MARIJUANA FACILITIES

STAKEHOLDER MEETING March 12, 2019



Agenda

Plan Review Process

BFS Application Submittal

Plan Review Basics

Plan Review Pitfalls

Break

Inspection

Q & A



Reference Materials

Medical Marijuana Facilities Licensing Act, 2016 PA 281, MCL 333.27101

NFPA 1, 2018 – Fire Code NFPA 101, 2018 – Life Safety Code

NFPA 10 – Standard for Portable Fire Extinguishers

NFPA 55 – Compressed Gases and Cryogenic Fluids Code

NFPA 91 – Standard for Installation of Blower and Exhaust Systems

NFPA 704 - Standard System for the Identification of the Hazards of Materials for Emergency Response.

Adam A. Dailide

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517-373-6361

Bureau of Fire Services Plan Review Consultant

Master of Architecture NFPA & State of Michigan Certified Fire Inspector I

PLANREVIEW PROCESS

- First
 - Approval from Bureau of Marijuana Regulation (BMR)
 - At Completion of BMR Step 2
 - Letter sent from BMR informing you to Submit to the Bureau of Fire Services (BFS)



GRETCHEN WHITME

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
LANSING

ORLENE HAWKS

VIA US MAIL

Date: 02/21/2019

Addressee

Address:

Facility License Application No:

Facility Type: Grower Class A

RE: Bureau of Fire Services Plan Review

Dear Applicant:

Please contact the Bureau of Fire Services (BFS) to have the plan for your marijuana facility reviewed. BFS plan review is required for grower and processor marijuana facilities.

For details on the BFS plan review process, please access the <u>Plan Review Division page</u> on the BFS website. You will find information titled "BFS Plan Review for Marijuana Facilities" under the section titled "Details for Specific Regulated Facilities."

Please note, you will need your facility license application number listed above to be able to submit your plans for review.

Sincerely

Applications Section Bureau of Marijuana Regulation Michigan Department of Licensing and Regulatory Affairs

> BUREAU OF MARIJUANA REGULATION 2407 NORTH GRAND RIVER • P.O. BOX 30205 • LANSING, MICHIGAN 48909 www.michigan.gov/BMR • 517-284-8599

- Second
 - -Submit **Application** for Fire Safety Plan Examination (FORM 979)
 - 2 Options
 - -Complete by Hardcopy
 - Mail into BFS
 - -Complete by ACCELA
 - Online portal for submittals
 - FAQ available at <u>www.Michigan.gov/lara</u> - Fire Services

Application for Fire Safety Plan Examination Michigan Department of Licensing and Regulatory Affairs Bureau of Fire Services Plan Review Division P.O. Box 30700 Lansing, MI 48909 (517) 241-8847 Authority: 1941 PA 207 Indee the Americans With Disabilities Act, you may make your needs known to this agency and the facing, writing, he under the Americans with Disabilities Act, you may make your needs known to this agency.								
Note The architect / engineer / certifie Project Description Facility Name	d firm is responsible for all fees app	County	Fire Department (Required) Zip Code					
Review Requested Construction Plans / Specs Consultation (\$155 fee) *Addendum / Bulletin # *Modification Request (\$155 Fee) Fire Alarm (specify below) Door Locking *Hood Suppression (specify below) Sprinkler (specify below) Clean Agent (specify below) school Site Plan (\$155 Fee, non-refundable) NOT related to a current FS project Related to existing FS project #	REQUIRED** College / University (253) Dormitory (253) FSOF (257) Hospital (257) Mobile Health Care Unit Serial # Phased Hospital within a Hospital (257) Hospice Residence (257) Schools/Charter (253)	eview/Inspection Fee NOT Required Adult Foster Care 7 - 12 13 - 20 ttach form BCAL 1712 Home for the Aged ttach form BCAL 1605	Building Data Original Year Constructed Your AIA/PE Job # No. of Stories Completely Partially None This Submittal: Addition New Building Conversion Remodeling or Alteration Type of Construction (per NFPA 220)					
"See Page 2 - Miscellaneous Instructions Facility Contact Person Name Architect / Engineer / Certified Firm Name (Licensed Individual) Name of Company	Penal Institutions** "See Page 2 - Fee Schedule & Phasing P Telephone (Including Are: License No / BFS Certified F Address Address License Telephone (Including Are: Address	a Code) Email Contairim No E-mail Addres	act (REQUIRED) ss (REQUIRED) elephone (Including Area Code)					

*This information is confidential. Disclosure of confidential information is protected by the Federal Privacy Act.

- Third
 - After Submittal of Application, BFS will check the input
 - Are drawings submitted correctly?
 - Is all the information filled out correctly
 - Mark it for Plan Review to Proceed
 - Project given a new unique BFS Project Number
 - EX. 2019BFS-000000

- Fourth
 - Plan Review
 - Review Plans
 - Produce Plan Review Letter
 - -Uploaded to Project File
 - Approved Contingent or Disapproved
 - Push Information to Submitter



- Fifth
 - If Disapproved
 - Read the Plan Review Letter
 - Correct or address the items in **BOLD** and/or "special attention to"
 - Resubmit required materials
 - If Approved Contingent
 - Read the Plan Review Letter
 - Ensure your Construction Manager is aware of the requirements in the letter.
 - Approval is contingent on the comments contained in the letter.

- Sixth
 - Inspection
 - Inspector will be assigned to the Facility
 - Inspector will contact to schedule an inspection.
 - -If **NEW** construction typically at 50% and final benchmarks

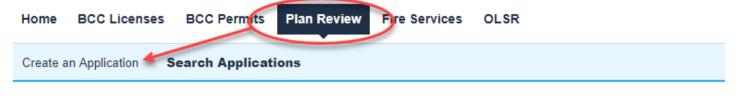
BFS APPLICAITON SUBMITTAL

BFS APPLICATION SUBMITTAL

• Who has submitted to BFS through the ACCELA system online?

Once Registered and Signed in

Click on "Plan Review" then on "Create an Application"



 Read through the information, select that you have read and accepted the terms, and click "Continue Application" Click here to see detailed instructions on how the plan files should be formatted.

