exam questions administered by RESNET in strictest confidence. ~~This~~ The examination and the items contained therein are the exclusive property of RESNET.
		4. Maintain records for three years of all training materials and trainee data, training schedules, curricula, attendance records, examinations and individual examination results. This information shall be made available to RESNET upon request by RESNET.
		5. Provide candidates with a certificate or letter of completion, which accurately includes the candidate’s legal name and completion dates of any items required for the candidate’s certification.
		6. Maintain curricula that align with the most ~~up-to-date~~up to date RESNET standards.
		7. Provide ~~for~~ training facilities and equipment appropriate ~~to~~ for the training being delivered.
		8. ~~Only RESNET Accredited Training Providers may offer Rater Training using RESNET Certified Rater Instructors~~
	1. Privileges and rights

Accredited Training Providers in good standing have the following privileges and rights:

* + 1. The privilege to make and use any materials trademarked, copyrighted, or otherwise restricted by RESNET (other than the tests developed by RESNET) for marketing Training Courses or Training Providers or for recruiting Rater trainees, instructors, or trainers.
		2. The right to present evidence, arguments and ~~a~~ vigorous defense ~~in~~ for any action brought under these standards by any party against an Accredited Training Provider.
	1. Revocation of Accreditation

See Chapter 9- RESNET National Standard for Quality Assurance, Section 911~~.~~

#  Certification of Rater Instructors

* 1. Achieving Certification

Individuals shall meet the following requirements to be certified as a Certified Rater Instructor. Only RESNET Certified instructors may conduct rater training under the auspices of RESNET Accredited Training Providers.

* + 1. Demonstrate the ability to effectively communicate with adults in a training environment. This ability is demonstrated through completion of a minimum sixteen (16) hour RESNET approved adult education program.
		2. Demonstrate mastery of the ~~Home Energy Rating System~~ RESNET standards ~~knowledge~~ and the abilities ~~ability sets~~ provided in [Section 208](#_heading=h.1302m92) - Capabilities. Mastery is demonstrated by completing the following RESNET tests with a minimum (passing) score to be determined by RESNET.
			1. National Rater Instructor Competency Test
			2. RESNET Combustion Appliance Simulation Test
			3. RESNET Rater Simulation Practical Test

* 1. Professional Development (PD)

RESNET Certified Rater Instructors shall complete a two-hour annual RESNET Roundtable each year. Every three years, RESNET Certified Rater Instructors shall complete ~~and also every three years~~:

* + 1. Document twelve (12) hours of attendance at RESNET conferences or other conferences approved by RESNET; and
		2. Complete eighteen (18) hours of RESNET approved Professional Development courses delivered by RESNET Accredited Training Providers or other events or venues approved by RESNET. Additional documented hours of attendance at RESNET Conferences qualify under this provision.

An individual that is both a Certified Rater Instructor and Quality Assurance Designee shall complete both the two-hour RESNET roundtable for Certified Rater Instructors and the two-hour roundtable for Quality Assurance Designees.

* 1. Revocation

The following items are grounds for revocation of the RESNET Certified Instructor designation.

* + 1. Compromising the security or integrity of any RESNET certification test. This examination and the items contained therein are the exclusive property of RESNET.
		2. Intentionally misrepresenting their Accredited Training Provider by training to curricula that differ from that submitted.
		3. Violation of RESNET defined test-proctoring procedures.
		4. ~~Non-payment of RESNET provider accreditation fees.~~
		5. Failure to complete required Professional Development.

# Certification of Candidate Field Assessors

205.1 Achieving Certification

Individuals shall meet the following requirements to be ~~a~~ certified as a RESNET Candidate Field Assessor.

