

# Agricultural Buildings And The 7<sup>th</sup> Edition of the Building Code \*

## Background

The 6<sup>th</sup> Edition of the Massachusetts Building Code, 780 CMR, which was based on the “BOCA” code, contained limited – and at times confusing – regulations regarding agricultural buildings. In fact, the 6<sup>th</sup> Edition has no definition for the term “agricultural building.”

Last year, the Massachusetts Board of Building Regulations and Standards (BBRS) completed a major revision of the building code to reflect more current standards. The BBRS used as its basis for the new 7<sup>th</sup> Edition the International Building Code (IBC) document. The new 7<sup>th</sup> Edition contains a definition of “agricultural buildings” that many prominent agricultural states found contrary to their state statutes. The Department of Agricultural Resources, as with other agricultural states, found the definition in the IBC to be too restrictive. For example, excluding from that definition any building on working farm that is “a place of employment where agricultural products are processed, treated or packaged,” and any building “used by the public.” Once excluded from its designation as “agricultural,” a farm building (e.g., milking barns) would be required to comply with more robust, more costly code provisions (e.g., factory).

In August 2008, the Department filed a White Paper with the BBRS regarding this definitional issue and requested a revision of the 7<sup>th</sup> Edition definition to reflect more accurately the uses and risks associated with such buildings. Over the next three to four months, the Department developed a comment complete with suggested changes that would offer exemptions to agricultural buildings under the 7<sup>th</sup> Edition that it submitted to the BBRS on November 18, 2008. Attachment A contains the proposed language from that comment. The full comment is available upon request.

Aside from the proposed amendments to provide accurate definitions for agriculture and agricultural buildings, the essence of the language is to offer a limited exemption for agricultural buildings from the building code. This limited exemption balances the hazards to life and property with the potential of such risks. As other states had done, DAR proposed limits based on occupancy thresholds as the balancing mechanism. That is, if for a particular agricultural use the occupancy is less than a certain number of people, that use is exempt from the building code. If the occupancy exceeds the threshold, then the building must meet all otherwise applicable standards.

The BBRS has considered the proposal made by DAR and provided the DAR with some feedback. The current revision of the proposed amendment is presented in Attachment B. The revised language maintains the occupancy-threshold while dramatically simplifying

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\* Prepared by Bob Ritchie, General Counsel, and Bill Gillmeister, Ph.D., Chief Economist for the Dept. of Ag. Res.

the occupancy thresholds. The BBRS will take up the adoption of this revised language in the near future, with all indications being favorable for the requested changes.

## Attachment A

November 18, 2008 Proposed Language\*

### Regarding Agricultural Buildings

Amend **780 CMR 202.0 DEFINITION** by adding a definition for agriculture and by amending the definition for agricultural building:

**AGRICULTURE.** Defined by G.L. c. 128, §1A. Specifically, “Farming” or “agriculture” shall include farming in all of its branches and the cultivation and tillage of the soil, dairying, the production, cultivation, growing and harvesting of any agricultural, aquacultural, floricultural or horticultural commodities, the growing and harvesting of forest products upon forest land, the raising of livestock including horses, the keeping of horses as a commercial enterprise, the keeping and raising of poultry, swine, cattle and other domesticated animals used for food purposes, bees, fur-bearing animals, and any forestry or lumbering operations, performed by a farmer, who is hereby defined as one engaged in agriculture or farming as herein defined, or on a farm as an incident to or in conjunction with such farming operations, including preparations for market, delivery to storage or to market or to carriers for transportation to market.

**AGRICULTURAL BUILDING.** A structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products. This structure shall not be a place of human habitation ~~or a place of employment where agricultural products are processed, treated or packaged,~~ nor shall it be a place regularly used by the public.

Amend **780 CMR 312.0 UTILITY AND MISCELLANEOUS GROUP U** by inserting a new section **780 CMR 312.2.**

**"312.1 General.** Buildings and structures of an accessory character and miscellaneous structures not classified in any specific occupancy shall be constructed, equipped and maintained to conform to the requirements of 780 CMR commensurate with the fire and life hazard incidental to their occupancy. Group U shall include, but not be limited to, the following:

- (1) Agricultural buildings
- (2) Aircraft hangars, accessory to a one- or two family residence (See 780 CMR 412.3)
- (3) Barns
- (4) Carports
- (5) Fences more than six feet (1829 mm) high
- (6) Grain silos, accessory to a residential

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\* Text in red type indicates inserted text.

- occupancy
- (7) Greenhouses
- (8) Livestock shelters
- (9) Private garages
- (10) Retaining walls
- (11) Sheds
- (12) Stables
- (13) Tanks
- (14) Towers

312.2 Agricultural Buildings. Agricultural buildings shall be exempt from the provisions otherwise applicable to use Group U buildings, but shall be governed by the provisions set forth in 780 CMR 120.C.

