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Commonwealth of Massachusetts
Division of Professional Licensure
Office of Public Safety and Inspections

1 Ashburton Place, Rm 1301 • Boston • Massachusetts • 02108

JOHN C. CHAPMAN
UNDERSECRETARY OF CONSUMER AFFAIRS AND BUSINESS REGULATION

CHARLES BORSTEL
COMMISSIONER, DIVISION OF PROFESSIONAL LICENSURE

BOARD OF BUILDING REGULATIONS AND STANDARDS

NOTICE OF MEETING

In accordance with the provisions of G.L. c. 30A § 20, notice is hereby given that the Board of Building Regulations and Standards (BBRS) will convene a regular monthly meeting on:

June 5, 2018 @ 1:00 p.m. until approximately 4 p.m.

50 Maple Street in Milford

Milford is a secure facility. Please allow time to be checked-in at the front desk.

Posted on May 30, 2018 @ 4 p.m.

It is anticipated that the topics shown below will be discussed at the aforementioned meeting:

AGENDA

Roll Call, by BBRS Chair:

John Couture, Chair	☐ present	☐ absent	Robert Anderson, or designee	☐ present	☐ absent
Kerry Dietz, Vice Chair	☐ present	☐ absent	Peter Ostroskey, or designee	☐ present	☐ absent
Richard Crowley, Second Vice Chair	☐ present	☐ absent	Michael McDowell	☐ present	☐ absent
Steve Frederickson	☐ present	☐ absent	Susan Gleason	☐ present	☐ absent
Kevin Gallagher	☐ present	☐ absent	Lisa Davey	☐ present	☐ absent
Cheryl Lavalley	☐ present	☐ absent			

Regular Meeting

1. **Review\Vote** approval of April 10, 2018 BBRS draft meeting minutes.
2. **Review\Vote** approval of April 4, 2018 BOCC draft meeting minutes.
3. **Review\Vote** actions relating to code change proposals submitted for the May public hearing.

- **Proposal Number 5-1-2018** – Consider adopting 2018 International Energy Conservation Code (IECC) & Discuss Stretch Energy Code Provisions.
  Link to code: https://codes.iccsafe.org/public/document/iecc2018
- **Proposal Number 5-2-2018** – Consider adopting Appendix Q of the International Residential Code pertaining to Tiny Houses.
  Link to appendix: https://codes.iccsafe.org/public/document/IRC2018/appendix-q-tiny-houses
- **Proposal Number 5-3-2018** – Consider adopting an amendment particular to Micro Units.
  See attached proposal from Mike DiMascio.
- **Proposal Number 5-4-2018** – Consider adopting 2015 International Solar Energy Provisions.
  Link to document: https://codes.iccsafe.org/public/document/ISEP2015

- **Proposal Number 5-5-2018** – Consider updating NFPA 241 to the 2013 Edition to coincide with 527 CMR (The Massachusetts Comprehensive Fire Safety Code) and broaden the scope beyond standpipes (*see below*).

NFPA 241 – 2009 *Standard for Safeguarding Construction, Alteration, and Demolition Operations*

905.10 Revise section as follows:

905.10 During Construction. Standpipes systems required during construction and demolition operations shall be provided in accordance with section 3311 and NFPA 241.

- **Proposal Number 5-6-2018** – Consider broadening the scope of NFPA 130 beyond Chapters 2, 3, 4, and 5 (*see below*).

101.4.13 Transit and Commuter Rail Stations. Such stations shall comply with 780 CMR and Chapters 2, 3, 4, and 5 of NFPA 130-2014. Any references to NFPA 101 and NFPA 220 shall mean reference to 780 CMR. Where conflict exists between 780

- **Proposal Number 5-7-2018** – Consider developing a swimming pool installers license\certification based on the Association of Pool & Spa Professionals (APSP) standards.
  Link to standards: http://apsp.org/pool-and-hot-tub-certification
- **Proposal Number 5-8-2018** – Consider adding the following paragraph as Section 105.3.1.1 for both the base and comparable residential code section (*see below*).

If a permit applicant fails to complete the permitted work by correcting outstanding code violations or fails to notify the inspector as required for final inspection, at the discretion of the authority having jurisdiction, the applicant may not be granted any further permits until the outstanding code issues are satisfactorily addressed.

105.3.1 Action on Application. The building official shall examine or cause to be examined applications for permits and amendments, and shall issue or deny the permit, within 30 days of filing. If the application or the construction documents do not conform to the requirements of 780 CMR and all pertinent laws under the building official's jurisdiction, the building official shall deny such application in writing, stating the reasons therefore. The building official's signature shall be attached to every permit. The following requirements, where applicable, shall be satisfied before a building permit is issued:

- **Proposal Number 5-9-2018** – Consider, via emergency action, revising Section 2603.5.5 to coordinate with final amendments made to Sections 1403.5 and 1407.10.4 of the ninth edition code.

2603.5.5 Revise subsection as follows:

2603.5.5 Vertical and Lateral Fire Propagation.
The exterior wall assembly shall be tested in accordance with and comply with theacceptancecriteria of NFPA 285.

EXCEPTIONS:

1. Wall assemblies where the foam plastic insulation is covered on each face by not less than one-inch (25 mm) thickness of masonry, concrete, terracotta, stucco or ½-inch-thick Type X gypsum board and meeting one of the following:
   2.1 There is no airspace between the insulation and the masonry, concrete, terracotta, stucco, or ½-inch thick type X gypsum board.
   2.2 The insulation has a flame spread index of not more than 25 as determined in accordance with ASTM E 84 or UL 723 and the maximum airspace between the insulation and the concrete or masonry is not more than 1 inch (25 mm).
2. In other than high rise buildings, walls in buildings equipped throughout with an automatic sprinkler system, with the following conditions: 1) only where a NFPA 13 sprinkler system is provided and 2) where fire flow analysis has been performed without sprinkler decrease allowance that shows adequate water is available.