* + 1. RESNET Certified ~~HERS~~ Rater in good standing.
		2. As a ~~certified Home Energy Rater~~ Certified Rater, complete confirmed ratings on a minimum of twenty-five (25) homes prior to becoming a Candidate Field Assessor. These 25 homes shall ~~have met~~ meet the minimum quality assurance processes defined in Section 903~~4~~.4 – Quality Assurance of Raters and Ratings.
		3. RESNET Accredited Rating Quality Assurance Providers shall:
			1. Confirm eligibility prior to allowing Candidate Field Assessors within their Providership to perform mentoring of Graded Field Evaluations.
			2. Maintain, and make available to RESNET upon request, a listing of qualified RESNET Candidate Field Assessors performing mentoring duties within their providership.

# Certification Candidates

* 1. General Provisions
		1. Examinations

Examinations allow a candidate to demonstrate the knowledge required appropriate to their desired certification. RESNET online examinations are time-limited and open-book allowing any reference materials but excluding any form of communication with other individuals during the examination session. Examinations are administered by RESNET, set up by a RESNET Accredited Training Provider and overseen by a RESNET approved proctor. Approved proctors include BPI exam proctors, faculty and staff of libraries, trade schools, colleges, independent testing institutions, or others as approved by RESNET. Approved proctors shall adhere to RESNET's defined test proctoring procedures.

* + 1. Simulated Practical Examinations

Simulated practical examinations allow a candidate to demonstrate their ability to perform certain tasks appropriate to their desired certification. Rater practical examinations shall be administered by RESNET and will include:

* + - 1. Rater Simulation Practical Test.
			2. RESNET Combustion Appliance Simulation Test
	1. Certification

Prior to issuing a candidate's certification, a RESNET Accredited Rating Quality Assurance Provider shall confirm that the candidate has completed at a minimum, all of the following tasks appropriate to their desired certification within a 1~~2~~5-month period (unless otherwise indicated). Only RESNET Accredited Rating Quality Assurance Providers may certify candidates. ~~Certified~~ Accredited Rating Quality Assurance Providers may require candidates ~~have~~ to successfully complete~~d~~ additional instruction beyond these requirements as needed to address their specific program, climate, software, or administrative requirements.

* + 1. Rating Field Inspector (RFI)
			1. Pass the following RESNET Tests with a minimum (passing) score to be determined by RESNET:
				1. The RESNET Combustion Appliance Simulation Test
				2. RESNET A~~a~~pproved G~~g~~raded F~~f~~ield E~~e~~valuation

206.2.1.1.2.1 The RESNET graded field evaluation shall be performed under the observation of a Candidate Field Assessor or Quality Assurance Designee.

