

BBRS Official Interpretation No. 2014_01

Date: February 11, 2014 and updated with Q&As 7 and 8 on October 14, 2014 and updated with Q&A 9 on December 9, 2014, updated with Q&A 5B on September 8, 2020 and Q&A 10 on January 12, 2021.

Subject: 8th and 9th Editions 780 CMR 34 Existing Buildings. Note: Although specific code sections cited may not apply with the 9th edition, the intent of the this official interpretation is carried forward for all Q&As.

Background/Discussion:

There are several sections 780 CMR 34 (*International Existing Building Code 2009* with MA amendments) which require interpretation from the BBRs to ensure that code compliance and enforcement are consistent for owners, builders, and building officials. The questions and answers below are intended to be the official interpretation of the BBRs on these matters.

QUESTION 1

Must a compliance alternative to meeting the code for new construction per **Section 101.5.0** be issued by a *registered design professional*?

ANSWER 1

No not necessarily. However, if the degree to which the code for new construction is not met or if the project is complex, then it may be practical to employ the services of a *registered design professional* (RDP). For example, if a restaurant, changing to a Nightclub, does not meet the new construction means of egress requirements of a Nightclub then an RDP may be able to determine whether the existing means of egress is sufficient to accommodate the occupant load or whether the existing means of egress needs improvements to safely do so.

QUESTION 2

If the work area method is used for a change of occupancy is an RDP allowed to incorporate building separation methods in the project plan via the requirements of **Section 912.1.1.2 Change of occupancy classification with separation** and then meet the applicable sprinkler requirements for just that occupancy per **Section 912.2.1 Fire sprinkler system**.

ANSWER 2

Yes when following the separation requirements of Section 912. In addition, attention must be paid to [M.G.L. c 148, §26G & I](#) which may require that sprinklers be installed throughout the building.

QUESTION 3

Can a single permit be issued for an application with plans that indicate Level 1 alterations in an area of the building and Level 2 alterations in another area of the building?

ANSWER 3

Yes. A single permit may be issued for an application with plans that indicate several different alteration ‘levels’ in an existing building project. However, two different compliance methods, like Work Area and Prescriptive, cannot be included in a single permit.

QUESTION 4

Plans to upgrade a 120V smoke detection system to a low voltage system with battery backup indicate that there is no *work area*. Is this OK?

ANSWER 4

Yes. If there is no reconfiguration of space then there is no *work area*, even though construction work is being done throughout the building to install this system.

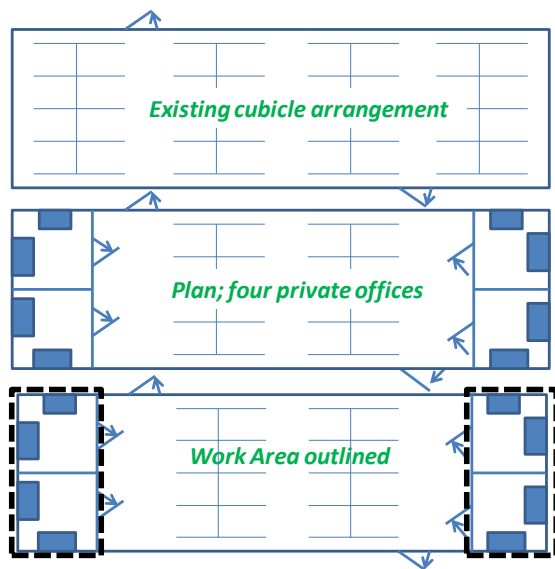
QUESTION 5A

What is meant by ‘reconfiguration of space’ which are words that are found in the definition of *work area*?

ANSWER 5A

Work area of a building project is not necessarily area where work is being done (see question 4). *Work area* is defined in part as ‘*that portion or portions of a building consisting of all reconfigured spaces as indicate on the construction documents.*’ Generally, if space is reconfigured it changes the manner in which occupants egress from the space in terms of travel or distance to exits.

An example below shows an existing plan and a proposed plan with a BBRS interpretation of the *work area* (reconfigured space) enclosed by the dashed lines.



QUESTION 5B

If 780 CMR, and by reference the specialty and accessibility codes, requires existing space to be modified, are these modifications considered *work area*.

ANSWER 5B

In general; No. Several examples of this condition follow:

- A chimney, revealed during demolition of finishes, has weak and flaking mortar, and must be repaired or removed because of its unsafe condition per 780 CMR 1. Cost of repair is prohibitive. Chimney is removed and floor and roof openings are framed in. *Work area* = 0 because the definition “excludes...portions of the building where work not initially intended by the owner is specifically required by this code.”
- An apartment requires modifications for accessibility per 521 CMR. Movement of partition walls and other framing to accommodate larger doors and an accessible kitchen and bathroom were done. *Work area* = 0 because the definition “excludes other portions of the building where incidental work entailed by the intended work must be performed”. In this case, the owner has chosen to improve the accessibility of the building (*intended work*) and associated construction (like a wider door opening, for example) is *incidental work* necessary to achieve the owner’s intent.
- A cast iron main drain split and required replacement. It served unvented plumbing fixtures in a residential building. The plumber installed new drain and vent lines, required by 248 CMR. A new chase was framed to accommodate these lines. *Work area* = 0. See ANSWER 5B. a.