- **Proposal Number 5-10-2018** – Consider amending Section R303.1, exception number 1.
  See attached proposal from Frank Ramsbottom.
- **Proposal Number 5-11-2018** – Consider adding item number 9 to Section R105.3 concerning information requested on a building permit application.

9. If applicable, in accordance with MGL 149 Section 6 and 454 CMR 22.00, include the ***Lead-Safe Renovation Contracting Licensees'*** name and license number.

5. State the valuation of the proposed work. The building official has authority to request from the applicant a detailed substantiation of the valuation.
6. Be signed by the owner or authorized agent.
7. Give such other data and information as required by the building official in accordance with 780 CMR.
8. If applicable, include the registration number and information of home improvement contractors or subcontractors for residential contracting services, in accordance with M.G.L. c. 142A, §§ 9(a) and 13.

- **Proposal Number 5-12-2018** – Consider amending Section N1103.6.2 and R403 to add reference to licensed sheet metal workers.
  See attached proposal from Cathy Flaherty.
- **Proposal Number 5-13-2018** – Consider amending Section N1103.3.3 and R403.3.3 to add reference to licensed sheet metal workers.
  See attached proposal from Cathy Flaherty.
- **Proposal Number 5-14-2018** – Consider amending Section 101.5 of the base code and comparable section of the residential code by deleting the last sentence as well as the name and make-up of each committee.

101.5 BBRS Advisory Committees. BBRS technical advisory committees support requests from and by the BBRS as it deems necessary in accordance with M.G.L. c. 143. Titles and membership of these technical advisory committees may be viewed at http://www.mass.gov/ocabr/government/oca-agencies/dpl-lp/opsi/. These technical advisory committees include, but are not limited to the following committees with their respective composition listed:

Energy Advisory Committee ("EAC")
One Division of Professional Licensurestaff
One Department of Energy Resources staff
One mechanical engineer (with HVAC expertise)
One architect
One utility company designee
One building envelope expert
One lighting controls expert
One building official
One IAQ / filtration expert
One high performance housing expert
One ASHRAE 62.1, 62.2, and 90.1 expert

Fire Protection Fire Prevention Committee ("FPFP")
One Division of Professional Licensurestaff
One Department of Fire Services staff
Boston Fire Department Commissioner, or designee
Two fire protection engineers
One fire chief representative
One building official representative
One architect representative
One residential contractor representative(for topics related to the residential volume)
One general contractor representative (for topics related to the base volume)
One sprinkler contractor
One fire alarm contractor

- **Proposal Number 5-15-2018** – Consider deleting Section AU103.7 and RB103.7 of the IECC (*submitted during hearing*).

Existing language:
AU103.7 (RB103.7) Electrical Service Reserved Space. The main electrical service panel shall have a reserved space to allow installation of a dual pole circuit breaker for future solar electric installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

Proposed changes:
Delete entire section AU103.7 (RB103.7)

4. **Discuss** general direction for next edition of 780 CMR.
5. **Review\Vote** FAQ responses for:
   a.) Wind-borne debris.
   b.) Underfloor protection.
   c.) Additions in floodplains.
   d.) Substantial structural alterations.

6. **Review\Vote** certain requests pertaining to:
   a.) ***Life experience*** for active construction professionals in lieu of completing the 12 CEU requirement.
   b.) ***Continuing Education Waiver*** to complete the classroom requirement for people on active Military Duty or for medical reasons.
7. **Consider\Vote** approval of new CSLs issued in the month of April, 2018.
8. **Discuss\Vote** CSL Average Passing Score\Medical\Military\Age or Continuing Education Requirements.
   a.) Frank Baj CS-011406 (*Medical*)
   b.) Romero Wilson CS-087861 (*Medical*)
9. **Discuss** other matters not reasonably anticipated 2 business days in advance of meeting.

The Commonwealth of Massachusetts

Office of Public Safety & Inspections
Board of Building Regulations and Standards
One Ashburton Place - Room 1301
Boston, MA 02108

780 CMR - MASSACHUSETTS BUILDING CODE - AMENDMENT PROPOSAL FORM

Impacted code:	9th Edition Base Code	State Use Only	
Date Submitted:	**April 30, 2018**	Date Received:	
Code Section:	**New**	Code Change Number:	
Name of proponent:	**Mike DiMascio**		
Company / Organization represented, if any:			
Address (number, street, city, state, ZIP:	**18 Hayden Rowe St., Hopkinton, MA 01748**		
Telephone number:	**617-447-1854**		
Email address:	**Mike.dimascio@arup.com**		

PLEASE CHECK OFF THE TYPE OF AMENDMENT PROPOSED

Change existing section language Add new section Delete existing section and substitute
Delete existing section, no substitute Other, Explain:

PLEASE TYPE THE PROPOSED AMENDMENT BELOW. If you propose to change a section, please copy the original text from either the relevant model code and/or MA amendment. Indicate, with a strikethrough, the text that you propose to delete. Please also indicate any new text in both *italic* and red font. Finally, for each proposal submitted, please provide the justification items requested below. Completed code amendment forms may be emailed to Cesar Lastra @ Cesar.Lastra@state.ma.us. Please attach additional pages as necessary.

Existing language: None

Proposed Changes: See attached.