* + - 1. Complete at least three mentored rating field inspections observed by a C~~c~~ertified ~~HERS rater~~ Rater, ~~or a~~ RESNET Candidate Field Assessor, or Quality Assurance Designee. The C~~c~~ertified ~~HERS~~ Rater ~~or~~, RESNET Candidate Field Assessor, or Quality Assurance Designee shall use the RESNET G~~g~~raded F~~f~~ield E~~e~~valuation Form to document the results of mentored inspections. The mentored Rating Field Inspections shall comprise the following tasks at a minimum ~~the following tasks~~.
				1. Follow the inspection protocols as specified in ANSI/RESNET/ICC 301 Normative Appendix B for all minimum rated features present in the subject dwelling unit.
				2. Use pressure differential diagnostics to identify intermediate buffer zones including (but not limited to) attics, garages, or crawlspaces.
				3. Identify insulation defects and ~~account for them in energy analysis tool inputs~~  demonstrate the application of appropriate insulation grading per ANSI/RESNET/ICC 301 Normative Appendix A.
				4. Identify insulation types, thickness, and alignment with air barriers.
				5. Measure pressure differences across the building envelope imposed by the operation of the home's HVAC equipment.
				6. Perform envelope leakage testing in accordance with the airtightness testing protocols contained in [ANSI/RESNET/ICC 380](https://codes.iccsafe.org/public/chapter/content/7325/)~~-2016~~.
				7. Perform duct leakage testing in accordance with the duct testing protocols contained in [ANSI/ RESNET/ICC 380](https://codes.iccsafe.org/public/chapter/content/7325/)~~-2016 and interpret results.~~
				8. Perform mechanical ventilation airflow testing in accordance with the mechanical ventilation airflow testing protocols contained in [ANSI/RESNET/ICC 380](https://codes.iccsafe.org/public/chapter/content/7325/)
				9. Identify room and zone pressure imbalances caused by lack of ducted return air or pressure relief mechanisms such as transfer grilles or jumper ducts.
				10. [Perform CAZ, spillage, and CO testing in accordance with Carbon Monoxide (CO) Test and Depressurization Test for the Combustion Appliance Zone (CAZ) protocols contained in](http://www.acca.org/wp-content/uploads/2014/09/2014-QH-12-quality-homes.pdf) ~~ANSI/ACCA 12 QH, Appendix A, Sections A4 and A5~~ Chapter 8.
			2. RFI’s shall not complete independent field testing and inspections until they have satisfactorily completed the requisite three mentored rating field inspections per [206.2.1.2](#_heading=h.206ipza) and passed the RESNET G~~g~~raded F~~f~~ield E~~e~~valuation.
			3. After successfully completing the mentored rating field inspections and passing the RESNET G~~g~~raded F~~f~~ield E~~e~~valuation, RFI’s may be permitted to conduct all rating tasks ~~contained under Appendix A~~ found in section 206.2.1.2 under the direct supervision of a Certified Rater without having a Certified Rater on site.
		1. ~~Home Energy Rater (HERS Rater)~~ Certified Rater
			1. Successfully complete a Certified Rater training course provided through a RESNET Accredited Training Provider that meets the minimum standards as defined in Section 20~~2~~3 - Accredited Training Providers.
			2. Complete the following National RESNET ~~HERS~~ Certified Rater series of tests with the minimum (passing) scores to be determined by RESNET:

206.2.2.2.1 ~~Pass the national HERS Rater Test(s)~~ The RESNET National Rater Test

206.2.2.2.2 The RESNET Combustion Appliance Simulation Test~~s~~

206.2.2.2.3 RESNET Rater Simulation Practical Test

* + - 1. After passing the ~~all of the~~ RESNET tests, but prior to being certified, the candidate shall complete five probationary ratings with a Rating Quality Assurance Provider overseen by a RESNET certified Candidate Field Assessor or Quality Assurance Designee. At least three of the five probationary ratings shall be accomplished using field verification of all rated features of the home in accordance with ANSI/RESNET/ICC 301 ~~and~~, [ANSI/RESNET/ICC 380](https://codes.iccsafe.org/public/document/details/toc/844) and Chapter 8~~-2016~~ and shall be completed in the presence of a RESNET Certified Field Assessor or Quality Assurance Designee. At least one of ~~which~~ the three shall be completed one-on-one. Probationary ratings shall not be considered Confirmed Ratings.
			2. A ~~HERS~~ Certified Rater Candidate who does not complete, to the satisfaction of a Rating Quality Assurance Provider, a minimum of three (3) of the five (5) required probationary ratings within fifteen (15) months of passing the National RESNET ~~HERS~~ Certified Rater series of tests as defined in ~~205.2.3.1~~ 206.2.2.2, or otherwise does not achieve certification within the allowed fifteen month time frame, must at a minimum, complete the original requirements and do the following in order to maintain eligibility for certification:
				1. Pass the RESNET ~~National~~ Certified Rater series of tests again; and
				2. Complete three (3) additional probationary ratings. One of the three (3) additional probationary ratings shall be accomplished using field verification of all rated features of the home in accordance with ~~Section 303.8 and~~ ANSI/RESNET/ICC 301, ANSI/RESNET/ICC 380, and Chapter 8, with the exception that the work is not being performed by a currently Certified Rater and shall be completed in the presence of a RESNET certified Candidate Field Assessor or Quality Assurance Designee. Probationary ratings shall not be considered Confirmed Ratings.