PLEASE READ THESE INSTRUCTIONS

If you would like to contact one of the Bureau's directly, please select an email address below.

BCC at: BCCplanreviewcodemail@michigan.gov
BFS at: BFSPlanReview@michigan.gov
HFES at: LARA-BCC-HFES@michigan.gov

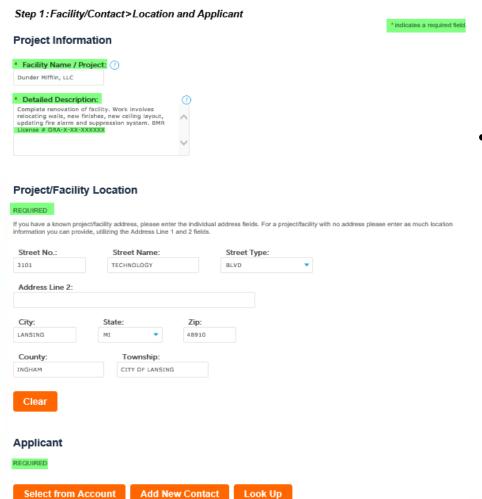
LARA Systems Use Notification

The Michigan Department of Licensing and Regulatory Affairs(LARA) computer information systems are the property of the State Of Michigan and subject to state and federal laws, rules and regulations. The systems are intended for use only by authorized persons and only for official state business.

Systems users are prohibited from using any assigned or entrusted access

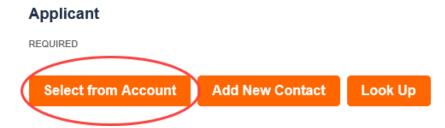
I have read and accepted the above terms

Continue Application »

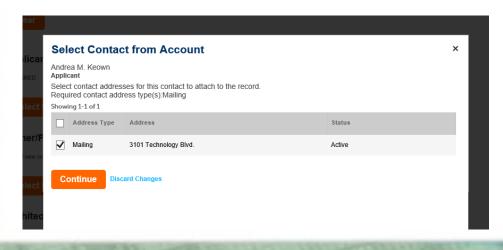


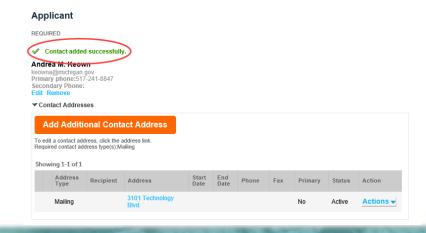
- Enter the Facility and Applicant information
 - Please be sure to fill out ALL required information.
 - Put your BMR Facility Number in with the Detailed Description.
 - Applicant will be the person that will receive all ACCELA notifications, including the Plan Review Letter

- To enter an Applicant
 - Click "Select from Account"

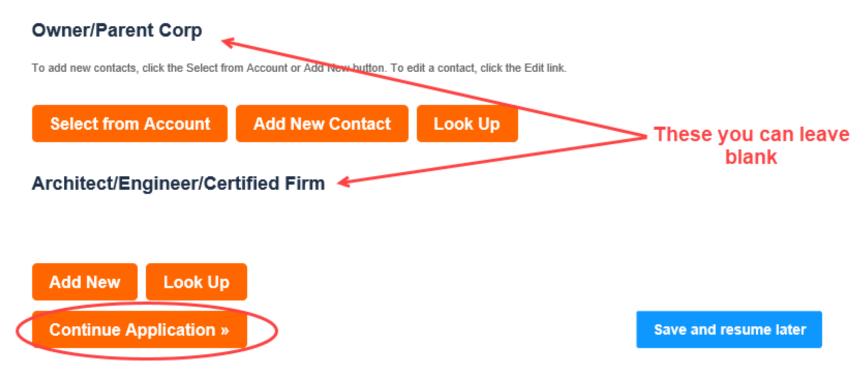


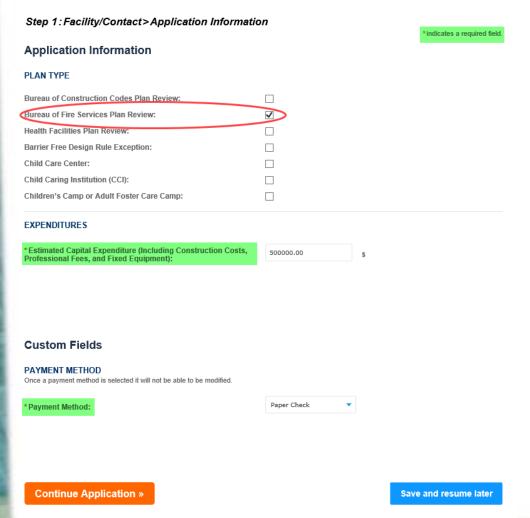
 Select a Mailing Address for Applicant, click Continue. A Green Check Mark and "Contact Added Successfully" will appear if done correctly





- You can leave the Owner/Parent and Architect/Engineer/Certified Firm sections blank or fill them out. It is your choice. Our preference would be to have these fields filled out.
- Click "Continue Application".