Background and rationale: The availability of housing for people new to the market in areas such as Boston and the immediate suburbs is such that affordability is a major problem for those concerned. Recent experience with new apartment buildings with a mix of studios, one-bedroom and two-bedroom units shows that the difference in rent between a studio and one-bedroom unit is only a few hundred dollars. The rents are in the range of $2,300 to $2,500 for studio apartments. This is out of the reach of many if not most single people who have recently graduated and staring work in Boston or moved to Boston from a more affordable location.

Pros of the proposed change: The cost to rent units is driven by the cost to build the units in a very active real estate market. The costs to build the units is directly related to the size of the units which is driven by the requirements in the

Massachusetts State Building Code. Research into the origin of the area requirements shows no particular reason for the minimum areas and in fact seems to indicate the choice of minimum areas was somewhat arbitrary.

The City of Boston is looking to modify its zoning regulations to allow these types of units. Other jurisdictions have recognized this issue and have allowed for smaller units to address affordability. Seattle has allowed so-called micro-units for several years (see attached), New York City made changes to the allowable minimum areas found in the International Building Code to allow for smaller units.

Other jurisdictions are either allowing the smaller units via the appeals process or zoning codes. The issue with this approach is that developers are reticent to invest the money to pursue this route without knowing the outcome. If the reduced size is allowed by the building code, developers are more willing to invest money upfront to build these more affordable units.

The proposed appendix section allows for an alternative to the current minimum areas with features that compensate for the reduced size of the unit. The proposed appendix wording requires more natural light be provided within the unit and that common spaces for gathering and storage be provided based on the number of units within the building.

Some spaces within the units cannot be reduced due to other restrictions such as those associated with the Massachusetts Architectural Access Board regulations and the Fair Housing Act. These regulations affect the size of the bathrooms and spaces in the kitchens by requiring minimum size spaces for access to fixtures and appliances. Other aspects such as minimum room widths and heights are not changed.

Pros of the proposed change: The following are the pros associated with the reduced dimensions allowed by the proposed code change.

- Smaller more affordable units
- Gathering spaces for more interaction among the residents
- No cost to the development community if the option is not selected

Cons of the proposed change: The following are the cons associated with the reduced dimensions allowed by the proposed code change.

- None identified

Estimated impact on life safety: None, no reduction in life safety is allowed as part of the proposed code change

Estimated impact on cost: Reduced cost of development due to the greater density of units allowed

MICRO UNITS

GENERAL

Scope *– This appendix shall be applicable to micro units uses as dwelling units within apartment or condominium buildings. Micro units shall comply with this code except as otherwise stated in this appendix.*

DEFINITIONS

General *– The following words and terms shall, for the purpose of this appendix, have the following meaning shown herein. Refer to Chapter 2 of this code for general definitions.*

Micro Unit *– A dwelling unit that is 200 square feet or more in floor area within the inside surface of the enclosing walls.*

MINIMUM AREAS

Minimum Habitable Room Areas *- Every micro unit shall have no fewer than one room that shall have not less than 120 square feet of net floor area, exclusive of structural elements, bathrooms, built-in cabinets, appliances and closets, for one person. Each additional person shall require an additional 30 square feet. The required 120 square feet of net floor area of contiguous space shall be on one floor level. Other habitable rooms in the same unit shall have a net floor area of not less than 70 square feet.*

PRIVACY

Privacy *- Each bathroom shall occupy space with permanent or movable partitions enclosing the fixtures to ensure privacy.*

LIGHT AND VENTILATION

Light/Ventilation *- All habitable spaces shall have sufficient access to daylight. Units shall provide a minimum ceiling height of 8 feet, and minimum window glazing area of at least 15% of habitable room area. Twenty-five percent of the window area shall be openable.*

COMMON SPACE

Common Space *- For buildings with 30 or fewer micro units, a minimum of 600 square feet of common space shall be provided. For buildings with more than 30 micro units, 10 square feet of common space shall be provided for each additional unit. Common space shall be located along common paths of travel and with good access to natural light and ventilation.*

STORAGE

Unit Storage *– A built-in storage space, exclusive of kitchen cabinets, shall be provided within each unit.*

Common Space Storage *- Individual unit lockable storage space within common areas shall be provided. A minimum of 20 square feet of storage space shall be provided for each unit. Individual bicycle storage space may count toward the minimum.*

SEATTLE DCI

Director's Rule 9-2017

Applicant:	Page	Supersedes:
City of Seattle Department of Construction and Inspections	1 of 3	7-2016
	Publication:	**Effective:**
	5/04/2017	6/30/2017
Subject:	**Code and Section Reference:**	
	Seattle Building Code	
Small Efficiency Dwelling Units	**Type of Rule:**	
	Code Interpretation	
	Ordinance Authority:	
	SMC 3.06.040	
Index:	**Approved**	**Date**
Seattle Building Code	(signature on file) Nathan Torgelson, Director, Seattle DCI	6/28/2017

BACKGROUND:

This Rule sets forth minimum room size and other technical requirements for small efficiency dwelling units.

Seattle Building Code (SBC) Section 1208 outlines minimum interior space dimensions for room widths (1208.1), ceiling heights (1208.2), and room area, (1208.3) for dwelling units, and (1208.4) for efficiency dwelling units. Section 1208.4 also requires units be provided a separate closet and bathroom, kitchen area with a kitchen sink, cooking appliance, and refrigeration facilities.

This Rule allows for efficiency units smaller than required by Section 1208.4, when other specified amenities are provided.

This Rule does not modify the required standards for Type A or Type B dwelling units.

