



Ruthanne Fuller
Mayor

City of Newton, Massachusetts
Department of Planning and Development
1000 Commonwealth Avenue Newton, Massachusetts 02459

Telephone
(617) 796-1120
Telefax
(617) 796-1142
TDD/TTY
(617) 796-1089
www.newtonma.gov

Barney S. Heath
Director

PUBLIC HEARING MEMORANDUM

DATE: December 6, 2019

TO: Councilor Susan Albright, Chair, Zoning & Planning Committee
Members of the Zoning & Planning Committee

FROM: Barney Heath, Director, Department of Planning and Development
Jennifer Caira, Deputy Director of Planning & Development
Zachery LeMel, Chief of Long Range Planning

RE: **#363-19 Amendment(s) to Chapter 30 relative to building efficiencies**
DIRECTOR OF PLANNING & CO-DIRECTORS OF SUSTAINABILITY requesting discussion and adoption of amendments to Chapter 30, the Newton Zoning Ordinance to create exemptions to building envelope standards such as height and setback to facilitate the implementation of energy efficiency and alternative energy measures in buildings including external insulation, doorway vestibules, heat pumps, and solar panels among other features.

MEETING: December 11, 2019

CC: Planning Board
Ann Berwick, Co-Director of Sustainability
William Ferguson, Co-Director of Sustainability
John Lojek, Commissioner of Inspectional Services
Alissa O. Giuliani, City Solicitor
Jonathan Yeo, Chief Operating Officer

In the previous ZAP meeting on November 25th, 2019 The Planning Department presented the updated draft zoning, Amendments to Chapter 30 relative to building efficiencies (#363-19). ZAP provided general approval for the revised language regarding solar panels (Sec. 1.5.4.A.d), while additional analysis was required for the language specific to allowable structures projecting into the setback (sec. 1.5.3.D).

Summary of Revisions

The updates to Section 1.5.3.D reduce barriers to installing energy efficient improvements by allowing such related structures to project into the setback. It should be noted that none of these structures amounts to any new habitable space, and as written should not contribute to a building that looks or feels substantially larger. These updates take into consideration the Committee comments as well as recommendations from Green Newton and building construction professionals.

Heat pump compressors (sec. 1.5.3.D.2)

According to the U.S. Dept. of Energy heat pumps can reduce electricity use for heating by approximately 50% compared to electric resistance heating. In addition, normal sound levels emitted from most heat pumps range between 40 and 50 decibels. That's less than a working dishwasher or a light rainfall. Finally, Staff believes further limiting heat pump compressors by requiring a minimum setback will make many installation infeasible, contradicting the stated goal of the relief. For these reasons Staff recommends maintaining the zoning text as written. This exemption does not supersede any requirements within a historic district.

Exterior insulation (sec. 1.5.3.D.3)

The current draft zoning text allows for up to 8 inches of exterior insulation to project into the setback, which Staff recommends maintaining. Speaking with building professionals associated with Green Newton, 8 inches allows for the necessary flexibility used for typical- and deep-energy retrofits, as well as new construction.

Doorway vestibules (sec. 1.5.3.D.4)

The Committee had a general concern with the placement of vestibules where development is close together and yard setbacks are already limited, particularly with side yards. To address this Staff recommends to update the zoning text to read, "Doorway vestibules up to 4 feet with a width no greater than 6 feet, provided a minimum setback of 5 feet is maintained;"

Roof overhangs (sec. 1.5.3.D.6)

After speaking with building construction professionals Staff found a conflict between sec. 1.5.3.D.5 and sec. 1.5.3.D.6. As written gutters can project 2 feet into the setback, while roof overhangs can project 3 feet. Standard design practice places the gutter at the end of the roof overhang. Because of this, staff recommends including gutters with roof overhangs as allowed to project up to 3 feet in the setback.

Gross floor area exemption (sec. 1.5.5.B.1.b.iii)

Previously the zoning text exempted "Exterior insulation added to an existing building." The Legal Dept. expressed concern for repercussions related to not defining "existing building" in this context. Therefore Staff has updated the text as follows, "Exterior insulation added to a building, in which case gross floor area shall be taken from the exterior face of the structural wall;"

Next Steps

Staff recommends the Committee approve amendment #363-19 on December 9th.