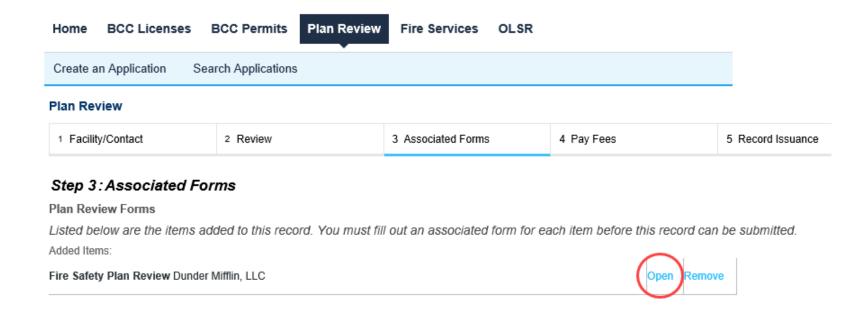


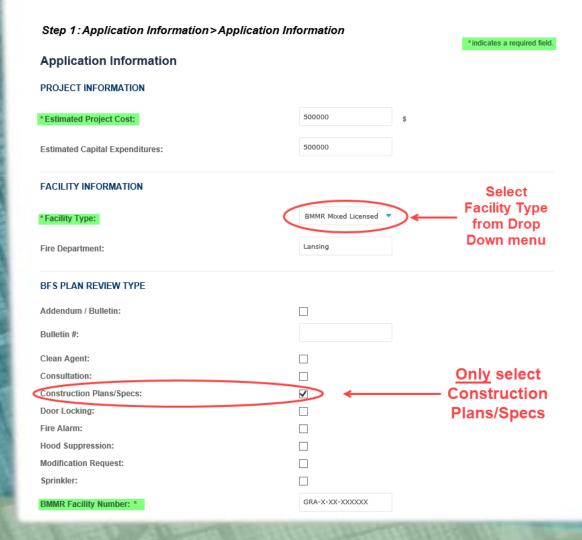
- Select "Bureau of Fire Services Plan Review"
- Enter Expenditures Amount
- <u>ALWAYS</u> select <u>Paper Check</u> as your payment method. Once you continue, you can not modify your payment method.

Step 2: Review Continue Application » Please review all information below. Click the "Edit" buttons to make changes to sections or "Continue Application" to move Record Type Plan Review Project Information Facility Name / Project:Dunder Mifflin, LLC Complete renovation of facility. Work involves relocating walls, new finishes, new ceiling layout, updating fire alarm and suppression system. BMR License # GRA-X-XX-XXXXXX Project/Facility Location 3101 TECHNOLOGY BLVD CITY OF LANSING LANSING INGHAM MI 48910 3101 TECHNOLOGY BLVD Applicant Individual Andrea M. Keown Primary Phone:517-241-8847 3101 Technology Blvd, Suite H. Lansing, MI, 48910 E-mail:keowna@michigan.gov Owner/Parent Corp Architect/Engineer/Certified Firm Application Information Bureau of Construction Codes Plan Review: Bureau of Fire Services Plan Review: Health Facilities Plan Review Barrier Free Design Rule Exception: Child Caring Institution (CCI) Children's Camp or Adult Foster Care Camp: Estimated Capital Expenditure (Including Construction Costs, Professional Fees, and Fixed Equipment): Custom Fields PAYMENT METHOD Payment Method: Paper Check Continue Application »

- Step 2 is just a Review Page.
- Make any modifications you may need in this area by clicking "Edit" next to the section.
- Click "Continue Application"

• Click "Open" to take you to Step 1 of the Associated Forms





- EPC will already be populated from previous page
- Select your Facility Type
- Enter the nearest Fire Department to the Facility
- Select Plan Review Type (ONLY select Construction Plans/Specs)
- Put you BMR Facility Number

Save and resume later

PLAN REVIEW INFORMATION Square Footage New Building: Square Footage Addition: Square Footage Alteration: Construction Type: Number of Occupants: Sauare Footage Area/Floor: Number of Floors: Sprinkler System: Sprinkler System Limited Area Description: **Payment Method** PAYMENT METHOD Paper Check * Payment Method:

- Select Construction Type from drop down menu
- Enter Sprinkler System information
- Payment Method will already be populated

Continue Application »

« Back to Associated Forms

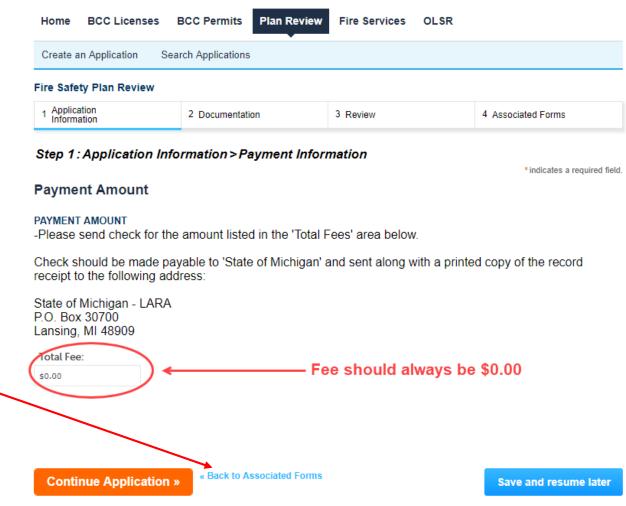
There is <u>NO FEE</u> for BMR Facilities. If you get to this page and a fee is generated that means 1 of 2 things;

An additional Plan Review
 Type was selected

Or

A Facility other than a BMR
 Facility was selected

You will need to go back to Associated Forms to correct this issue.



Step 2: Documentation > Documents

*indicates a required field

Attachment

Please read all instructions before uploading documents.

mportant note: AutoCAD 2016 and newer version users will need to change their AutoCAD setting to "EPDFSHX=0" before saving and uploading a document.

Each plan (or plan set) must be saved in PDF format. Please flatten the drawing layers in your CAD program before creating the PDF. For plan review projects where the page count is up to 75 pages, creating a single PDF document is acceptable and the file name should be unique and descriptive of the project itself. For larger projects that exceed 75 pages we recommend grouping and submitting plans in smaller sets. Please do not include any symbols, spaces, or unnecessary punctuation in the document file name.

Pages must all be in landscape format and viewable without rotation. Failure to submit correctly oriented plans may result in a 'hold' being placed on the submittal which will delay review. Plans must be saved and submitted at 100% scale, in black and white only, and cannot be password protected or locked. Scanned drawings in PDF format can be submitted, but are required to be legible and must follow all submittal requirements. Each sheet containing scaled drawings must include a scale of known dimension.

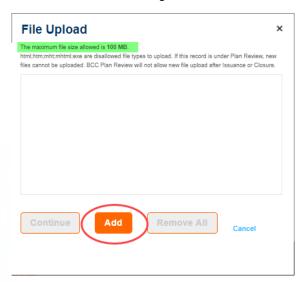
Revisions and resubmissions must match up exactly to the original submittal and file name, and contain the same page order. Do not reorder, extract, or insert pages in the middle of your corrected plan sets. Any pages added to the document set need to be after the final original page. Rearranging, extracting, or inserting pages out of order will result in delays for completing your plan review. If pages are removed from the scope of work, simply mark those pages accordingly. Do not remove any such pages. Resubmitting the pages in the original order ensures that the plan reviewers comments and sketches are properly carried forward to the newer submittal/version by the electronic plan review software. This allows for more accurate and expedited document reviews.