RULE:

Dwelling units shall comply with the SBC Section 1208 for interior dimensions, except when modified by this Rule. Small efficiency dwelling units (SEDU) are single, independent, residential units consisting of one habitable room (excluding kitchen, bath, closets, storage areas, and built-ins).

Dwelling units having a living room floor area 220 square feet or greater, or a total gross unit size exceeding 320 square feet measured to the interior face of unit bounding walls, are not considered small efficiency dwelling units and at a minimum, shall meet the efficiency dwelling unit requirements found in SBC Section 1208.4.

FLOOR AREA:

Habitable Space: A SEDU shall have a living room of at least 120 square feet of net floor area of habitable space meeting dimensions outlined in SBC 1208.1 and 1208.2.

Occupiable Space: A SEDU shall have an additional 30 square feet of net floor area of occupiable space, which is not required to meet the habitable space dimensions of SBC 1208.1, contiguous to the 120-net square foot living room floor area.

The required 150 square feet of net floor area of contiguous habitable/occupiable space shall be on one floor level.

Space occupied by structural features, bathrooms, closets, cabinets, appliances, built-ins, or any encroachments not specified in SBC 1208.1 and 1208.2, shall not be included when calculating the required net floor area.

FOOD PREPARATION AREA:

A food preparation area shall be provided with the following components with each having a clear working space of not less than 30 inches:

- cooking appliance;
- refrigerator;
- sink with hot and cold water;
- food and utensil storage space; and
- contiguous countertop work area of not less than 4 square feet

For the purposes of this Rule only, a microwave oven is permitted to serve as the cooking appliance and shall not encroach on the required countertop work area. The food preparation area shall be provided with two 20 amperes small appliance branch circuits. Each circuit shall serve at least one duplex receptacle. Built-in cooking appliances shall be on an additional circuit.

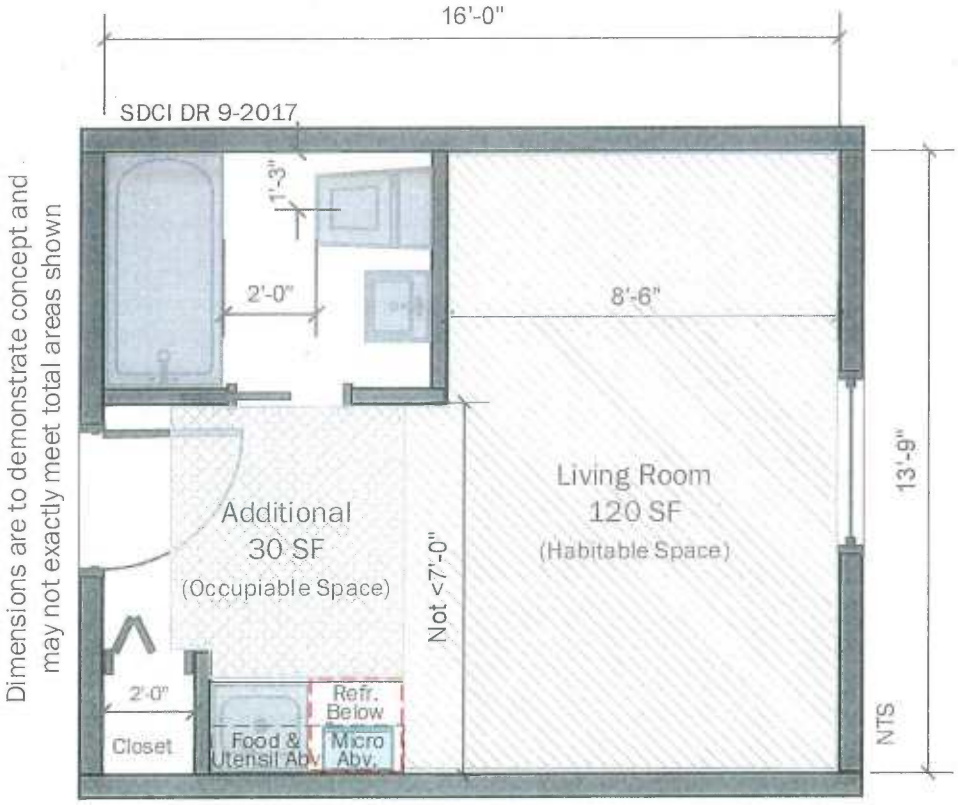
CLOSETS AND STORAGE:

A built-in closet shall be provided within each unit. The portion of a closet used to store built-in beds or other equipment shall not be counted in the SEDU's required square footage, and it also shall not be counted as a required closet. Additionally, there shall be 55 cubic feet of storage space provided for each unit located anywhere within the building, and several may be grouped together in a common storage area.

NATURAL LIGHT:

Habitable/occupiable space shall be provided with natural light per SBC Section 1205.2.

