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**IEBC Section 101.5.4 - Existing Building Evaluation
Mixed Use Building – 156 River Street
North Adams, MA 01247**

February 6, 2024

This report is prepared in relation to proposed alterations to the existing building, 156 River Street, North Adams, MA. It is intended to serve as the Section 104.2.2.1 Existing Building Evaluation analysis required by the International Existing Building Code (IEBC), with Massachusetts amendments, and supports the accompanying Application for Building Permit.

104.2.2.1 Investigation and Evaluation. For any proposed work regulated by this code and subject to subsection 107 of the International Building Code 2015 with Massachusetts Amendments (Ninth Edition) as a condition of the issuance of a building permit the building owner shall cause the existing building (or portion thereof) to be investigated and evaluated in accordance with the provisions of 780 CMR 34.00. The investigation and evaluation shall be in sufficient detail to ascertain the effects of the proposed work on at least these systems: structural, means of egress, fire protection, energy conservation, lighting, hazardous materials, accessibility, and ventilation for the space under consideration and, where necessary, the entire building or structure and its foundation if impacted by the proposed work. The results of the investigation and evaluation, along with any proposed compliance alternatives, shall be submitted to the building official in written report form.

Existing Building

The existing building has a footprint of 6,479 square feet, is a single-story, and approximately 14-feet in height (average height of the highest roof from grade plane). The last legal use of the mixed-use building included a retail tire store, use classification M (IBC 309.1); a business office associated with real estate management, use classification B (IBC 304.1), and garages for commercial vehicles, classified as S-1, Moderate Hazard Storage (IBC 311.2). There was no motor-fuel dispensing associated with the garages.

Proposed Use and Alterations

The building is to continue to be used as a mixed-use occupancy including a Cannabis Dispensary for the retail sale of marijuana, containing approximately 959 s.f. , classified as M, Mercantile (IBC

309.1), No manufacturing or processing is to occur at the Cannabis Dispensary, but the new packaging and labeling space is classified as a F-1, Factory (IBC 306.1). There are two rental spaces containing approximately 1,388 and 2,317 sf., suitable for small food service uses such as a bagel shop, or a take-out pizza shop or offices, classified as B, Business (IBC 304.1), or retail stores, classified as M, Mercantile (IBC 309.1). The basement use will remain limited general storage, S-1 Moderate Hazard Storage (IBC 311.2).

The westerly most space will be occupied as a restaurant, contained 2,467 s.f, with seating limited to 730 s.f. and a maximum of 49 seats, classified as B, Business. A room or space used for assembly purposes with an occupant load of less than 50 persons and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy (IBC 303.1.2.1). A room or space used for assembly purposes that is less than 750 square feet in area and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy (IBC 303.1.2.2).

Code Applicability

The provisions of the International Existing Building Code, with Massachusetts amendments, applies to the repair, alteration, or change in use of existing buildings (IEBC 101.2). The only change in use is the separation of packaging and labeling in a new room and the construction of a new toilet room, as shown on the Construction Documents.

Code applicability is, in part, a function of the Level of Alteration proposed. Level 1 Alterations include the removal and replacement or the covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment, or fixtures (IEBC 503.1). Level 2 alterations include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment, involving up to 50 percent of the aggregate area of the building (IEBC 504.1). Level 3 Alterations apply where the Work Area exceeds 50 percent of the aggregate area of the building (IEBC 505.1). Chapter 2 of the IEBC defines "Work Area" as "That portion of all reconfigured spaces as indicated on the construction documents."

The proposed Work Areas will exceed 50% of each floor area and are Classified as a Level 3 Alteration. The alterations will be subject to IEBC Chapter 9 (and therefore Chapters 7 and 8), in addition to IEBC Chapter 10 "Change of Occupancy."

Mixed Use Separation

Where a portion of an existing building is changed to a new Occupancy Classification, or where there is a change of occupancy within a space where there is a different fire protection system threshold requirement in Chapter 9 of the International Building Code, and that portion is not separated from the remainder of the building with fire barriers having a fire-resistance rating as required in the International Building Code for the separate occupancy, the entire building must comply with all of the requirements of IBC Chapter 9 applied throughout the building for the most restrictive Occupancy Classification in the building and with the requirements of IEBC Chapter 10 (IEBC 1012.1.1.1).

Where a portion of an existing building is changed to a new Occupancy Classification, or where there is a change of occupancy within a space where there is a different fire protection system threshold requirement in IBC Chapter 9 of the International Building Code, and that portion is separated from the remainder of the building with fire barriers having a fire-resistance rating as required in the International Building Code for the separate occupancy, that portion must comply with all of the requirements of Chapter 9 for the new Occupancy Classification and with the requirements of IEBC Chapter 10 (IEBC 1012.1.1.2). There is no separation requirement between the proposed B, F-1, S-1, and M occupancies (IBC Table 508.4).