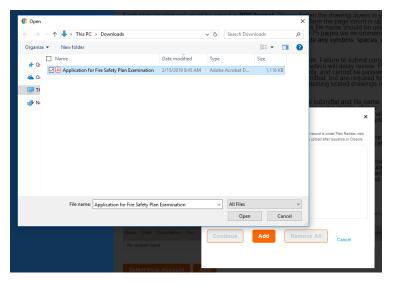
To address plan review deficiencies, applicants must resubmit a complete set of plans through the Accela Citizens Access (ACA) portal. Once the plans have been processed, the 'Resubmit' action becomes available in the Attachments section of the appropriate record in ACA. Plan sets addressing correction requests must be resubmitted through the 'Resubmit' link associated with the plans in order to avoid processing delays.

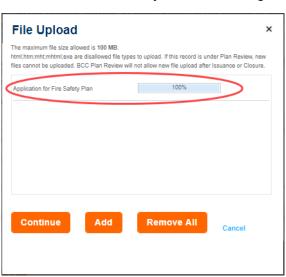
- Uploading Plan Drawings
 - Most Incomplete submittals happen because PDF's are not:
 - FULLY Flattened <u>No</u> Layers or Comments
 - In Landscape format
 - Or there are no drawings at all.

After reading the Instructions, click "Add"

A small box will open, select Add --> Select the document you wish to upload --> Select the document you wish to upload



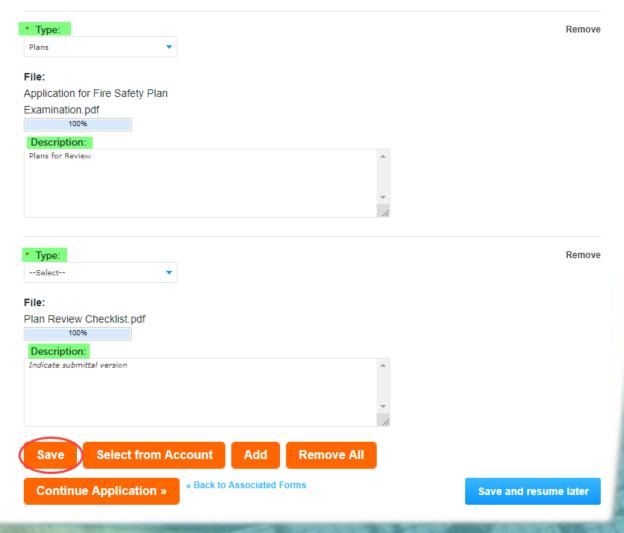


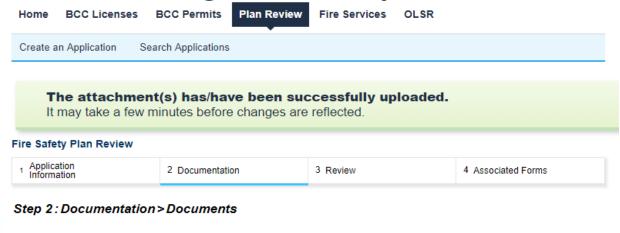


*If you need to add more documents, select "Add". Otherwise click "Continue".

Once all documents are uploaded

- Select the Document Type from the drop-down menu;
 - Addendum
 - BFS 12A
 - Letters
 - Miscellaneous
 - Plans
 - Project Inspection Report
 - Specifications
- ** Plans and Letters are the most commonly selected **
- Enter a Description for each
- Click "Save" then "Continue Application"





The top of the next page will let you know the documents were uploaded successfully.

The maximum file size allowed is 100 MB.

html;htm;mht;mhtml;exe are disallowed file types to upload. If this record is under Plan Review, new files cannot be uploaded. BCC Plan Review will not allow new file upload after Issuance or Closure.

Name	Туре	Description	Size	Document Status	Action	Latest Update	Status Date	Upload Date	Virtual Folders
Application for Fire Safety Plan Examination.pdf	Plans	Plans for Review	1.09 MB	Uploaded	Actions ▼	02/26/2019	02/26/2019	02/26/2019	
Plan Review Checklist.pdf	Plans	Plans for review	81.80 KB	Uploaded	Actions ▼	02/26/2019	02/26/2019	02/26/2019	

The bottom of the next page will list the documents.

Select from Account

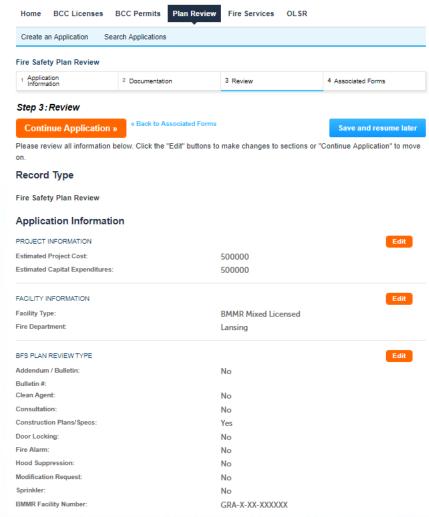
Add

Continue Application »