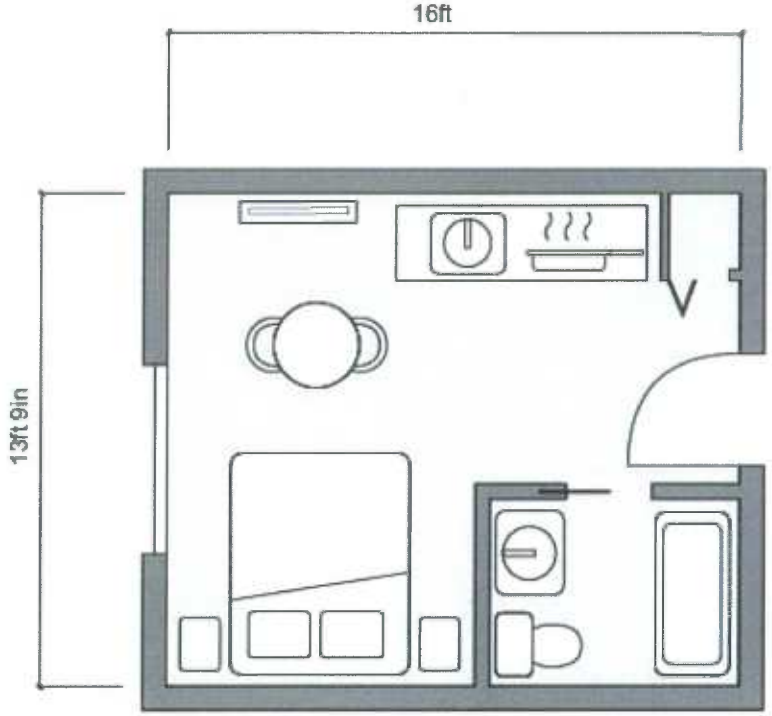
Small Efficiency Dwelling Unit Design Example:

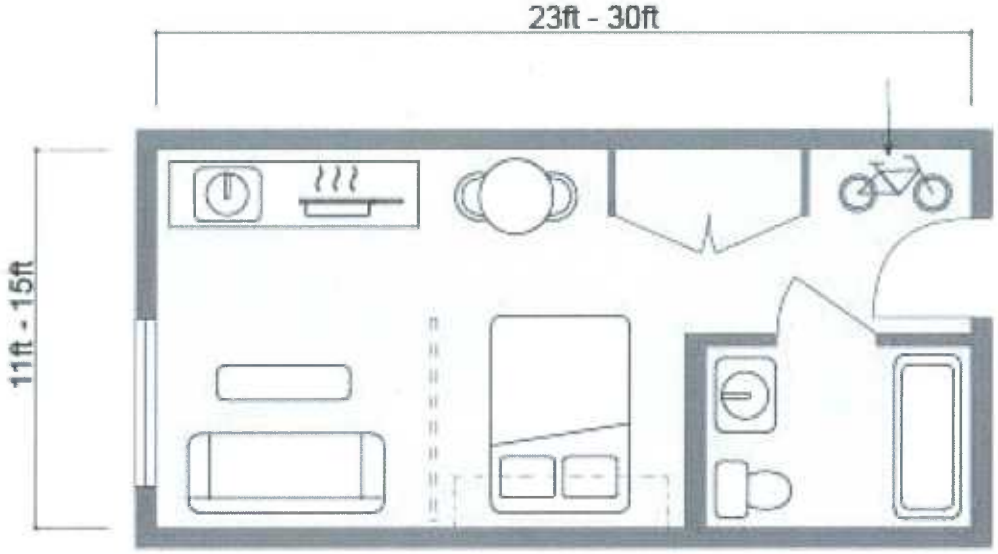


<u>*This example does not meet requirements for Type A or Type B Dwelling Units</u>

For this example:
The gross unit size of 16'-0" X 13'-9" = 220 SF (<320 SF satisfies SEDU)
Living Room net floor area = 120 SF (<220 SF satisfies SEDU)
Occupiable space ≥ 30 SF (=150 SF habitable/occupiable space satisfies SEDU)
Closet not part of built-in equipment or storage areas satisfies SEDU
Minimum 4 SF countertop work area satisfies SEDU
Microwave (cooking appliance) satisfies SEDU
Upper & lower cabinet for food & utensil storage satisfies SEDU
Window provides minimum 8% natural light, satisfies SEC Section 1205.2.

<u>Note:</u> 55 cubic feet of additional storage space shall be provided for each unit and located in the building.





Micro Unit Sample Plans

The Commonwealth of Massachusetts

Office of Public Safety & Inspections

Board of Building Regulations and Standards

One Ashburton Place - Room 1301

Boston, MA 02108

780 CMR - MASSACHUSETTS BUILDING CODE - AMENDMENT PROPOSAL FORM

Impacted code:	9th Edition Base Code 9th Edition Residential Code	State Use Only	
Date Submitted:	**2/8/2018**	Date Received:	
Code Section:	**R303.1 exception 1**	Code Change Number:	
Name of proponent:	**Francis Ramsbottom**		
Company / Organization represented, if any:	Town of Acton	Check if representing self	
Address (number, street, city, state, ZIP:	**472 Main Street Acton, MA 01720**		
Telephone number:	**978-929-6633**		
Email address:	**framsbottom@acton-ma.gov**		

PLEASE CHECK OFF THE TYPE OF AMENDMENT PROPOSED

Change existing section language Add new section Delete existing section and substitute

Delete existing section, no substitute Other, Explain: _____

PLEASE TYPE THE PROPOSED AMENDMENT BELOW. If you propose to change a section, please copy the original text from either the relevant model code and/or MA amendment. Indicate, with a strikethrough, the text that you propose to delete. Please also indicate any new text in both *italic* and red font. Finally, for each proposal submitted, please provide the justification items requested below. Completed code amendment forms may be emailed to Cesar Lastra @ Cesar.Lastra@state.ma.us. Please attach additional pages as necessary.

Existing language:

R303.1 Habitable rooms.
Habitable rooms shall have an aggregate glazing area of not less than 8 percent of the floor area of such rooms. Natural ventilation shall be through windows, skylights, doors, louvers or other approved openings to the outdoor air. Such openings shall be provided with ready access or shall otherwise be readily controllable by the building occupants. The openable area to the outdoors shall be not less than 4 percent of the floor area being ventilated.

