

	Marijuana/Hemp Industry – Construction Permitting		510-915
	AUTHORED BY: Life Safety Chief Ty Drage		EFFECTIVE DATE: 10/01/2017
	APPROVED BY: Fire Chief Ron Bateman		REVISION DATE: Scheduled 01/01/2019

Owners and operators, along with their employees, agents, and assigns, assume all risks arising from or related to the operation or maintenance of a marijuana and/or hemp facility. Front Range Fire Rescue assumes no liability for any such operation or maintenance through the adoption and enforcement of this policy.

Scope:

This policy is intended to aid in the construction permitting process, including *Change of Use/Occupancy* for marijuana- and/or hemp-related establishments or businesses (i.e., infused product manufacturing, cultivation, sales, or testing laboratories) within commercial buildings or tenant spaces regarding what shall be submitted for Front Range Fire Rescue (FRFR) plan review. Because every building differs, this policy is not intended to identify every applicable code requirement; therefore, the applicant must follow all appropriate codes as adopted by Front Range Fire Rescue and the municipality within which the business will be operating for the purposes of construction plan review. Additional FRFR operational permits may be required.

Marijuana and/or hemp establishments or businesses are strictly prohibited from being established or operated in residential buildings.

Discussion:

The following items are related to construction permitting including change of use and/or occupancy of a commercial building for use as a marijuana or hemp establishment after a municipal zoning use permit, municipal building permit and FRFR building permit has been obtained by the applicant. Where a new certificate of occupancy is required, refer to the applicable municipal and FRFR policies governing this topic.

Policy:

Front Range Fire Rescue’s Life Safety Division reviews construction permit submittals concurrently with the municipality to determine and establish compliance with the adopted International Fire Code (IFC). Submittals for construction permits and changes of use/occupancy shall be submitted to Front Range Fire Rescue at Fire Station 2 – 101 South Irene Avenue, Milliken, as well as to the municipality within which the proposed facility will be located. The following information, specific to marijuana- and/or hemp-related establishments, plant cultivation facilities, testing laboratories, and/or infused product manufacturing/kitchens shall be submitted in addition to any Building Department requirements when applying for a construction permit:

1. Identify any proposed blocked windows or doors and how blocking will be established. For growing operations, any new wall partitions or ceilings shall be permitted for construction. Any use of plastic or mylar to enclose rooms or cover the walls or ceiling shall be installed in accordance with Fire Code and Building Code requirements. If plastic material is proposed, include manufacturer cut sheets showing flame spread ratings and details of how the product will be installed in compliance with applicable Codes. If plastic is not proposed, indicate in a letter or on construction drawings that plastic materials will not be used to line walls/ceilings or to create room enclosures. Note that hanging plastic from ceilings or suspended from overhead structures to create wall dividers is not in compliance with code provisions for a wall partition or interior finish.
2. There are several common triggers that require the installation of an automatic fire sprinkler system for plant cultivation operations. These include an F-1 occupancy fire area exceeding 12,000 square feet, the building meets requirements to be considered a *story without openings* per the adopted Code, or Building Code height or areas are exceeded. Plant cultivation operations are regulated as an F-1 occupancy. A Building Code Analysis performed by a licensed design professional shall be submitted with any construction permit application or change of use/occupancy permit application. This code analysis assists the Fire Code Official and Building Official in determining requirements for automatic fire sprinkler systems.
3. Any facility that requires an installed carbon dioxide (CO₂) enrichment system shall be permitted and evaluated the same as an automatic fire alarm system. Any such system shall require a plan review and installation permit from Front Range Fire Rescue prior to installation. Refer to FRFR's CO₂ Gas Enrichment Policy for details of permit requirements.
4. The adopted International Fire Code prohibits the use of extension cords or power strips as permanent wiring to equipment, lighting, fans, etc. The electrical loads and wiring plans for grow lighting, fans, etc. shall be submitted for review by the Building Code Official prior to being allowed for use. All electrical submittals shall be accompanied by written documentation from a licensed Master Electrician that all electrical loads are adequately sized per the current National Electrical Code. For field installation of lighting, all electrical wiring, including wiring from ballasts to grow lamps, shall be supported in accordance with the National Electrical Code.
5. The type of proposed locking hardware on all exit doors shall be submitted for review prior to being approved for installation. Section 1008 of the adopted International Fire Code and International Building Code shall govern the installation of all exit doors and exit door hardware, including installation of access control systems and delayed egress locks.
6. If plant oil extractions will be performed inside the building, the applicant shall provide complete details of the proposed extraction process, equipment, mechanical exhaust system, and room construction in the permit submittal application. All extractions must be performed in an enclosed room that is designed specifically for that purpose and is not used for any other purposes. All exhaust system installations and room construction require mechanical

construction permits. Unless *listed* extraction equipment is used (i.e., UL or equivalent), only those machines currently accepted by the Denver Fire Department shall be permitted to be installed and/or used.

- a. The use of butane or any other similar flammable gas in open systems, where the agent is directly released into the atmosphere, is strictly prohibited.
 - b. Closed systems are approved by permit only after review to confirm that the system is in compliance with adopted Denver Fire Code requirements. Closed systems must include a low level (typically floor level) mechanical exhaust system with a minimum area exchange rate of one (1) cubic foot per minute per square foot of floor area or a hazardous exhaust hood designed to capture any possible vapor release. A local hydrocarbon detector shall be used at all times the extraction equipment is in operation. Exhaust systems shall be rated intrinsically safe and shall be electrically classified as Class 1/Division 1. Where closed systems use refrigeration recovery machines, the unit must be rated for use with hydrocarbon refrigerants. Where butane is stored/used on site, an annual operational hazardous materials permit is required and can be obtained through application and inspection by Front Range Fire Rescue's Life Safety Division.
 - c. Carbon dioxide (CO₂) supercritical extractions relief venting must be piped to the exterior of the building. Local CO₂ level monitoring/alarm shall be provided in the area of operation as well as within any CO₂ storage rooms. The applicant shall provide details of the equipment and the amount of CO₂ stored/used on site during the plan review process.
 - d. Alcohol or other flammable/combustible liquid extractions where the liquid is boiled, distilled, or evaporated shall be in the compliance with the adopted International Fire Code as well as NFPA 30. The solvent used in the process (typically alcohol) shall be specifically identified by the applicant. The operation shall be conducted under a hazardous exhaust hood that is rated for exhausting flammable vapors. Electrical equipment used, including hot plates, shall be rated for use in flammable vapor atmospheres. Heating flammable liquids over an open flame is strictly prohibited. Details of the proposed equipment shall be submitted for FRFR approval. Note that a heating element that is not rated for flammable atmospheres may be approved where documentation from the manufacturer or an approved testing laboratory shows that it is rated for heating flammable liquids.
7. For existing permitted occupancies, any modification to extraction processes, the building layout (i.e., walls, ceilings, doors or other similar construction), electrical system, etc. shall only be performed after plan review and approved permit. The applicant shall coordinate with the local Building Department requirements for construction.

Revision History:

08/03/2017 Original documented developed

References:

Denver Fire Department – Guideline for Construction Permitting for Marijuana Establishments/Businesses Located in Commercial Buildings