Nack to Associated Forms

Save and resume later

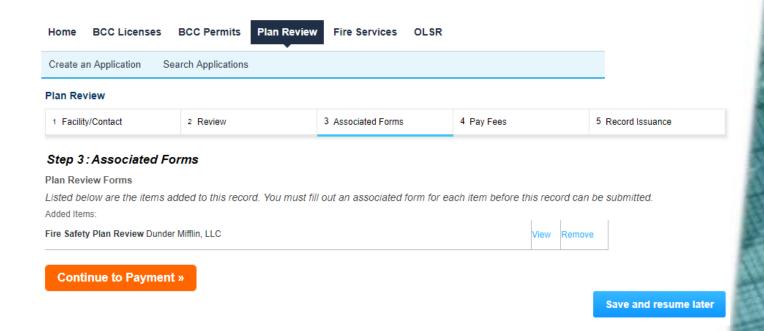
Click Continue Application

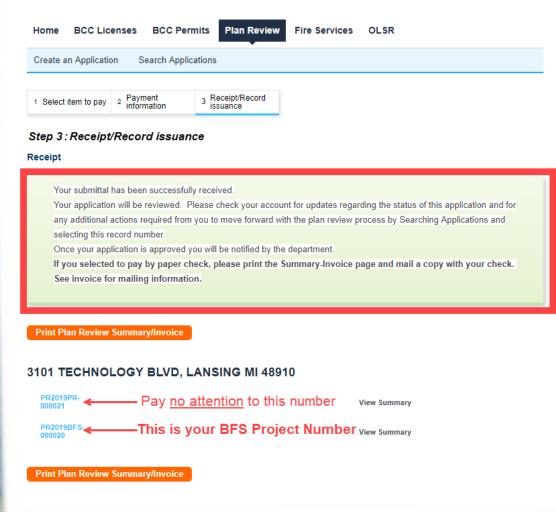


This will take you to a final review page.

Look over all information, make any edits, then click "Continue Application".

Back at the Associated Forms page, click "Continue to Payment"





You've successfully submitted a Facility for Plan Review!

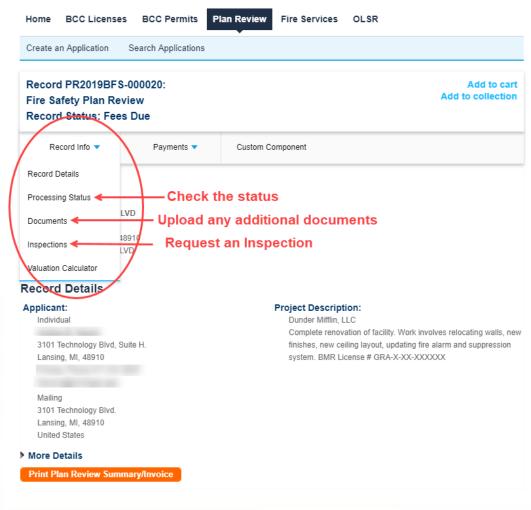
At the bottom you will see two project numbers,

(PR2019PR-000000) Parent Record

(PR2019BFS-000000) BFS Project Number

Only use the BFS project number when requesting status updates

If you click on the **BFS number,** it will take you to the Project Record Page.



By selecting the Record Info Drop-Down Menu you will be able to:

- Check the Status
- Upload any additional
- Request an Inspection

PLANREVIEW BASICS

- The Bureau of Fire Services (BFS) is only one Authority Having Jurisdiction (AHJ) involved with the licensing and approval for this facility. Coordinate all final approvals through the Bureau of Marihuana Regulation (BMR).
 - Examples:
 - The Bureau of Marijuana Regulation (BMR)
 - The Bureau of Construction Codes (BCC)
 - Electrical
 - Mechanical
 - Plumbing
 - Local Municipality or County

• 6.1.12.1* Definition

Industrial Occupancy

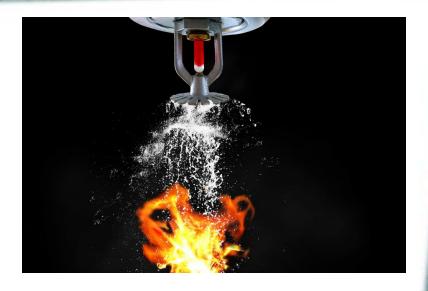
 An occupancy in which products are manufactured or in which processing, assembling, mixing, packaging, finishing, decorating, or repair operations are conducted.



- Facilities will be viewed as **NEW INDUSTRIAL** if
 - New Construction
 - Existing Building that <u>was not</u> classified as INDUSTRIAL previously
 - For *new construction*, provide plans and specifications bearing the seal of an architect or engineer licensed in the State of Michigan as required by the *Occupational Code*, *PA* 299 of 1980
- Facilities will be viewed as **EXISTING INDSUTRIAL** if
 - Existing Building that was previously used as INDUSTRAIL

• SPRINKLERS

- New industrial occupancies, other than low-hazard industrial occupancies, shall be protected by an approved automatic sprinkler system in accordance with NFPA 13 in any of the following locations.
 - Throughout all industrial occupancies 3 or more stories in height,
 - Throughout all industrial occupancies exceeding 12,000 sq. ft. in fire area,
 - Where the total area of all floors, including mezzanines, exceeds 24,000 sq. ft.



Plan Review Basics

FIRE ALARM AND SPRINKLER REVIEWS

- Evaluation of the required fire alarm and automatic sprinkler systems is not included in this BFS Plan Review.
 - Submit shop drawings to the appropriate electrical/mechanical AHJ.
 - Refer to the Bureau of Construction Codes' Statewide Jurisdiction list to find the appropriate electrical/mechanical AHJ (local, county or State).
 - (found on their website at www.michigan.gov/bcc)

Plan Review Basics

- The Operations in any **combination** of Grower, Processor and/or Provisioning Center shall comply with the requirements of *Rule 32 in the Medical Marihuana Facilities Rules*. Including but not limited to the following:
 - Have distinct and identifiable areas with designated structures that are contiguous and specific to the state operating license
 - Have separate entrances and exits, inventory, record keeping and point of sale operations, if applicable.
 - Post the state operating license on the wall in its distinct area and as provided in these rules.

PLANREVIEW PITFALLS

GROW FACILITY

- If the Grow is Shared with a Provisioning Center in the same building, the 2 facilities must be fire separated by a **2-HOUR barrier**.
 - Industrial General Purpose to Mercantile requires 2-hour separation
- All Egress Doors shall be side hinged or pivot-swinging
- Common Paths of Travel shall be limited to
 - **50 feet** (unsprinklered)
 - **100 feet** (Sprinklered)
- Dead Ends shall not exceed **50 feet**
- Facility must provide:
 - Portable Fire Extinguishers
 - Emergency Lighting
 - Exit signage

PROCESSOR FACILITY

- If the Processor is Shared with a Provisioning Center in the same building, the 2 facilities must be fire separated by a 2-HOUR barrier.
 - Industrial General Purpose to Mercantile requires 2-hour separation
- Common Paths of Travel shall be limited to
 - **50 feet** (unsprinklered)
 - **100 feet** (Sprinklered)
- Dead Ends shall not exceed **50 feet**
- Hood or Enclosure for LPG Extractions shall be classified as Class 1, Division 1
- Facility must provide:
 - Portable Fire Extinguishers
 - Emergency Lighting
 - Exit signage

• EXTRACTION ROOMS

For other than CO2 and nonhazardous extraction process, the marijuana extraction equipment and process shall be located in a room of noncombustible construction dedicated to the extraction process and the room shall not be used for any other purpose.