# Recertification

* 1. Certification Renewal:

RESNET Certified Rating Field Inspectors, and ~~HERS~~ Certified Raters, shall renew their certification every three years. They shall complete the following:

* + 1. Rating Field Inspectors

 207.1.1.1 Pass the RESNET Graded Field Evaluation overseen by a RESNET certified Candidate Field Assessor or Quality Assurance Designee once in a three-year period, OR

 207.1.1.2 Attend a RESNET approved conference once every three years.

 207.1.1.3 Certified Rating Field Inspectors who have not completed field work on any Confirmed, Sampled, or Threshold ratings within the three-year certification period shall be required to successfully complete one RESNET graded-field evaluation overseen by a RESNET certified Candidate Field Assessor or Quality Assurance Designee.

* + 1. Certified ~~Home Energy~~ Raters
			1. Attend a RESNET approved conference once every three years, OR
			2. Complete 18 hours of RESNET approved professional development from a RESNET Accredited Training Provider every three years~~, OR~~
			3. Certified ~~Home Energy~~ Raters who have not completed any Confirmed, Sampled, or Threshold ratings within the three-year certification period shall successfully complete one RESNET graded-field evaluation overseen by a RESNET certified Candidate Field Assessor or Quality Assurance Designee, in addition to satisfying either 207.1.2.1 or 207.1.2.2.
	1. Failure to Achieve Recertification Criteria
		1. RESNET certified Rating Field Inspectors and ~~HERS~~ Certified Raters that fail to meet the requirements for recertification shall be placed on "Suspension - Administrative" status in the RESNET Registry by their affiliated RESNET Rating Quality Assurance Provider on the date of the expiration of their certification, and shall be barred from conducting rating inspection or certification activities until they have successfully met the criteria for recertification.
		2. RESNET certified Rating Field Inspectors and ~~HERS~~ Certified Raters ~~that~~ who fail to successfully meet the criteria for recertification by 180 days past the date of expiration of their certification shall ~~be~~ have their certification revoked by their affiliated RESNET Rating Quality Assurance Provider per Section 102.1.4.7.~~3~~1.

# Capabilities

Certified individuals shall have certain capabilities to perform the work required under their certification. The categories listed in this section are contained in Chapter 3, Chapter 8, – ANSI/RESNET/ICC 301~~-2014~~*,* and ANSI/RESNET/ICC 380~~-2016, and Appendix 1 A – On Site Inspection Procedures for Minimum Rated Features~~. Certification candidates shall demonstrate proficiency at these capabilities through successful completion of certification requirements specified in [Section 206 Certification Candidates](#_heading=h.1v1yuxt). Accredited Training Providers ~~Training providers~~ shall ensure that their curricula effectively cover these items.

***Delete sections 208.1.2 208.1.3 and 208.1.5 and renumber sequentially. Revise the following sections as shown below.***

* 1. Certified Rating Field Inspector (RFI)

A Certified Rating Field Inspector is permitted to conduct all tasks contained within Chapter 8 Section 802, ANSI/RESNET/ICC 301 Appendix A and ANSI/RESNET/ICC 301 Appendix B. A Certified Rating Field Inspector shall have proficiency ~~at~~ in performing those tasks and in the capabilities listed below.