Exceptions:

1. The glazed areas need not be openable where the opening is not required by Section R310 and a whole-house mechanical ventilation system is installed in accordance with Section M1507.

2. The glazed areas need not be installed in rooms where Exception 1 is satisfied and artificial light is provided that is capable of producing an average illumination of 6 footcandles (65 lux) over the area of the room at a height of 30 inches (762 mm) above the floor level.

3. Use of sunroom and patio covers, as defined in Section R202, shall be permitted for natural ventilation if in excess of 40 percent of the exterior sunroom walls are open, or are enclosed only by insect screening.

Proposed changes:

Change R303.1 Exception 1 by adding the following

"an approved mechanical ventilation system capable of producing 0.35 air change per hour in the room is installed"

R303.1 Habitable rooms.

Habitable rooms shall have an aggregate glazing area of not less than 8 percent of the floor area of such rooms. Natural ventilation shall be through windows, skylights, doors, louvers or other approved openings to the outdoor air. Such openings shall be provided with ready access or shall otherwise be readily controllable by the building occupants. The openable area to the outdoors shall be not less than 4 percent of the floor area being ventilated.

Exceptions:

1. The glazed areas need not be openable where the opening is not required by Section R310 and *an approved mechanical ventilation system capable of producing 0.35 air change per hour in the room is installed* or a whole-house mechanical ventilation system is installed in accordance with Section M1507.

2. The glazed areas need not be installed in rooms where Exception 1 is satisfied and artificial light is provided that is capable of producing an average illumination of 6 footcandles (65 lux) over the area of the room at a height of 30 inches (762 mm) above the floor level.

3. Use of sunroom and patio covers, as defined in Section R202, shall be permitted for natural ventilation if in excess of 40 percent of the exterior sunroom walls are open, or are enclosed only by insect screening.

Background and rationale: The 2009 IRC Sec 303.1 exception 1 included the language I am proposing be amended back into the code. Single room mechanical ventilation systems have been used for many years successfully

Pros of the proposed change: It is not unusual to find rooms such a basements or home theatres which meet all other aspects of the building code but do not meet the ventilation requirements. Single room mechanical ventilations has been an effective means of providing ventilation to these spaces. Allowing only whole house ventilation as an exception adds unnecessary costs. If the rest of the house has adequate windows to provide ventilation adding a whole house ventilations system is redundant. A whole house ventilation system will use more energy than a single room system to operate and will unnecessarily exhaust conditioned air further increasing energy usage.

Cons of the proposed change:

Estimated impact on life safety: None

Estimated impact on cost: Reduced cost compared to other alternatives i.e. installing a whole house ventilation system or cutting an opening and installing a window(s)

The Commonwealth of Massachusetts

Office of Public Safety & Inspections
Board of Building Regulations and Standards
One Ashburton Place - Room 1301
Boston, MA 02108

780 CMR - MASSACHUSETTS BUILDING CODE - AMENDMENT PROPOSAL FORM

Code (Indicate with an 'x')	_ Ninth Edition Base _ Ninth Edition One- and Two-Family Dwellings X IECC Amendments	*State Use Only*	
Date: 4/27/2018	**N1103.6.2**	**Date Received:**	
Code Section:	**R403 SYSTEMS – Mechanical Ventilation**	**Code Change Number::**	
Name and company affiliation if any: **Air Conditioning Association of New England, Inc. (ACA/NE)**			
Address: **11 Robert Tower Blvd #234** **North Attleboro, MA 02763**	**Telephone: 508-839-3407** **Email: cflaherty@acane.org**		

Indicate with an 'x' the type of amendment proposed:

_X_Change Section __Add new section __Delete section and substitute __Delete section; no substitute

__ Other, Explain:

Please type below the proposed amendment. If you propose to change a section, please copy the original text from the appropriate 2015 I-code and\or Massachusetts amendment. Indicate with strike out the text you propose to delete and add new text in either *italic* or red font. Also you please provide justification of your proposal as a second page and include information on the **Introduction and Background** of your proposal, **Pro *and* Con Reasons for Adoption** of it, a summary of estimated **Costs for Building Owners**, and **Life Safety Benefits** for building occupants. Also, please indicate whether or not the proposal has been presented to the International Code Council (ICC) for consideration. If not, please explain why the proposal is unique to Massachusetts. When complete email this file to Cesar.Lastra@state.ma.us. Please use additional pages if necessary.

Installed performance of the mechanical ventilation system shall be tested and verified by a HERS Rater, HERS Rater Field Inspector, ~~or~~ an applicable BPI Certified Professional or a Licensed Sheet Metal Worker, and measured using a flow hood, flow grid, or other air flow measuring device in accordance with RESNET Standard Chapter 8 or ACCA Standard 5.

Introduction and Background:

We feel that this amendment in its current form, does not produce the intended results. Licensed HVAC/Sheet Metal professionals possess the prerequisite knowledge and are uniquely equipped with the necessary tools to test duct system leakage rates.

Pro *and* Con Reasons for Adoption: Pros: Cons:

1. **This amendment is in direct conflict with the Massachusetts General Laws. Duct testing is by statute the domain of the Sheet Metal Board. (See supporting document on the next page).**

2. **This amendment is impractical. It places a burden on people who are not always equipped to do such work, like having a tall ladder.**
3. **It unnecessarily imposes additional costs on consumers by duplicating services that in many cases were already done by the HVAC people.**
4. **It greatly inconveniences the consumer by imposing one more sub-contractor and at least one more inspection and requiring the consumer to take additional days off from work. It is hard to schedule HERS Raters around the customer's needs.**
5. **This amendment singles out one trade from checking and testing their own work. All other trades are allowed to test their own work.**
6. **The AHJ has no power to enforce the provision in this amendment on persons not licensed under the BBRS. HERS Raters and BPI persons hold certifications that are not under the jurisdiction of the Commonwealth.**
7. **The IECC 2015 and IRC 2015 model codes are purposely neutral on the qualifications required for testing the performance of the mechanical ventilation system. Ma. State law is very clear on this same question; it is the work of a licensed sheet metal worker.**

Costs to Building Owners:

This will decrease the cost to the building owner.