- NONCOMBUSITBLE MATERIALS
- Noncombustible materials are those that will not ignite, burn, support combustion, or release flammable vapors when heated.
 - Ex. Masonry, Stone, Steel
- While these materials cannot be ignited or will not support combustion, they may react to heat in a manner that could affect structural stability.
 - Ex. Unprotected steel is noncombustible material, but expands significantly when heated.

EXTRACTION ROOMS

- The Occupancy of buildings or portions of buildings where the growing or processing of marijuana occurs shall be in accordance with Chapter 6 and the applicable building code.
 - Extraction Rooms will be considered **Industrial Special Purpose**.
 - Separate the Extraction room with a 1-hour fire barrier using "Separated Occupancy"
 - Comply with the most restrictive requirements of the occupancies for the entire facility using "Mixed Occupancy"

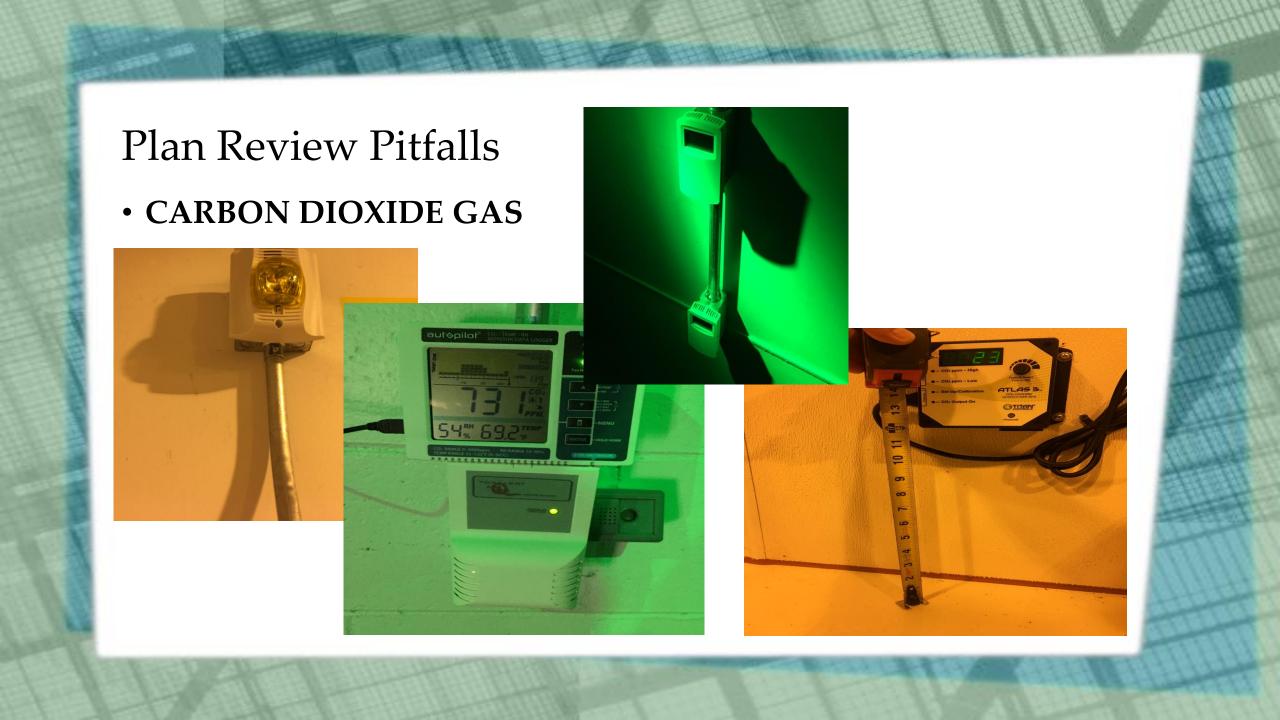
• EXTRACTION ROOMS

- For extraction rooms using hazardous materials, each room shall be provided with at least one exit access door complying with the following:
 - The door shall swing in the direction of egress travel
 - The door shall be provided with a self-closing or automatic closing device
 - The door shall be equipped with panic or fire exit hardware.



CARBON DIOXIDE GAS

- Marihuana facilities utilizing liquefied Petroleum or Carbon Dioxide Gas must have proper detection and alarm systems as required by rule and the NFPA.
 - Carbon Dioxide (CO2) sensors shall be provided <u>within 12 in.</u> (305mm) of the floor in the area where the gas is most likely to accumulate or leaks are most likely to occur.
 - The threshold for activation of the low-level alarm shall not exceed a carbon dioxide concentration of 5,000 ppm TWA (9,000 mg/m3). When carbon dioxide is detected at the low-level alarm, the system shall activate a signal at a normally attended location within the building.
 - Activation of the gas detection systems shall initiate an audible alarm within the room or area in which the system was installed. Activation of gas detection system shall also sound a local alarm to notify persons responsible for system operation of a hazard condition in the area in which the system in installed.