Attachments

Attachment A – Section 1.5 Rules of Measurements

1.5. Rules of Measurement

1.5.3. Setback

- A. **Defined.** A line equidistant from the lot line which establishes the nearest point to the lot line at which the nearest point of a structure may be erected. In the case of a corner lot, the rear lot line shall be the lot line opposite the street on which the main entrance is located.
- B. No building need be set back more than the average of the setbacks of the buildings on the nearest lot on either side, a vacant lot or a lot occupied by a building set back more than the required distance for its district to be counted as though occupied by a building set back such required distance. Averaging applies only to the front setback. In no case shall any part of a building in a residence district extend nearer the street line than 10 feet.
- C. Distances shall be measured from the lot lines to the nearest portion of the structure, ~~including outside vestibule or porch.~~
- D. The following structures may project into the setback:
 - 1. Steps, landings and bulkheads; ~~may project into the setback.~~
 - 2. Heat pump compressors;
 - 3. Exterior insulation may project up to 8 inches;
 - 4. Doorway vestibules may project up to 4 feet with a width no greater than 6 feet;
 - 5. ~~Gutters, cornices~~Cornices, projecting eaves exterior window shades and ornamental features ~~may project up to 2 feet; and into the setback.~~
 - 6. Roof overhangs and gutters may project up to 3 feet.

1.5.4. Height

- A. **Defined:**
 - 1. The vertical distance between the elevations of the average grade plane and the highest point of the roof. Not included in such measurements are:
 - a. Cornices which do not extend more than 5 feet above the roof line;
 - b. Chimneys, vents, ventilators and enclosures for machinery of elevators which do not exceed 15 feet in height above the roof line;
 - c. Enclosures for tanks which do not exceed 20 feet in height above the roof line and do not exceed in aggregate area 10 percent of the area of the roof;
 - d. Solar panels which do not extend more than ~~1 foot~~4 feet above the ridgeline or in the case of a flat roof, no more than 4 feet above the parapet, unless greater extensions are allowed by special permit; and
 - e. Towers, spires, domes and ornamental features.

1.5.5. Floor Area

- A. Floor Area Ratio.

1. The gross floor area of all buildings on the lot divided by the total lot area.
2. FAR tables can be found in Sec. 3.1.9 and Sec. 3.2.11.

B. Floor Area, Gross.

1. **Residential Districts.** The sum of the floor area of all principal and accessory buildings whether or not habitable shall be taken from the exterior face of the exterior walls of each building without deduction for garage space, hallways, stairs, closets, thickness of walls, columns, atria, open wells and other vertical open spaces, or other features as defined in this Sec. 1.5.5, as defined below:
 - a. Gross floor area shall include:
 - i. First and second stories;
 - ii. Any floor area above the second story, whether finished or unfinished, that meets all of the following criteria:
 - a. It lies below the area of a horizontal plane that is 5 feet above it and which touches the side walls and/or the underside of the roof rafters;
 - b. Is at least 7 feet in any horizontal dimension, as measured within the area having a wall height of 5 feet or more;
 - c. Has a minimum ceiling height of 7 feet on at least 50 percent of its required floor area; and
 - d. Has a floor area of not less than 70 square feet as measured within the area having a wall height of 5 feet or more;
 - iii. Atria, open wells, and other vertical open spaces, where floor area shall be calculated by multiplying the floor level area of such space by a factor equal to the average height in feet divided by 10;
 - iv. Enclosed porches;
 - v. Attached garages;
 - vi. Detached garages and any space above the first story of a detached garage that has a ceiling height of 7 feet or greater;
 - vii. Other detached accessory buildings, such as sheds or cabanas, except as exempted in paragraph b. below;
 - viii. A portion of mass below the first story, to be calculated using the formula in paragraph D. below; and
 - b. Gross floor area shall not include:
 - i. Unenclosed porches;
 - ii. Doorway vestibules up to a maximum floor area of 24 square feet;
 - iii. Exterior insulation added to an existing a building, in which case gross floor area shall be taken from the exterior face of the structural wall;
 - iv. Carports; and
 - v. detached accessory building equal to or less than 120 square feet in size.

8.3. Defined Terms

Exterior Insulation. Insulation that is installed on the exterior face of ~~to the exterior structural wall of the~~ building so as to allow for continuous insulation on the building exterior with the intention of reducing thermal bridging and improving the energy efficiency of the building.

Exterior Window Shades. Non-habitable architectural features attached to a building above windows individually so as to reduce the amount of sunlight entering the window.

Heat Pump Compressor. A device that serves as a heating and/or cooling system for a building by transferring heat energy into a building to heat it and out of the building to cool it. The compressor is the external portion of this system.