* + 1. General
			1. Have a basic understanding of building performance evaluation.
			2. Demonstrate proficient customer communication skills, ethics, and privacy per the RESNET Code of Ethics.
			3. ~~Use~~ Complete field inspection forms ~~to~~ that accurately identify and document the minimum rated features of the ~~Reference Home and~~ Rated Home in accordance with the requirements of [Chapter 3](https://standards.resnet.us/index.htm#t=minhers_adv%2FCh_3%2FMINHERS.htm), [ANSI/RESNET/ICC 301 Appendix A](https://codes.iccsafe.org/content/RESNETICC3012019/normative-appendix-a) and [ANSI/RESNET/ICC 301 Appendix B](https://codes.iccsafe.org/content/RESNETICC3012019/normative-appendix-b).
			4. Identify potential problems with the building such as health and safety concerns, building durability issues, potential comfort problems, and ~~possible~~ sources of elevated energy use in accordance with the requirements of [Chapter 8, Section 802](https://standards.resnet.us/index.htm#t=minhers_adv%2FCh_8%2FCombustion_Safety_Testing.htm).
			5. Identify basic home construction types and the ramifications ~~of these~~ for energy usage.
		2. ~~Basics of specifications~~
			1. ~~Have a basic understanding of energy improvement measure interactions, expected life, and bundling for optimal performance considering the house as a system and the emerging need for deep energy savings.~~
		3. ~~Determining Conditioned Space Volume~~
			1. ~~Determine the Conditioned Space Volume of a dwelling unit as defined in Appendix B.~~
		4. ~~208.1.4~~ Health and Safety
			1. ~~208.1.4.1~~ Identify moisture issues such as condensation, leaks through building components, signs of mold or mildew, insect damage, efflorescence and stains.
			2. ~~208.1.4.2~~ Identify potential combustion appliance safety hazards.
			3. ~~208.1.4.3~~ Identify evidence in combustion equipment of flame rollout, blocked chimneys, rust and corrosion, and missing or damaged vent connectors.
			4. ~~208.1.4.4~~ Identify problems related to poor indoor air quality (IAQ), building durability, and human comfort.
			5. ~~208.1.4.5~~ Identify potential presence of mold and potential causes.
		5. ~~Building Science Concepts~~
			1. ~~Identify areas of potential envelope leakage, thermal bypasses, and thermal bridging.~~
		6. ~~208.1.6~~ Moisture Principles and Properties
			1. ~~208.1.6.1~~ Identify potential or existing moisture issues (bulk water intrusion, capillary action, air transport, vapor diffusion).
		7. ~~208.1.7~~ Building Components
			1. ~~208.1.7.1~~ Identify exterior building components, such as stone or brick veneer, overhangs, roofing types, grade levels, and lighting types.
			2. ~~208.1.7.1.2~~ Determine building orientation and shading characteristics.
			3. Collect fenestration specific information in enough detail to allow for efficiencies and performance factors to be derived for those windows, doors, and skylights without NFRC labels. This includes the identification of window and skylight types, frame materials, reflective and low-e films and coatings, and permanently installed shading devices.
			4. ~~208.1.7.3~~ Measure building dimensions. ~~and use them to calculate gross and net areas.~~
			5. ~~208.1.7.4~~ Estimate the approximate age of a building
			6. Identify areas of thermal bypasses and thermal bridging.

* + 1. ~~208.1.8 Measuring~~ Documenting Building Components
			1. ~~208.1.8.1~~ Use construction documents such as building drawings and specification sheets, or actual measured building dimensions to produce a scaled and dimensioned sketch of a home.
		2. ~~208.1.9~~ Collect~~ing~~ Field Data (including photo documentation) as specified in [ANSI/RESNET/ICC 301 Appendix B](https://codes.iccsafe.org/content/RESNETICC3012019/normative-appendix-b).

***Delete subsections 208.1.9.1 through 208.1.22.1 retaining subsections 208.1.14.2 and 208.1.20.3 which are renumbered as shown below.***

~~208.1.9.1 Determine Building Orientation. 208.1.9.2 Measure window overhanging lengths, heights, and distances from top and bottom of windows. 208.1.9.3 Determine roof slopes, gable heights, etc. 208.1.9.4 Calculate gross and net areas and volumes. 208.1.10 Insulation 208.1.10.1 Identify the presence or absence of insulation and the quality of its insulation when visually accessible. 208.1.10.2 Determine thickness, R-value, and location of insulation. 208.1.10.3 Recommend levels of insulation by climate zone. 208.1.10.4 Identify insulation types, thickness measurements, common usage locations, and alignment with air barriers. 208.1.10.5 Identify insulation defects, and grading (I, II, II). 208.1.11 Building Foundations. 208.1.11.1 Identify foundation type as crawl space, basement, or slab. 208.1.11.2 Identify mechanical ventilation system types. 208.1.11.3 Identify location, type, and R-value of foundation insulation systems.~~