Investigation and Evaluation

The following summarizes the primary impacts of the proposed work on the existing building and the associated code-required improvements.

Special Use and Occupancy:

Where the character or use of an existing building or part of an existing building is changed to a special use or occupancy as found in 780 CMR 4.00: Special Detailed Requirements Based on Use and Occupancy, the special use or occupancy shall comply with the applicable requirements of that chapter (IEBC 1002.1). There are no Special Use and Occupancy uses proposed.

Height and Area, Construction Type:

The building is of Type VB, unprotected combustible construction (IBC Table 601) without an automatic sprinkler system. The proposed uses are subject to the following tabular height and area limitations:

Use	height (ft.)	Stories	Area (sf)
B	40	2	9,000
M	40	1	9,000
F-1	40	1	8,500
S-1	40	1	9,000

With a change in Use Classification, the extent to which the building must comply with Height and Area Limitations for new construction depends, in part, on the resulting change in "Height and Area Hazard Category" (IEBC 1012.5). The existing Use Group S-1 and M have an Index of 3, and the existing B Use group is a Category 4. The proposed Use Group F-1, S-1, and Use Group M have an index of 3 resulting in an increase in Hazard Category where the B occupancy is replaced with a different occupancy.

When a change of occupancy classification is made to a higher hazard category as shown in Table 1012.5, heights and areas of buildings and structures shall comply with the requirements of Chapter 5 of the International Building Code for the new occupancy classification. The building is a single

story above grade plane, is approximately 14-feet in height, and 6,479 square feet in area, in compliance with applicable height and area limitations (IBC Tables 504.3, 504.4, 506.2).

Exterior Wall Exposure Hazard:

The extent to which the building must comply with Exterior Wall Limitations for new construction depends on the resulting change in "Exposure of Exterior Walls Hazard Category" (IEBC 1012.6). The existing Use Groups S-1 and M and proposed Use Group F-1, S-1, and M are a Category 2. The existing Use Group B is a Category 3, resulting in an increase in hazard where the B occupancy replaced by a different use (IEBC T 1012.6). When a change of occupancy classification is made to a higher hazard category as shown in Table 1012.6, exterior walls shall have fire resistance and exterior opening protectives as required by the International Building Code (IEBC 1012.6.1).

Exterior walls of type VB construction, with a fire separation distance less than 5-feet, must have a fire resistance rating of 2 hours when containing M, F-1, S-1 occupancies. Where the fire separation distance is 5-feet or up to 10-feet, the exterior walls must have a 1-hour fire resistance rating, and where the distance is greater than 10-feet no rating is required (IBC Table 602). Fire separation distance is measured from the face of the building to the closest interior property line, to the centerline of a street, an alley, or public way. Where there are two buildings on the property, the measurement is to an imaginary line between the two buildings measured at right angles to the wall.

The permanently dedicated concrete flood control waterway serves the same purpose as an alleyway for this purpose and satisfies the separation distance along the southerly building wall. The public streets satisfy the separation on the north and west walls.

The easterly side of the building is 5'-4" away from a second building on the subject property, resulting in a 2'-8" fire separation, if the reference line is centered between the buildings. The exterior wall of the subject building, in the area of the adjacency, is constructed of 12-inch-thick solid brick masonry, and the adjacent building 8-inch thick concrete block. No exterior wall openings are permitted in unprotected, non-sprinklered buildings where fire separation distances (FSD) is less than 5-feet. Openings in the easterly wall must be infilled with solid masonry or with alternative 2-hour fire resistance rated assemblies.

Fire protection:

Where a change in occupancy classification occurs that requires an automatic fire sprinkler system to be provided based on the new occupancy in accordance with Chapter 9 of the International Building Code, such system shall be provided throughout the area where the change of occupancy occurs (IEBC 1012.2.1).

The IBC requires an automatic sprinkler system in all buildings containing a Group M occupancy (other than bulk merchandising, upholstered furniture sales, or high-rack storage), a S-1 Storage (excluding motor vehicle storage) or F-1 Factory occupancy, where the fire area exceeds 12,000

square feet or they are located more than three stories above grade plane (IBC Table 903.2). The aggregate area of all floor areas is 6,479 sq. ft. An automatic fire sprinkler system is not required.

Separate and apart from applicable Building Codes, Massachusetts General Law, Chapter 148, Section 26G (Chapter 508 of the Acts of 2008) is concurrently applicable with regard to sprinkler requirements in existing buildings which total more than 7,500 square feet in floor area. This statute does not require an automatic sprinkler system in the 6,479 square foot building.