Life Safety Benefits:

The adoption of this amendment has no impact on the Life Safety Benefits.

Supporting Documents:

(1) *HOUSE- No. 4804 (excerpt)*
In the Year Two Thousand and Eight
AN ACT RELATIVE TO THE LICENSING OF SHEET METAL WORKERS AND SHEET METAL CONTRACTORS.
Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

1 SECTION 1. Chapter 13 of the General Laws is hereby amended by inserting at the end
There of the following section:—……..
18 "Sheet metal", manufacturing, fabrication, assembling, han-
19 dling, erection, installation, dismantling, conditioning, adjustment,
20 alteration, repairing, and servicing of all commercial and indus-
21 trial air-veyor systems including, but not limited, air handling sys-
22 terns regardless of the material used, including specifically the
handling, fabricating, setting, installation, assembling, disman-
24 tling, adjustment, alteration, reconditioning, repairing of all duct-
25 work; installation of fans, sheaves, belt guards, dampers, louvers,
26 screens, registers, grilles, diffusers, sound traps, attenuators,
27 mixing boxes, access doors related to air handling systems,
28 breaching, hoods, and any and all appurtenances relating to
29 heating, ventilation, air conditioning and exhaust systems, com-
30 mercial and industrial architectural sheet metal water shed roof
31 systems, ***the testing, adjusting, and balancing of all air-handling***
32 equipment and ductwork*, the fabrication and installation of com-*
33 mercial and industrial kitchen hoods, kitchen vents, bathroom
34 exhaust vents and fans.

The Commonwealth of Massachusetts

Office of Public Safety & Inspections
Board of Building Regulations and Standards
One Ashburton Place - Room 1301
Boston, MA 02108

780 CMR - MASSACHUSETTS BUILDING CODE - AMENDMENT PROPOSAL FORM

Code (Indicate with an 'x')	_ Ninth Edition Base _ Ninth Edition One- and Two-Family Dwellings X IECC Amendments	*State Use Only*	
Date: 4/27/2018	**N1103.3.3 (R403.3.3)**	**Date Received:**	
Code Section:	**R403 SYSTEMS – Duct testing**	**Code Change Number::**	
Name and company affiliation if any: **Air Conditioning Association of New England, Inc. (ACA/NE)**			
Address: **11 Robert Tower Blvd. #234** **North Attleboro, MA 02763**	**Telephone: 508-839-3407** **Email: cflaherty@acane.org**		

Indicate with an 'x' the type of amendment proposed:

_X_Change Section __Add new section __Delete section and substitute __Delete section; no substitute

__ Other, Explain:

Please type below the proposed amendment. If you propose to change a section, please copy the original text from the appropriate 2015 I-code and\or Massachusetts amendment. Indicate with strike out the text you propose to delete and add new text in either *italic* or red font. Also you please provide justification of your proposal as a second page and include information on the **Introduction and Background** of your proposal, **Pro *and* Con Reasons for Adoption** of it, a summary of estimated **Costs for Building Owners**, and **Life Safety Benefits** for building occupants. Also, please indicate whether or not the proposal has been presented to the International Code Council (ICC) for consideration. If not, please explain why the proposal is unique to Massachusetts. When complete email this file to Cesar.Lastra@state.ma.us. Please use additional pages if necessary.

Post-construction or rough-in testing and verification shall be done by a HERS Rater, HERS Rating Field Inspector, ~~or~~ an applicable BPI Certified Professional or a Licensed Sheet Metal Worker.

Introduction and Background:

We feel that this amendment in its current form, does not produce the intended results. Licensed HVAC/Sheet Metal professionals possess the prerequisite knowledge and are uniquely equipped with the necessary tools to test duct system leakage rates.

Pro *and* Con Reasons for Adoption: Pros: Cons:

1. **This amendment is in direct conflict with the Massachusetts General Laws. Duct testing is by statute the domain of the Sheet Metal Board. (See supporting document (1) on the next page).**
2. **This amendment is impractical. It places a burden on people who are not always equipped to do such work, like having a tall ladder.**
3. **It unnecessarily imposes additional costs on consumers by duplicating services that in many cases were already done by the HVAC people.**

4. **It greatly inconveniences the consumer by imposing one more sub-contractor and at least one more inspection and requiring the consumer to take additional days off from work. It is hard to schedule HERS Raters around the customer's needs.**
5. **This amendment contradicts State Law regarding licensing and singles out one trade (sheet metal workers) from checking and testing their own work. Other trades can test their own work.**
6. **The AHJ has no power to enforce the provision in this amendment on persons not licensed under the BBRS. HERS Raters and BPI persons hold certifications that are not under the jurisdiction of the Commonwealth.**
7. **The IECC 2015 and IRC 2015 model codes are purposely neutral on the qualifications required for testing a ducted system. Ma. State law is very clear on this same question; it is the work of a licensed sheet metal worker.**
8. **It should be noted that the ICC Model Codes have clear statements of intent. (See supporting document (2) below**

Costs to Building Owners:

This will decrease the cost to the building owner.