CARBON DIOXIDE GAS

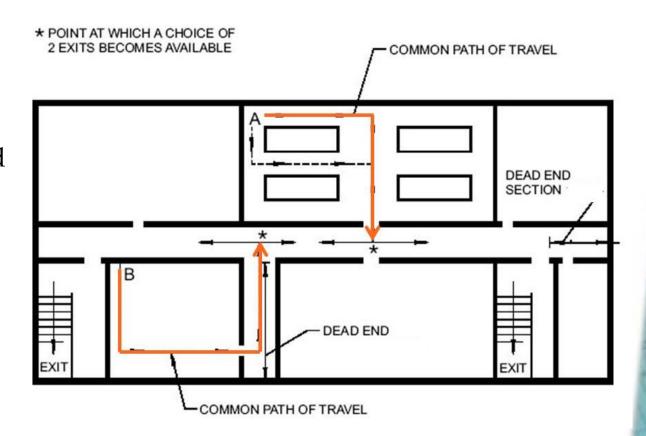
A warning sign shall be posted at the entrance to the building, room, enclosure or confined area where the container is located. The warning sign shall be at least 8 in. (200 mm) wide and 6 in. (150 mm) high and state the following:

CAUTION-CARBON DIOXIDE GAS

Ventilate the area before entering.

A high carbon dioxide (CO2) gas concentration in this area can cause suffocation.

- COMMON PATH OF TRAVEL
 - 3.3.66 Common Path of Travel. The portion of exit access that must be traversed before two separate and distinct paths of travel to two exits are available.
 - Common Path of Travel to include distance around all obstacles, such as furniture, from a point that a person could physically be standing.



MEZZANINES

- A mezzanine having one means of egress, check common path of travel.
- A mezzanine having two or more means of egress shall not be required to open into the room in which it is located if not less than one of the means of egress <u>provides direct</u> <u>access from the enclosed area to an exit at the mezzanine level.</u>
 - **3.3.105* Exit.** That portion of a means of egress that is separated from all other spaces of the building or structure by construction, location, or equipment as required to provide a protected way of travel to the <u>exit discharge</u>.
 - 3.3.107 Exit Discharge. That portion of a means of egress between the termination of an exit and a public way.
 - NOTE: Occupant Load may be restricted dependent on layout.

- Additional Fire Safety Plan Review and/or Inspections are required in the following circumstances.
 - Modifications to the grow area, rooms and storage, extraction equipment and process rooms or marihuana-infused product processing equipment within a marihuana facility.
 - Changes in Occupancy
 - Material changes to a new or existing grower or processor facility including changes made pre-licensure and post-licensure.
 - Changes in extraction methods and processing or grow areas and building structures may trigger a new inspection.

PHASED PROJECTS

- In the case of a Phased project, a plan review application and submittal is required for each phase of the project.
 - Each Phase will be given its own BFS project number.
 - Drawings should reflect what is included in the existing and current phase.
 - Note: In a 3 phase project, submittals for Phase 3, should also include work already done in Phases 1 & 2 and will be reviewed as an accumulated building.

BREAK

STILL TO COME

Inspection

Q & A

INSPECTION

BUREAU OF FIRE SERVICES MARIJUANA

INSPECTORS

Paul Dove: DoveP1@Michigan.gov

John Hager: HagerJ@Michigan.gov

James Bradford: Bradfordi@Michigan.gov

• BFS Field Inspectors shall have the authority to require evidence to show that other regulatory agencies having jurisdiction over the design, construction, alteration, repair, equipment, maintenance, process, and relocation of structures have been issued appropriate approvals. *Refer to Section 1.12.4.1 of NFPA 1.*

- First
 - Be Prepared for the Inspection
 - Show the Inspector the approved State or Local Permits for Construction
 - Provide the Inspector with Specifications noted in Plan Review
 - Affidavits, when required due to the absence of an approval label, must be provided to the inspecting officer.
 - Provide the Inspector with Emergency Lighting Point by Point Calculations
 - Point-by-point calculations are required in order to verify compliance.

- Second
 - Walk-Through the Facility
 - Questions may be asked, please have someone who knows the answers available.
- Third
 - Inspection report will be produced and Uploaded to Project File.

- Codes and References
- NFPA 1, 2018, Specifically chapter 38 and references.
- Additional NFPA referenced Codes and Standards.
- Local jurisdictional applicable code requirements also apply.
- If there are differences......
 - Apply the Most stringent requirement

Types of Marijuana Facilities



- Growers
- Processors
- Provisioning Centers
- Safety Compliance (Testing Labs)
- Secure Transporters

GROW

- Class A Licenses 500 plants
- Class B Licenses 1000 plants
- Class C Licenses 1500 plants
 - *Class C Licenses are permitted to have stacked licenses

Grow Facilities

- Classified as Industrial General Purpose occupancy, NFPA 1, 2018
- Required 2-hour separation from Mercantile or Business
- Plan review required by BFS and local AHJ
- Rooms broken down to different operations:
 - Flower, Veg, Clone, and Mother rooms
- Must have Certificate of Occupancy from AHJ



Hazards of CO2 Enrichment

- C02 enrichment usually less than 2000 ppm
- Can be piped in from outside bulk tank
- Portable tanks
- C02 burners
- Supplied from building mechanical equipment











Other Grow Concerns

Fumigation

- -Signage
- Watch personnel
- Written notification
- Sources of ignition
- Occupant removal
- Maintenance of openings
- Venting and clean-up



More Grow Operation Concerns.....

- Aisle width
- Spray on foam insulation NFPA 286 test - intumescent paint or drywall protection
- Emergency lighting point by point calculations (required)
- Power taps UL1363/1363A
- Extension cords
- Water tanks and Chemicals

- Light hangers
- Sulfur burners (not permitted)
- Hazmat fertilizers and pesticides
- Secured access
- NFPA 704 Placards
- Fire protection systems
- Dry rooms
- Interior finish / Plastic hanging













PROCESSOR

Processing Facilities

- Extract resin or create infused products for sale
- Most hazardous area of marijuana industry
- Common extraction methods are:
 - LPG Extraction
 - Alcohol or other solvent extraction
 - C02 extraction
 - Miscellaneous methods

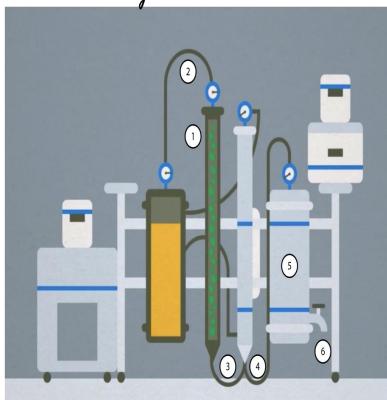


LPG Extraction

- Butane & Pentane is most commonly used
- Has to be done in closed loop extraction machine system
- Extraction machine has to be in C1D1 booth or lab hood
- Booth or hood shall have interlocking features
- Shall have gas monitoring set to 25% LEL/LFL
- Shall have automatic suppression system in booth/hood along with duct work