Where a change in Occupancy Classification occurs that requires a fire alarm and detection system to be provided based on the new occupancy in accordance with Chapter 9 of the IBC, such system shall be provided throughout the area where the Change in Classification occurs (IEBC 1012.2.2). A manual fire alarm system that activates the occupant notification system must be installed in Group M occupancies where the occupant load of all floors is 500 or more; or the occupant load is more than 100 persons above or below the lowest level of exit discharge (IBC 907.2.2, 907.2.7). A manual fire alarm system must be installed in a Group F-1 occupancy where it is more than two-stories in height or has a combined occupant load of 500 or more above or below the lowest level of exit discharge (IBC 907.2.4). A manual fire alarm system is not required.

Means of Egress:

In all existing buildings, the minimum "number" of means of egress required by Chapter 10 of the IBC (IEBC 102.6.4); any required means of egress component which is not of sufficient "width" to provide adequate exit capacity in accordance with section 1005.1 of the IBC; and any means of egress which is not arranged as to provide safe and adequate means of egress, must comply with the IBC.

The extent to which means of egress must further comply with code standards depends, in part, on the resulting change in "Means of Egress Hazard Category" (IEBC 1012.4). The existing Use Groups B and S-1 are Category 4 and the existing M a Category 3. The proposed Use Group F-1 has an Index of 4 and the M a Category 3. Where the existing M is replaced with a F-1 Use Group there is an increase in Means of Egress Hazard and means of egress must comply with the requirements of Chapter 10 of the International Building Code.

Two exits or exit access doorways from any space must be provided where the design occupant load or the common path of egress travel distance exceeds 49 people or 75-feet for B, F or M occupancies, and 29 people or 100-feet for S-1 occupancies (IBC Table 1006.2.1). The cumulative occupant load from adjacent rooms, areas or spaces must be included in the determination (IBC 1004.2). Exit access travel distance also shall not exceed 200 feet for M, S, and F occupancies (IBC Table 1017.2) without an automatic sprinkler system.

Unless a tenant space has an occupant load of 49 or less and travel distance of 75-feet or less (IBC 1006.2.1), each proposed tenant spaces requires two means of egress. Where two exits, exit access doorways, exit access stairways or ramps, or any combination thereof, are required from any portion of the exit access, they shall be placed a distance apart equal to not less than one-half of the

length of the maximum overall diagonal dimension of the space to be served measured in a straight line between them (IBC 107.1.1).

Based upon Mercantile occupancies, the most intense occupancy (60 s.f. per occupant), plus the proposed restaurant, the total building occupancy load would not exceed 148 (IBC Table 1004.1.2). The minimum clear door width to be provided is 34-inches having a capacity of 170 occupants, with the clear opening between the face of the door and the stop, and the door open 90 degrees ($34''/0.2 = 170$) (BCNY 1010.1.1).

Means of egress must be provided with artificial lighting in accordance with the requirements of the International Building Code (NYEBC 905.2). Means of egress must be provided with exit signs in accordance with the requirements of the International Building Code (NYEBC 905.3).

Every portion of a floor, such as a balcony or a loading dock, that is more than 30 inches above the floor or grade below and is not provided with guards, or those in which the existing guards are judged to be in danger of collapsing, shall be provided with guards (IEBC 803.5.1). Where there are no guards or where existing guards must be replaced, the guards shall be designed and installed in accordance with the International Building Code (IEBC 803.5.2).

Structural:

Where a change of use results in a higher Seismic Occupancy Category (IBC Table 1604.5) or in a higher Means of Egress Hazard Category (IEBC 1012.4), the building shall comply with the requirements for IBC level forces. The existing and proposed Occupancies are in Seismic Occupancy Category II (IBC Table 1604.5), and there is no increase in Egress Hazard Category. Alterations must not reduce the capacity of existing gravity load-carrying structural elements (807.4). No such changes are proposed.

Existing structural elements supporting additional gravity loads as a result of alterations must comply with the IBC (807.4). Any existing lateral load-resisting structural element whose demand-capacity ratio, with the alteration considered, is increased by 10-percent or more, shall be evaluated and reinforced as required (807.5).

Buildings or portions thereof subject to a change of occupancy where such change in the nature of occupancy results in higher uniform or concentrated loads based on Table 1607.1 of the International Building Code must comply with the gravity load provisions of the International Building Code, except where the Structural elements stress is not increased by more than 5 percent (IEBC 907.1). Assembly occupancies with fixed seating are required to have a live load capacity of 100 PSF (pounds per square foot) and the first floor of Retail occupancies are required to have a live load capacity of 100 PSF (IBC Table 1607).