QUESTION 6

Plans show alterations to a 3-unit R-2 in which a new stairway is added from the 3rd floor unit to join the existing stairway at the rear of the building which serves the 1st and 2nd floor units. The front of the building has an existing top to bottom stairway and exit. In addition, the plans show that all the plaster and lathe will be replaced with gypsum board and alterations to the electrical systems and insulation will be done in all the units. The owner indicates the plans comply with the Work Area method and that the 1st and 2nd floor units have Level 1 alterations and the 3rd floor unit has Level 2 alterations. The work area indicated on the plans encloses the new stairway. The building currently has no sprinkler system and the plans do not show a new sprinkler system. Is this OK?

ANSWER 6

Yes, if the *work area* is on only one unit then the owner may invoke Exception 1 to MA amendment 704.2.2 which reads “The *work area* is on a single unit” and thereby **Section 704.2.2** does not apply. In this case, the occupants of the 1st and 2nd floor do not egress in a manner differently as a result of the proposed work. The occupants of the 3rd floor do egress differently and in a manner that is enhanced with respect to life safety as a result of the construction. It is the responsibility of the building owner or designer to indicate on the plans the reconfigured space or *work area*. And the building official has the authority to review and

approve or disapprove the *work area* as indicated on the plan.

Although the question is limited in scope it must be noted that if a system is being altered then the system must comply with the code for new construction to the extent practicable. For example, since a smoke detection system (even just battery operated) is likely in the building and will be removed during construction then the plans should indicate a new smoke detection/alarm system. In addition since the framing of the building will be exposed then proper fire blocking must be installed as well. Based on the extent of construction in this building it is 'practicable' and thereby necessary to do each of these items.

QUESTION 7

Are common area smoke detection systems required throughout R-2 occupancies undergoing renovation, alteration or repair?

ANSWER 7

If the building is fully sprinkled throughout in accordance with 780 CMR 9, 8th Edition, then common area smoke detection is not required.

If the building is not sprinkled throughout as noted above, then common area smoke detection may be required by the edition of 780 CMR in effect at the time of original construction (or substantial renovation) or by applicable provisions of 527 CMR or M.G.L. c. 148, §26c & e. Such required systems must be maintained.

QUESTION 8

When only a smoke detection system is being installed, repaired or renovated as a stand-alone project in an existing R-2 occupancy is a common area smoke detection required per 780 CMR 9, 8th Edition?

ANSWER 8

See answer to Question 7. Yes if the building is not sprinkled throughout in accordance with 780 CMR 9, 8th Edition and such a system was required by previous editions or other applicable regulations.

QUESTION 9

Does the building official have the authority to invoke:

1. fire blocking of a balloon framed building when wall cavities are exposed?
2. installation of a hard wire smoke detection system when the plaster and lathe on all exterior walls and interior ceilings are removed versus the placement of battery powered single station smoke alarms at the locations prior to the alteration?

ANSWER 9

Yes. Both the Prescriptive and Work Area compliance methods have sections that allow the building official this authority to invoke these requirements where practicable.

--Section **303.1 General** is copied here:

“Except as provided by Section 301.2 or this section, alterations to any building or structure shall comply with the requirements of the *International Building Code*. Alterations shall be such that the *existing building* or structure is no less conforming to the provision of the *International Building Code* than the existing building or structure was prior to the *alteration*”

--Section **602.4 Materials and methods** is copied in part here:

“All new work shall comply with materials and methods requirements in the *International Building Code*...”

For Question 9 item 1, when wall cavities are exposed fire blocking and fire separation should be addressed and to the extent practicable the building official can cite the requirements of 780 CMR 7. Likewise for Question 9 item 2 the building official can to the extent practicable cite the requirements of 780 CMR 9 with respect to the smoke detection requirements. The construction being done in both cases presents 'opportunity' and a basis for this guidance.

QUESTION 10

An architect submits plans for an unsprinklered three-unit residential building with each unit modified to produce a more open floor plan, rearranged kitchens, and walls moved to create master bedrooms. The construction documents indicate work area to be less than 50% of the total aggregate floor area, work area on each level to be less than 50% of each floor, front and rear stairways are retained, and indicate that a new sprinkler system is not required. Is this the correct application of 780 CMR IEBC Section 804.2?

ANSWER 10

Yes. The designer has indicated the Work Area Compliance Method by designating work area. Per 780 CMR 34 Section 505, 9th

edition (International Existing Building Code 2015) the project does not meet Alterations - Level 3 requirements since the work area does not exceed 50% of the building area, and so must comply with the requirements for Alterations - Level 1 and Level 2 (Chapters 7 & 8). 780 CMR IEBC Section 804.2 Automatic sprinkler systems, requires an automatic sprinkler system in Group R-2 occupancies when the exits or corridors are shared by more than one tenant or serving an occupant load greater than 30, and the work area would be required to be sprinkled by the building code, 780 CMR 903.2, and the work area exceeds 50% of the floor area. Since the proposed renovation does not exceed 50% of the floor on any level, a sprinkler system is not required by this code section.

It should be noted that although a renovation may not be classified as a Level 3 alteration, each floor must be evaluated to determine if the work area exceeds 50% of the floor area for compliance with Section 804.2. If the work area exceeds 50% of that individual floor then the work area on that floor must be equipped with fire sprinklers.

Note, see also Mass. Amendments to IEBC 804.2 and Massachusetts General Law (MGL) Chapter 148, §26I.