115.00: continued

1. Storm windows installed over existing fenestration.
2. Repairs to an existing sash and frame.
3. Existing ceiling, wall or floor cavities, of the building envelope, exposed or accessible during construction provided that any empty cavities are filled with insulation that meets or exceeds an *R* value of R - 3.5/inch.
4. Reroofing or residing over uninsulated roofs or walls where the sheathing is not exposed.
5. Replacement of existing doors that separate conditioned space from the exterior shall not require the installation of a vestibule or revolving door, provided, however, that an existing vestibule that separates a conditioned space from the exterior shall not be removed,
6. Alterations that replace less than 50% of the luminaires in a space, provided that such alterations do not increase the installed interior lighting power.
7. Alterations that replace only the bulb and ballast within the existing luminaires in a space provided that the alteration does not increase the installed interior lighting power.

104.1 Replace as follows:

104.1 General. Construction or work for which a permit is required shall be subject to inspection by the code official or approved inspection agencies.

104.5 Replace as follows:

104.5 Approved Inspection Agencies. The code official is authorized to require or accept reports of approved inspection agencies, provided such agencies satisfy the requirements as to qualifications and reliability.

107, 108 and 109 Delete.

202 Add definitions as follows:

FENESTRATION PRODUCT, FIELD-FABRICATED. A fenestration product including an exterior glass door whose frame is made at the construction site of standard dimensional lumber or other materials that were not previously cut, or otherwise formed with the specific intention of being used to fabricate a fenestration product or exterior door. Field fabricated does not include site-built fenestration with a label certificate or products required to have temporary or permanent labels.

FENESTRATION PRODUCT, SITE-BUILT. Fenestration designed to be field-glazed or field assembled units using specific factory cut or otherwise factory formed framing and glazing units. Examples of site-built fenestration include storefront systems, curtain walls, and atrium roof systems.

FURNACE ELECTRICITY RATIO. The ratio of furnace electricity use to total furnace energy computed as ratio = (3.412*EAE)/(1000*EF + 3.412*EAE), where EAE (average annual auxiliary electrical consumption) and EF (average annual fuel energy consumption) are defined in 10 CFR Part 430, Subpart B, Appendix N and EF is expressed in millions of Btu's per year.

ON-SITE RENEWABLE ENERGY. Includes solar photovoltaic; active solar thermal that employs collection panels, heat transfer mechanical components and a defined heat storage system; wind; small hydro; tidal; wave energy; geothermal (core earth); biomass energy systems; landfill gas and bio-fuel based electrical production. Onsite energy shall be generated on or adjacent to the project site and shall not be delivered to the project through the utility service.

301.1 through 301.3 Replace as follows:

301.1 General. Climate Zone 5 and moisture regime A (Moist) shall be used in determining the applicable requirements from Chapters 4 and 5 for locations in Massachusetts.

401 Replace as follows:

401.1 Scope. Chapter 4 applies to residential buildings.

401.2 New Construction. New low-rise (three stories or less) residential buildings including townhouses shall require a HERS (Home Energy Rating System) index rating as verified by a RESNET (Residential Energy Services Network) certified HERS rater.

1. For units equal to or greater than 3,000 sq. ft. in conditioned floor space, a HERS rating of 65 or less is required.
2. For units less than 3,000 sq. ft., a HERS rating of 70 or less is required.
3. In addition, all new construction shall demonstrate compliance with the Energy Star Qualified Homes Thermal Bypass Inspection Checklist[1]

115.00: continued

401.3 Prescriptive Option for Residential Additions. Additions to an existing building, building system or portion thereof shall conform to IECC 2009 Chapter 4, and shall further demonstrate compliance with:

1. The Energy Star Qualified Homes Thermal Bypass Inspection Checklist[1].
2. Fenestration U-factor requirements as listed in Energy Star program requirements for Residential Doors, Windows and Skylights - Version 5[2]
3. Ducts for new HVAC systems shall be sealed and tested post-construction to demonstrate leakage to outdoors of less than or equal to 4 cfm per 100 sq. ft. of conditioned floor area, except where the air handler and all ducts are located within *conditioned space*.

401.4 Performance Option for Residential Additions. The performance approach and HERS ratings of 401.2 may be followed in *lieu* of the prescriptive requirements of section 401.3

401.5 Prescriptive Option for Alterations, Renovations or Repairs. Alterations, renovations or repairs that involve accessing the building envelope shall require the affected portion of the envelope to comply with 401.3. Envelope insulation shall meet or exceed IECC 2009 requirements (Chapter 4, section 402) for climate zone 5, or fully fill existing cavities with insulating material which meets or exceeds an R value of R 3.5/inch.

401.6 Performance Option for Alternations, Renovations or Repairs. In all cases of alternations, renovations or repairs the performance approach of 401.2 may be followed in *lieu* of the prescriptive requirements of section 401.5 with the following HERS rating requirements:

1. For units equal to or greater than 2,000 sq. ft. in conditioned floor space, a HERS rating of 80 or less is required.
2. For units less than 2,000 sq. ft., a HERS rating of 85 or less is required.
3. Compliance with the Energy Star Qualified Homes Thermal Bypass Inspection Checklist.

[1] http://www.energystar.gov/ia/partners/bldrs_lenders_raters/downloads/Thermal_Bypass_Inspection_Checklist.pdf.

[2] http://www.energystar.gov/ia/partners/prod_development/archives/downloads/windows_doors/WindowsDoorsSkylightsProgRequirements7Apr09.pdf.

Chapter 5 Change title to:

CHAPTER 5 ADVANCED COMMERCIAL ENERGY EFFICIENCY

501.1 and 501.2 Replace as follows:

501.1 Scope. The requirements contained in this chapter are applicable to new construction of commercial buildings, or portions of commercial buildings.

Exceptions:

1. Commercial buildings less than 5,000 sq. ft.
2. Commercial buildings from 5,000 to 40,000 sq. ft. in area with these uses:
   a. Supermarkets
   b. Warehouses
   c. Laboratories
   d. A building of specialized use by variance to this code through appeal to the BBRS.

501.1.1 Buildings Greater that 100,000 sq. ft. Buildings greater than 100,000 sq. ft., and additions to such buildings greater than or equal to 30% of the existing conditioned floor area, shall be designed to achieve energy use per square foot equal to at least 20% below the energy requirements of *ASHRAE/IESNA Standard 90.1-2007, Energy Standard for Buildings Except for Low-Rise Residential Buildings*, Appendix G, measured by industry-accepted energy modeling.

501.1.2 Mandatory Requirements for Buildings Subject to 501.1.1. Buildings subject to 501.1.1 must comply with:

1. the mandatory requirements set forth in sections 502.4, 503.2, 504 and 505, or
2. the mandatory requirements of ASHRAE Standard 90.1-2007: 5.4, 6.4, 7.4, 8.4, 9.4, 10.4.
3. the lighting power density requirements of TABLE 505.5.2

501.1.3 Special Energy use Buildings. Buildings greater than 40,000 sq. ft. in area, and additions to such buildings greater than or equal to 30% of the existing conditioned floor area with these uses:

1. Supermarkets
2. Warehouses