Buildings and structures subject to a change of occupancy where such change in the nature of occupancy results in higher wind or snow occupancy categories based on Table 1604.5 of the International Building Code, shall be analyzed and shall comply with the applicable wind or snow load provisions of the International Building Code (IEBC 1007.2). There is no change in Occupancy Category, further compliance is not required.

Mechanical Requirements:

Where the occupancy of an existing building or part of an existing building is changed such that the new occupancy is subject to different kitchen exhaust requirements or to increased mechanical ventilation requirements in accordance with the International Mechanical Code, the new occupancy shall comply with the respective International Mechanical Code provisions (IEBC 1009.1).

Where the occupancy of an existing building or part of an existing building is changed such that the new occupancy is subject to increased or different plumbing fixture requirements or to increased water supply requirements in accordance with the International Plumbing Code, the new occupancy shall comply with the intent of the respective International Plumbing Code provisions (IEBC 1010.1).

All existing sanitary waste lines above the food or drink preparation or storage areas in new food-handling establishments shall be panned or otherwise protected to prevent leaking pipes or condensation on pipes from contaminating food or drink. New drainage lines shall not be installed above such areas and shall be protected in accordance with the International Plumbing Code (IEBC 1010.2).

Light and ventilation must comply with the requirements of the International Building Code for the new occupancy (IEBC 1011.1).

Building Elements:

Interior finishes in areas of Use Classification change must comply with the IBC (IEBC 1012.3) and interior finishes in exits and corridors in the Work Areas must comply with the IBC (IEBC 803.4). All finishes will comply with applicable provisions of the IBC. The M occupancies have the more restrictive interior finish requirements of the proposed uses. Interior exit stairways and exit passageways in non-sprinkled buildings must have Class A finishes; exit access passageways and corridors must be Class B, and rooms and spaces Class C (Table 803.11). A Class A: finish has a flame-spread index 0-25 and smoke-developed index of 0-450; Class B has a flame-spread index 26-75 and smoke-developed index of 0-450; and Class C has a flame-spread index 76-200 and smoke-developed index of 0-450 (IBC 803.1.1). Walls will be covered with gypsum wallboard, and ceilings with a suspended ceiling system complying with the interior finish classifications.

All existing interior vertical openings connecting two or more floors (including the basement) shall be enclosed with approved assemblies having a fire-resistance rating of not less than 1 hour with approved opening protectives (IEBC 803.2.1). Group F occupancies are exempt from the enclosure where vertical openings do not exceed three stories (IEBC 803.2.1, ex. 7).

Energy Conservation:

Alterations to any building or structure must comply with the requirements of 2018 IECC Section C503 and the code for new construction. Alterations shall be such that the existing building or structure is not less conforming to the provisions of this code than the existing building or structure was prior to the alteration.

The IECC 2021 requires such buildings going through change of use or occupancy to comply prescriptively as if new construction. The Stretch Code makes that requirement explicit by referencing the prescriptive sections (IECC sections C402 through C406).

Spaces, where energy use is increased, must comply with the requirements for new construction. Where the scope of the change is the whole building, the whole building must comply as a new building.

For Commercial projects, the new Stretch Code also replaces the exception (C503.1 Ex.3) which allowed exterior opaque assemblies exposed during construction to be in compliance when cavities are “filled with insulation.” The Stretch Code permits walls not meeting the prescriptive envelope requirements to use an area-weighted U-factor, allowing what is permitted in C402.1.5 to be increased by 10%. Importantly, this 10% reduction in required performance requires the derating calculations in C402.7. Because only above-grade exterior walls are in the scope of C402.1.5, other assemblies are required to comply prescriptively and allows using Massachusetts Stretch Code-specific COMcheck with Section C402.6.

Spaces undergoing a change in occupancy that would result in an increase in demand for either fossil fuel or electrical energy shall comply with this code. Where the use in a space changes from one use in Table C405.3.2(1) or C405.3.2(2) to another use in Table C405.3.2(1) or C405.3.2(2), the installed lighting wattage shall comply with Section C405.3.

Where the space undergoing a change in occupancy or use is in a building with a fenestration area that exceeds the limitations of Section C402.4.1, the space is exempt from Section C402.4.1 provided that there is not an increase in fenestration area (2018 IECC 505.1).

Accessibility:

Retail establishments are subject to the provisions of the Massachusetts Architectural Access Board Rules and Regulations (527 CMR 7.1). All areas of all occupancies that are open to, and used by, the public must comply with the regulations. Several food and product preparation spaces, and storage spaces, that will not be open to the public and will be accessed only by authorized employees of the establishment, are not required to comply.

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