Amend 780 CMR 120.C as follows:

**"780 CMR 120.C101 GENERAL**

**120.C101.1 Scope.** The provisions of 780 CMR 120.C shall apply exclusively to agricultural buildings. Such buildings shall be classified as Group U and shall include the following uses:

1. Livestock shelters or buildings, including shade structures and milking barns.
2. Poultry buildings or shelters.
3. Barns.
4. Storage of equipment and machinery used exclusively in agriculture.
5. Horticultural structures, including detached production greenhouses and crop protection shelters.
6. Sheds.
7. Grain silos.
8. Stables.

120 C101.2 Definition. Regularly Used by the Public: a building is regularly used by the public when it is made available for visits or use by the general public without supervision by the owner, but excludes owners and families, employees and agents of the owner, business invitees, and visits or use by the general public who are supervised, accompanied, or escorted, unless otherwise stated within 780 CMR 120.C.

120 C101.3 Occupancy thresholds for regularly used by the public. Buildings classified as Group U Agricultural that exceed the occupancy loads specified in Table 120.C101.1 shall be considered regularly used by the public and shall comply with all applicable portions of 780 CMR.

Table 120C.1 Thresholds<sup>1</sup> Establishing Occupancy for Uses of, or Storage in, Buildings Listed in 120.C101.1 for Agricultural Buildings Regularly Used by the Public.

Use	Occupancy, Duration, and Occurrence Limits			Storage Limits
	Occupant Load <sup>2</sup>	Time Duration (hours)	No. of Occurrences per Period	Fertilizer/Herbicide/Pesticide Quantity (lbs)
Equine Training	100	Two	Two per week	--
Riding Arenas	200	24	--	--
Educational	100	Two	Two per week	--
High Hazard Storage <sup>3</sup>	--	--	--	TBD/TBD/TBD
Product Processing	25	24	Unlimited over a 4 months	
Product Sales	75	24	--	
Ancillary	35	24	--	

Notes:

1. If these thresholds are exceeded then the building shall comply with the requirements and applicable chapters of 780 CMR
2. Occupant Load is the sum total of employees, agents of the owner, business invitees and members of the general public
3. Agricultural buildings used to store commercial fertilizers, pesticides, or both shall comply with 527 CMR and M.G.L. c. 132B and the associated regulations as applicable.

**780 CMR 120.C102 ALLOWABLE HEIGHT AND AREA****120.C102.1 General.**

Buildings classified as Group U Agricultural shall not exceed the area or height limits specified in Table 120.C102.2.

**120.C102.2 One-story Unlimited Area.** The area of a one-story Group U agricultural building shall not be limited if the building is surrounded and adjoined by public ways or yards not less than 60 feet (18288 mm) in width.

**TABLE 120.C102.2 – BASIC ALLOWABLE AREA FOR GROUP U, ONE STORY IN HEIGHT AND MAXIMUM HEIGHT OF SUCH OCCUPANCY**

I		II		III and IV		V	
A	B	A	B	IIIA and IV	IIIB	A	B
<b>ALLOWABLE AREA (square feet)a,b</b>							
Unlimited	60,000	27,100	18,000	27,100	18,000	21,100	12,000
<b>MAXIMUM HEIGHT IN STORIES</b>							
Unlimited	12	4	2	4	2	3	2
<b>MAXIMUM HEIGHT IN FEET</b>							
Unlimited	160	65	55	65	55	50	40

For SI: 1 square foot = 0.0929 m<sup>2</sup>

- a. See 780 CMR 120.C102 for unlimited area under certain conditions.
- b. Greenhouses that comply with snow-load requirements are exempt from the area requirements set forth in 780 CMR 120C.102."



## Attachment B

### Revised Proposed Language by BBRS\*

#### Regarding Agricultural Buildings

Amend **780 CMR 202.0 DEFINITION** by adding a definition for agriculture and by amending the definition for agricultural building:

**AGRICULTURE.** Defined by G.L. c. 128, §1A. Specifically, "Farming" or "agriculture" shall include farming in all of its branches and the cultivation and tillage of the soil, dairying, the production, cultivation, growing and harvesting of any agricultural, aquacultural, floricultural or horticultural commodities, the growing and harvesting of forest products upon forest land, the raising of livestock including horses, the keeping of horses as a commercial enterprise, the keeping and raising of poultry, swine, cattle and other domesticated animals used for food purposes, bees, fur-bearing animals, and any forestry or lumbering operations, performed by a farmer, who is hereby defined as one engaged in agriculture or farming as herein defined, or on a farm as an incident to or in conjunction with such farming operations, including preparations for market, delivery to storage or to market or to carriers for transportation to market.