~~208.1.12 Framed Floors. 208.1.12.1 Identify location and type of floor system, its insulation type, thickness, and approximate R-value 208.1.12.2 Determine if framed floors are exposed to Conditioned Space Volume, Unconditioned Space Volume, or the outdoors ambient conditions. 208.1.12.3 Determine floor system type and frequency framing factor of framing members. 208.1.12.4 Determine insulation thickness, type, and grade (I, II, or III). 208.1.13 Slab-on-Grade 208.1.13.1 Identify slab as covered or exposed. 208.1.14 Above Grade Walls. 208.1.14.1 Determine wall types, insulation thickness, and approximate R-value.~~

* + - 1. ~~209.1.14.2~~ Identify signs of building additions.

~~208.1.14.3 Determine if walls are exposed to Conditioned Space Volume, Unconditioned Space Volume, or outdoors ambient conditions. 208.1.14.4 Determine construction type, thickness, and exterior color. 208.1.15 Windows, Doors and Skylights 208.1.15.1 Identify window and skylight types, frame materials, and permanently installed shading devices. 208.1.15.2 Determine window, door, and skylight efficiencies and performance factors. 208.1.15.3~~ ​~~Identify window labels, framing types and materials, U-factors, reflective and low-e films and coatings, shading and overhangs, and orientation.~~ ~~208.1.15.4 Identify exterior door types, insulation, and orientation.~~ ~~208.1.15.5 Identify glass-area of exterior doors and windows.~~ ~~208.1.16 Rim or Band Joist~~ ~~208.1.16.1 Determine insulation type, thickness, and approximate R-value.~~ ~~208.1.17 Ceilings 208.1.17.1~~ ~~Determine ceiling type, insulation thickness, and approximate R-value~~. ~~208.1.18 Attic.~~ ~~208.1.18.1 Identify type of attic and location type of attic venting.~~ ~~208.1.19 Roof.~~  ~~208.1.19.1 Identify approximate age, type, and color of roofing materials.~~ ~~208.1.19.2 Determine approximate R-value if insulated. 208.1.20 Heating and Cooling Systems~~ ~~208.1.20.1 Identify types, model numbers, and location of systems.~~ ~~208.1.20.2 Identify HVAC pros/cons, drivers and sensitivities for major system types.~~

208.1.6.2 ~~208.1.20.3~~  Identify basic combustion appliance concerns.

~~208.1.20.4 Determine equipment efficiencies using equipment data (make, model, nameplate data), AHRI or other current accepted guides, or age-based defaults. 208.1.20.5~~ ~~Identify space-conditioning systems as active or passive208.1.20.6.~~ ~~Identify heating system properties: fuel type, burner type, venting type, distribution type, and efficiency. 208.1.20.7~~ ~~Identify Ground-source heat pumps, air-source heat pumps, and air conditioning systems. 208.1.20.8~~ ~~Identify ductless systems (hydronic, steam, electric, minisplits). 208.1.20.9~~ ~~Identify combo systems. 208.1.20.10~~ ~~Identify solar thermal systems. 208.1.20.11~~ ~~Identify control types (standard thermostats, programmable thermostats, multi-zone controls. 208.1.20.12~~ ~~Identify sizing and design issues, control types, and their impacts on energy use and humidity control. 208.1.20.13~~ ~~Identify summer and winter design temperatures. 208.1.20.14 Identify cooling and heating system design trade-offs. 208.1.21 Domestic Hot Water Systems. 208.1.21.1~~ ~~Identify system types and efficiency factors from equipment labels, model numbers, or default tables. 208.1.22 Gas Leakage Testing 208.1.22.1 Identify gas leaks using combustible gas sensing equipment.~~

 ***Revise the following sections as shown below***

* + 1. ~~208.1.23 CAZ~~ Combustion Appliance Zone (CAZ) Testing
			1. ~~208.1.23.1~~ Perform CAZ depressurization, spillage, and Carbon Monoxide (CO) testing in accordance with ~~Carbon Monoxide (~~CO~~)~~ Test and Depressurization Test for the Combustion Appliance Zone (CAZ) protocols contained in ~~ANSI/ACCA 12 QH, Appendix A, Sections A4 and A5~~ [Chapter 8, Section 802](https://standards.resnet.us/index.htm#t=minhers_adv%2FCh_8%2FCombustion_Safety_Testing.htm).