Life Safety Benefits:

The adoption of this amendment has no impact on the Life Safety Benefits.

Supporting Documents:

(1) *HOUSE- No. 4804 (excerpt)*
In the Year Two Thousand and Eight
AN ACT RELATIVE TO THE LICENSING OF SHEET METAL WORKERS AND SHEET METAL CONTRACTORS.
Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

1 SECTION 1. Chapter 13 of the General Laws is hereby amended by inserting at the end
There of the following section:—……..
18 "Sheet metal", manufacturing, fabrication, assembling, han-
19 dling, erection, installation, dismantling, conditioning, adjustment,
20 alteration, repairing, and servicing of all commercial and indus-
21 trial air-veyor systems including, but not limited, air handling sys-
22 terns regardless of the material used, including specifically the
handling, fabricating, setting, installation, assembling, disman-
24 tling, adjustment, alteration, reconditioning, repairing of all duct-
25 work; installation of fans, sheaves, belt guards, dampers, louvers,
26 screens, registers, grilles, diffusers, sound traps, attenuators,
27 mixing boxes, access doors related to air handling systems,
28 breaching, hoods, and any and all appurtenances relating to
29 heating, ventilation, air conditioning and exhaust systems, com-
30 mercial and industrial architectural sheet metal water shed roof
31 systems, ***the testing, adjusting, and balancing of all air-handling***
32 equipment and ductwork*, the fabrication and installation of com-*
33 mercial and industrial kitchen hoods, kitchen vents, bathroom
34 exhaust vents and fans.

(2) N1101.2 (R101.3) Intent.
This code shall regulate the design and construction of buildings for the effective use and conservation of energy over the useful life of each building. This code is intended to provide flexibility to permit the use of innovative approaches and techniques to achieve this objective. **This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.**

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Daniel Bennett
Secretary

The Commonwealth of Massachusetts
Department of Public Safety
Board of Building Regulations and Standards

One Ashburton Place, Room 1301
Boston, Massachusetts 02108-1618
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Fax (617) 727-5732
www.mass.gov/dps

Matthew Moran
Commissioner

Richard Crowley
Chairman

Robert Anderson
Administrator

MASSACHUSETTS STATE BUILDING CODE – CODE AMENDMENT FORM

Impacted code:	☐ 9th Edition Base Code ☒ 9th Edition Residential Code	State Use Only	
Date Submitted:	**January 26, 2018**	Date Received:	
Code Section:	**AU103.7**	Code Change Number:	
Name of proponent:	**Guy Webb**		
Company / Organization represented, if any:	**HBRA of Massachusetts** Check ☐ if representing self		
Address (number, street, city, state, ZIP:	**51 Pullman St., Worcester, MA 01606**		
Telephone number:	**(508) 791-5595**		
Email address:	**guy@hbracm.com**		

PLEASE CHECK OFF THE TYPE OF AMENDMENT PROPOSED

☐ Change existing section language ☐ Add new section ☐ Delete existing section and substitute
☒ Delete existing section, no substitute ☐ Other, Explain: _____

PLEASE TYPE THE PROPOSED AMENDMENT BELOW. If you propose to change a section, please copy the original text from either the relevant model code and/or MA amendment. Indicate, with a strikethrough, the text that you propose to delete. Please also indicate any new text in both *italic* and red font. Finally, for each proposal submitted, please provide the justification items requested below. Completed code amendment forms may be emailed to Felix Zemel, Director of Code Development and Manufactured Buildings at felix.zemel@state.ma.us. Please attach additional pages as necessary.

Existing language:

AU103.7 (RB103.7) Electrical Service Reserved Space. The main electrical service panel shall have a reserved space to allow installation of a dual pole circuit breaker for future solar electric installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

Proposed changes:

Delete entire section AU103.7 (RB103.7)

Background and rationale:
Nealry all new single family homes as well as townhomes have a 200amp electrical service and many of those homes have electrical needs that require use of all 200amps or very close to it. The intent of the reserved space is to make the connection to the possible future solar electric system easier and without the need to upgrade the electrical service. However, as stated above, most homes require all or nearly all of the 200amps of a typical electrical service and reserving space will often result in not enough space for the needs of the home. In order to be compliant with the electrical code this would necessitate an upgrade to a larger electical service – Typically 400amps. This upgrade may result in further cost in situations where the larger electrical service requires the addition of a transformer. Some of these homes will never install a solar electric system and will have been burdened with the additional cost for no reason. It should be noted that the lack of space in the existing electrical service does not inhibit the installation of a solar electric system as the installers will connect the system through what is known as a "line side (or 'supply side') tab", which means they are connecting directly to the electrical service cable above the electrical meter. While the homeowner always has the option of upgrading the electrical service at that time, there is no need to do so.
In summary, this proposed code change has a significant cost savings in many cases and provides no hinderance to the future installation of a solar electric system.

Pros of the proposed change: In the many cases where an upgrade to the electrical service would be required, the homeowner will not be burdened with the cost to do so.

Cons of the proposed change:
None.

Estimated impact on life safety:
The code change proposed has no impact on life safety that I am aware of.

Estimated impact on cost: The code change would result in a cost savings by not having to upgrade the electrical service due to the reserved space in the electrical panel as required in section AU103.7 in such cases as the home already needs all or nearly all of the typical 200amps. The upgrade to a 400amp service, according to electricians, can be somewhere around $1500 to over $3000 depending on a number of variables. In the case where the upgrade triggers the need for a transformer, the cost could be in the range of $2,000 to $4,000 if the transformer is the type installed at the pole, and well above $10,000 if a box transformer installed on the property is required.