**AGRICULTURAL BUILDING.** A structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products. This structure shall not be a place of human habitation ~~or a place of employment where agricultural products are processed, treated or packaged, nor shall it be a place used by the public.~~

Amend **780 CMR 312.0 UTILITY AND MISCELLANEOUS GROUP U** by inserting a new section **780 CMR 312.2:**

**"312.1 General.** Buildings and structures of an accessory character and miscellaneous structures not classified in any specific occupancy shall be constructed, equipped and maintained to conform to the requirements of 780 CMR commensurate with the fire and life hazard incidental to their occupancy. Group U shall include, but not be limited to, the following:

- (1) Agricultural buildings
- (2) Aircraft hangars, accessory to a one- or two family residence (*See* 780 CMR 412.3)
- (3) Barns
- (4) Carports
- (5) Fences more than six feet (1829 mm) high
- (6) Grain silos, accessory to a residential occupancy
- (7) Greenhouses
- (8) Livestock shelters

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- (9) Private garages
- (10) Retaining walls
- (11) Sheds
- (12) Stables
- (13) Tanks
- (14) Towers

**312.2 Agricultural Buildings.** Agricultural buildings shall be exempt from the provisions otherwise applicable to use Group U buildings, but shall be governed by the provisions set forth in 780 CMR 120.C.

Amend **780 CMR Appendix 120 C Group U Agricultural Buildings** as follows:

### **780 CMR 120.C101 GENERAL**

**120.C101.1 Scope.** The provisions of 780 CMR 120.C shall apply exclusively to agricultural buildings. Such buildings shall be classified as Group U and shall include the following uses:

1. Livestock shelters or buildings, including shade structures and milking barns.
2. Poultry buildings or shelters.
3. Barns.
4. Storage of equipment and machinery used exclusively in agriculture.
5. Horticultural structures, including detached production greenhouses and crop protection shelters.
6. Sheds.
7. Grain silos.
8. Stables.

**120 C101.2 Occupancy thresholds.** Buildings that exceed an occupancy load of 100, that would otherwise be classified as Group U Agricultural, shall be classified per their intended use.

Exception: Riding arenas shall have an occupancy load limit of 200.

**120 C101.3 H-Use.** Agricultural buildings used to store commercial fertilizers, herbicides, or pesticides shall comply with 527 CMR, 780 CMR, and M.G.L. c. 132B and the associated regulations as applicable.

### **780 CMR 120.C102 ALLOWABLE HEIGHT AND AREA**

**120.C102.1 General.** Buildings classified as Group U Agricultural shall not exceed the area or height limits specified in Table 120.C102.1.

**120.C102.2 One-story Unlimited Area.** The area of a one-story Group U agricultural building shall not be limited if the building is surrounded and adjoined by public ways or yards not less than 60 feet (18288 mm) in width.



~~120.C102.3 Two-story Unlimited Area.~~ The area of a two-story Group U agricultural building shall not be limited if the building is surrounded and adjoined by public ways or yards not less than 60 feet (18288 mm) in width and is provided with an approved automatic sprinkler system throughout in accordance with Section 903.3.1.1.

**TABLE 120.C102.1. – BASIC ALLOWABLE AREA FOR GROUP U, ONE STORY IN HEIGHT AND MAXIMUM HEIGHT OF SUCH OCCUPANCY**

I		II		III and IV		V	
A	B	A	B	IIIA & IV	IIIB	A	B
<b>ALLOWABLE AREA (square feet)a,b</b>							
Unlimited	60,000	27,100	18,000	27,100	18,000	21,100	12,000
<b>MAXIMUM HEIGHT IN STORIES</b>							
Unlimited	12	4	2	4	2	3	2
<b>MAXIMUM HEIGHT IN FEET</b>							
Unlimited	160	65	55	65	55	50	40

For SI: 1 square foot = 0.0929 m<sup>2</sup>

- c. See 780 CMR 120.C102 for unlimited area under certain conditions.
- d. Greenhouses that comply with snow-load requirements are exempt from the area requirements set forth in 780 CMR 120C.102.

**780 CMR 120.C103 MIXED OCCUPANCIES**

**120.C103.1 Mixed Occupancies.** Mixed occupancies shall be protected in accordance with 780 CMR 3.00.

**780 CMR 120.C104 EXITS**

**120.C104.1 Exit Facilities.** Exits shall be provided in accordance with 780 CMR 10.00 and 11.00.

**Exceptions:**

1. The maximum travel distance from any point in the building to an approved exit shall not exceed 300 feet (91440 mm).
2. One exit is required for each 15,000 square feet (1393.5 m<sup>2</sup>) of area or fraction thereof.