~~208.1.23.2 Identify room and zone pressures imbalances caused by lack of ducted return air or pressure relief mechanisms such as transfer grilles or jumper ducts.~~

* + - 1. ~~208.1.23.3~~ Identify gas leaks using combustible gas sensing equipment. If a leak is found, recommend that a certified technician repair the leak.
		1. ~~208.1.24~~ Air Leakage
			1. ~~208.1.24 .1~~ Identify common air leakage sites and indicate likely opportunities for leakage reduction.
			2. ~~208.1.24 .2~~ Identify air leakage mechanisms and drivers, energy and comfort implications, and health and safety issues.

~~208.1.24 .3 Perform single-point and multi-point building envelope leakage testing in accordance with the airtightness testing protocols containined in ANSI/RESNET/ICC 380-2016.~~

* + - 1. ~~208.1.24 .4~~ Identify potential air sealing using zonal pressure differentials and measurement techniques.
			2. ~~208.1.24 .5~~ Measure pressure differences across the building envelope imposed by the operation of the home's equipment.
		1. ~~208.1.25~~ Conditioned Air Distribution Systems

~~208.1.25.1 Determine duct type, location, and R-value.~~

* + - 1. ~~208.1.25.2~~ Identify obvious leakage locations and indications of previous sealing.
			2. ~~208.1.25.3~~ Identify impacts of designed and imposed flaws (closed interior doors, blocked registers and grilles, air handler filters, etc).
			3. ~~208.1.25.4~~ Identify duct supply and return types (flexible, rigid metal, building chase, insulated panels) and locations with respect to thermal and air barriers.
			4. ~~208.1.25.5~~ Identify room and zone pressure imbalances caused by lack of ducted return air or pressure relief mechanisms such as transfer grilles or jumper ducts.

***Delete subsections 208.1.25.5 through 208.1.27.2***

~~208.1.25.5 Perform duct leakage testing in accordance with the duct testing protocols contained in ANSI/RESNET/ICC 380-2016 and recommend sealing as needed based on test results. 208.1.25.6 Determine need for duct insulation in Unconditioned Space Volumes and specify thickness of retrofit insulation if needed. 208.1.26 Mechanical Ventilation 208.1.26.1 Identify presence and type of exhaust fans and determine whether they vent to outdoors. 208.1.26.2 Identify fresh air ventilation from supply, exhaust and balanced flow systems. 208.1.26.3 Identify heat recovery ventilation (HRV) and energy recovery ventilation (ERV) systems. 208.1.26.4 Determine HRV or ERV efficiency, fan power and duty cycle characteristics. 208.1.27 Appliances and Lighting 208.1.27.1 Estimate efficiency from model numbers or vintage. 208.1.27.2 Identify potential lighting upgrades.~~

***Revise the following sections as shown below***

* 1. ~~Home Energy Rating System Rater (HERS)~~ Certified Rater

A Certified ~~Home Energy~~ Rater shall have proficiency at the knowledge and abilities of a Rating Field Inspector in addition to the following.

* + 1. General
			1. Understand and be familiar with local climate conditions, housing stock, and climate- specific practices.
			2. Identify summer and winter design temperatures.
			3. Understand local utility pricing structures (flat vs. tiered rates, net-metering regulations) and sources for reliable utility information.
			4. Prepare a detailed work scope.
			5. Develop field inspection forms.
			6. Interpret results from airtightness testing, duct leakage testing, mechanical ventilation system testing, and combustion safety testing.
			7. Determine window, door, and skylight efficiencies and performance factors for those fenestrations that do not have an NFRC Label.
			8. Identify major U.S. climate zones and energy consumption impacts of local climate zone.
			9. Recommend levels of insulation by climate zone.
			10. Have a basic understanding of energy improvement measure interactions, expected life, and bundling for optimal performance considering the house-as-a-system and the emerging need for deep energy savings.