LPG Extraction

Hydocarbon Extraction



- LPG containers <u>shall not</u> be stored in extraction rooms
- Transfilling shall take place outside
- NFPA 704 placard on entrance doors
- Shall have an automatic emergency power system installed
- Used plant material must be allowed to off gas in booth/hood





Flammable Liquid Extraction

- Most common solvents are ethanol, methanol and isopropyl alcohol
- Closed loop system
- Conducted in Chemical Fume Hood-Chapter 7
 of NFPA 45 or approved exhaust system –
 NFPA 91 or Mechanical Code
- Most facilities use C1D2 booth or hood
- Hood or booth have to have interlocking systems
- No fire suppression required in hood or booth unless building is required to be suppressed

- Storage, use, and handling shall comply with NFPA 1, chapter 66
- Heating of flammable or combustible liquids over open flame is prohibited
- Maximum allowable quantities
- Signage, NFPA 704 placard, no smoking, flammable liquids
- SDS



CO₂ Extraction

- High Pressure
- Gas detection system required set at 5000 ppm
- Pressure relief devices piped to exterior of building
- Auto calibrating and self-zeroing detectors are prohibited
- No booth or hood requirement
- Signage, NFPA 704 placard, C02 warning signage

SAFETY COMPLIANCE FACILITIES

Safety Compliance Facilities

- Classified as business
- Testing labs
- Fume hoods
- SDS sheets
- Flammable liquid storage cabinets & refrigerators

- Flammable liquids refrigerators
- Signage, NFPA 704 placard
- UL 1363/1363A listed power taps
- General inspection practices







SECURE TRANSPORTER

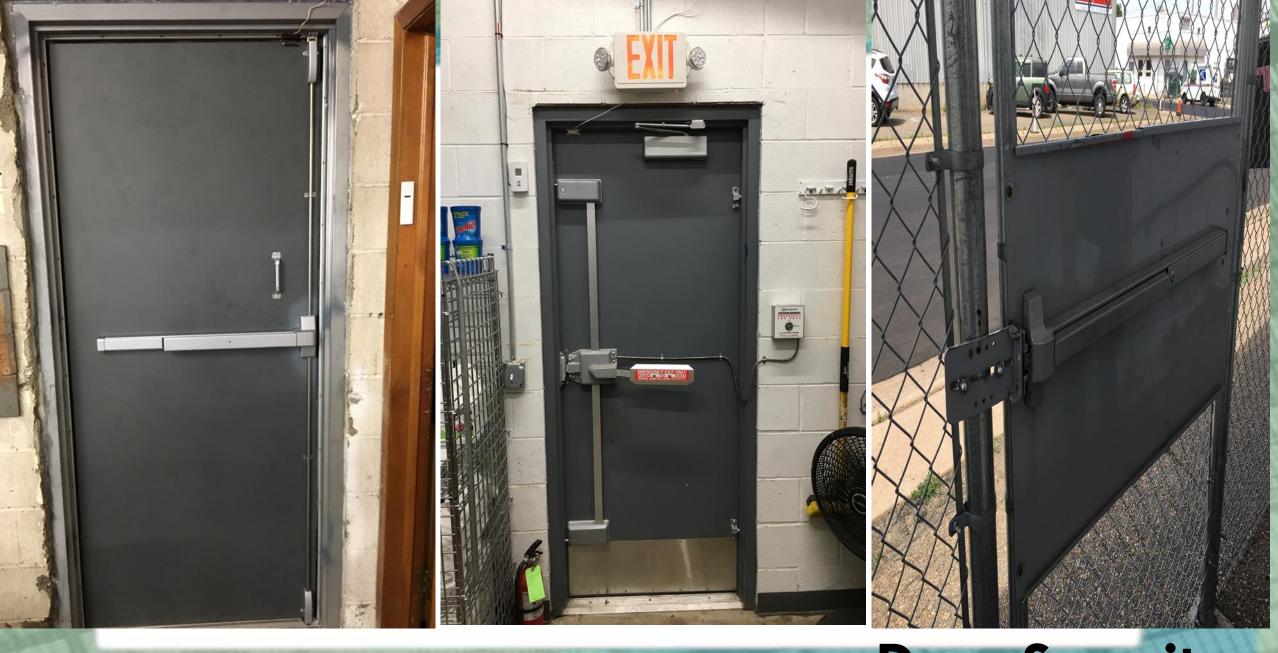
Secure Transporter

- Classified as a Business
- Possible inside storage of vehicles
- Security concerns
- UL 1363/1363A
- Products may be stored up to 48 hours
- General inspection practices

PROVISIONING CENTER

Provisioning Centers

- Classified as a Mercantile
 - providing products to card holders and authorized caregivers
- Separation required if attached to a processor or grow
- 2nd floor separation
- Security/roll-up doors/gates/fenced in area/vaults
- Blocked egress
- Large product and cash present
- Situational awareness
- UL 1363/1363A
- General inspection practices



Door Security

Inspection

- Security
 - Where permitted in *Chapters 11 through 43 of NFPA 101*, horizontal-sliding or vertical-rolling security grilles or door assemblies that are part of the required means of egress shall be permitted with the provisions required by the Code. NFPA 1, 14.5.1.1(3).
 - **NOTE**: Industrial occupancies are not permitted to have security grilles, gates or roll-up security doors <u>on any required</u> <u>means of egress</u>.







RESOURCES

www.Michigan.gov/bfs - Bureau of Fire Services (BFS)

<u>www.Michigan.gov/bmr</u> - Bureau of Marijuana Regulation (BMR)

www.nfpa.org – NFPA publications

https://aca3.accela.com/LARA/Default.aspx - ACCELA

QUESTIONS?

A Copy of this Presentation will be available as a PDF upon request