* + 1. RESNET Rating System
			1. Communicate the business aspects of being a RESNET ~~HERS~~ Certified Rater.
			2. Maintain current knowledge of the HERS Rating method using the Reference Home as defined in [ANSI/RESNET/ICC 301](http://www.resnet.us/standards/ANSI-RESNET_301-2014.pdf)~~-2014~~.
			3. Conduct both projected and confirmed building simulation and performance analysis to provide HERS Ratings in accordance with the requirements in Chapter 3, – ANSI/RESNET/ICC 301~~-2014~~ and [ANSI/RESNET/ICC 380](https://codes.iccsafe.org/public/chapter/content/7325/)~~-2016~~.
			4. Use RESNET ~~approved~~ Accredited ~~energy analysis software~~ Software Rating Tool(s) capable of producing a HERS Index, perform data entry procedures, reporting, and analysis of results.
			5. Calculate HERS ~~Score~~ Index computation using the Normalized Modified End-Use Loads (nMEUL) Rating Method.
			6. Communicate the benefits of the Home Energy Rating System to homeowners, builders, finance and real estate agents and cultivate partnerships between those individuals.
			7. Assist and educate customers and builders with:

208.2.3.7.1 ~~Home Energy Surveys and~~ Home Energy Ratings.

208.2.3.7.2 Cost effectiveness of energy efficient building design.

208.2.3.7.2.1 Identify HVAC pros/cons, drivers and sensitivities for major system

208.2.3.7.2.2 Identify sizing and design issues, control types and their impacts on energy use and humidity control.

208.2.3.7.2.3 Identify cooling and heating system design trade-offs.

208.2.3.7.2.4 Determine need for duct insulation in Unconditioned Space Volumes and specify thickness of retrofit insulation if needed

208.2.3.7.2.5 Identify potential lighting upgrades.

208.2.3.7.3 Quality assurance.

208.2.3.7.4 Marketing of HERS Rated Homes.

208.2.3.7.5 Qualifications for RESNET recognized energy efficiency programs (EEPs) such as ENERGY STAR®.

208.2.3.7.6 Real estate financing, economic terminology, and energy code compliance.

208.2.3.7.7 Financing advantages of Energy Efficient Mortgages (EEM) and Energy Improvement Mortgages (EIM).

208.2.3.7.8 Adding appraisal value through energy improvements.

* + - 1. Provide excellent customer service in an ethical and fully disclosed manner in accordance with the RESNET Code of Ethics.
			2. Produce reports which meet minimum reporting requirements and improvement analysis.
			3. Maintain standard operating procedures and office administration.
			4. Maintain knowledge of current technical guidelines.

# Reciprocity

Nationally A~~a~~ccredited ~~Home Energy~~ Rating Quality Assurance Providers shall accept certified training provided by an accredited Training Provider as meeting the core competencies for a ~~Home Energy~~ Certified Rater. Accredited ~~Home Energy Certified~~ Rating Quality Assurance Providers may add additional training requirements needed to address their specific program, climate, software, or administrative requirements.

# Normative References

~~ANSI/ACCA 12 QH-2014, Home Evaluation and Performance Improvement~~

ANSI/RESNET/ICC 301-2019~~2014(Republished January 2016)~~, “Standard for the Calculation and Labeling of the Energy Performance of Dwelling and Sleeping Units ~~Low-Rise Residential Buildings~~ using an Energy Rating Index.”, including addenda and normative appendices.

ANSI/RESNET/ICC 380-2019~~2016~~, “Standard for Testing Airtightness of Building Dwelling Unit and Sleeping Unit Enclosures, Airtightness of Heating and Cooling Air Distribution Systems, and Airflow of Mechanical Ventilation Systems”, including addenda and normative appendices.