Municipality of Anchorage
Marijuana Retail Store
Plan Review Guide

TABLE OF CONTENTS

PREFACE

The Marijuana Establishment Plan Review Manual was developed to assist the regulatory authority and architects, marijuana retail facility consultants and other interested professionals in the plan review process when proposing to build or remodel a retail marijuana establishment. However, it does not establish regulatory requirements and the recommendations contained herein are not intended to supplant, or otherwise serve as, the rules and regulations applicable to marijuana retail facilities in a given Federal, State, local, or tribal jurisdiction.

- This Manual is intended as a training tool for individuals responsible for conducting plan reviews.
- Is intended to be consistent with the recommendations of the FDA as contained in the FDA 2013 Food Code as may be pertinent to edible marijuana products. The FDA Food Code contains requirements for safeguarding public health and ensuring food is unadulterated and honestly presented when offered to the consumer. Terminology with respect to the word "shall" is based on the recommendations within the FDA Food Code.
- Was developed by the Conference for Food Protection's 2014-2016 Plan Review Committee to update the 2008 Plan Review for Food Establishments Document.

INTRODUCTION

The plan review process presents a unique opportunity to discuss and prepare a proper foundation that will enable a marijuana retail establishment to be successful, remain in compliance over time, and protect public health. Quality plan review, process improvement and the dedication to providing excellent customer service are high priorities for this Manual. Plan review assists in providing greater uniformity, technical assistance, and is essential for customer success and avoiding future establishment problems. Poor design, repair, and maintenance will compromise the functionality of the physical facilities and its operations. Plan review is intended to ensure physical facilities and proposed operational processes are properly designed and sanitary practices implemented in order to serve their intended purposes.

The plan review process provides the regulatory authority with the opportunity to complete an effective evaluation of a marijuana retail establishment's ability to ensure the following:

- Minimum standards are met for the protection of environmental health and safety of the public.
- Prevention of environmental health related illness and promote public health.
- Minimum standards are met for the sanitary design, facility layout, operational and product flow, construction, operation and maintenance of regulated establishments, premises, and surroundings.
- Retail marijuana and related food code violations for edibles are eliminated prior to construction or implementation.
- Conditions are corrected and prevented that may adversely affect persons utilizing

regulated establishments.
- Technical assistance is provided to industry to establish organized and efficient operations.
- Meets consumer expectations for the safe operation of a permitted retail marijuana establishment.

No establishment is to be constructed and no major alteration or addition is to be made until detailed plans and specifications for such construction, alteration or addition have been submitted to and approved by the regulatory authority.

The regulatory authority may impose specific requirements and provisions in addition to the requirements contained in codes that are authorized by law that are necessary to protect against public health hazards or nuisances. The regulatory authority shall document the conditions that necessitate the imposition of additional requirements and the underlying public health rationale.

The function of plan review, construction inspections, pre-operational inspections, and the permit approval process is to provide a comprehensive overview of proposed operations with an emphasis on contents of plans, equipment specifications, architectural design, and operational procedures. The end goal of the plan review process is to prevent foodborne illness resulting from poor sanitary facility design and/or floor plans, and, where applicable, when the process is based on marijuana, marijuana concentrate and other edible preparation, and product flow.

DEFINITIONS

The following definitions as used in this document are intended to assist in the understanding of this manual.

"Easily Disassembled Equipment" means EQUIPMENT that is accessible for cleaning and inspection by:

(1) Disassembling without the use of tools, or

(2) Disassembling with the use of handheld tools commonly available to maintenance and cleaning personnel such as screwdrivers, pliers, open-end wrenches, and Allen wrenches.

"Flashing" means an impervious sheet of material placed in construction to prevent water penetration or direct flow of water.

"Service Sink" means a curbed cleaning facility or janitorial sink used for the disposal of mop water and similar liquid wastes.

CONTENTS AND FORMAT OF PLANS AND SPECIFICATIONS

Proper plan review submittal with equipment listed and located on floor plans as well as specifications for finish and plumbing schedules will highlight potential problems on paper while allowing for modifications to be made before costly purchases, installations, and

construction are performed.

All facilities, systems, and processes, will be evaluated to determine minimum operational requirements. Refer to Appendix A for a copy of the Plan Review Application.

The following is a summary of what should be included in the plan submittal:

- Legible plans at minimum of 11 x 14 inches in size drawn to scale (scale - ¼ inch = 1 foot)
- Location of all food equipment (refrigerators or freezers). Each piece of equipment must be clearly labeled, marked, or identified. Provide equipment schedule that identifies the make and model numbers and listing of equipment that is certified or classified for sanitation by an ANSI accredited certification program (when applicable). Elevation drawings may be requested by the regulatory authority.
- Location of all required sinks: handwashing sinks, warewashing sinks, and utility sink.
- Auxiliary areas such as storage rooms, garbage rooms, toilets, basements and/or cellars used for storage.
- Entrances, exits, loading/unloading areas and delivery docks.
- Complete finish schedules for each room including floors, walls, ceilings and coved juncture bases.
- Plumbing schedule including location of floor drains, floor sinks, water supply lines, overhead waste-water lines, hot water generating equipment with capacity and recovery rate, backflow prevention, and wastewater line connections.
- Location of lighting fixtures.
- Source of water and method of sewage disposal.
- A color coded flow chart may be requested by the regulatory authority demonstrating flow patterns for:
  - Edible items (receiving, storage, preparation, service);
  - Utensils (clean, soiled, cleaning, storage); and
  - Refuse (service area, holding, storage, and disposal).
- Storage of Employee Personal Items.
- Ventilation.

Marijuana Product Flow

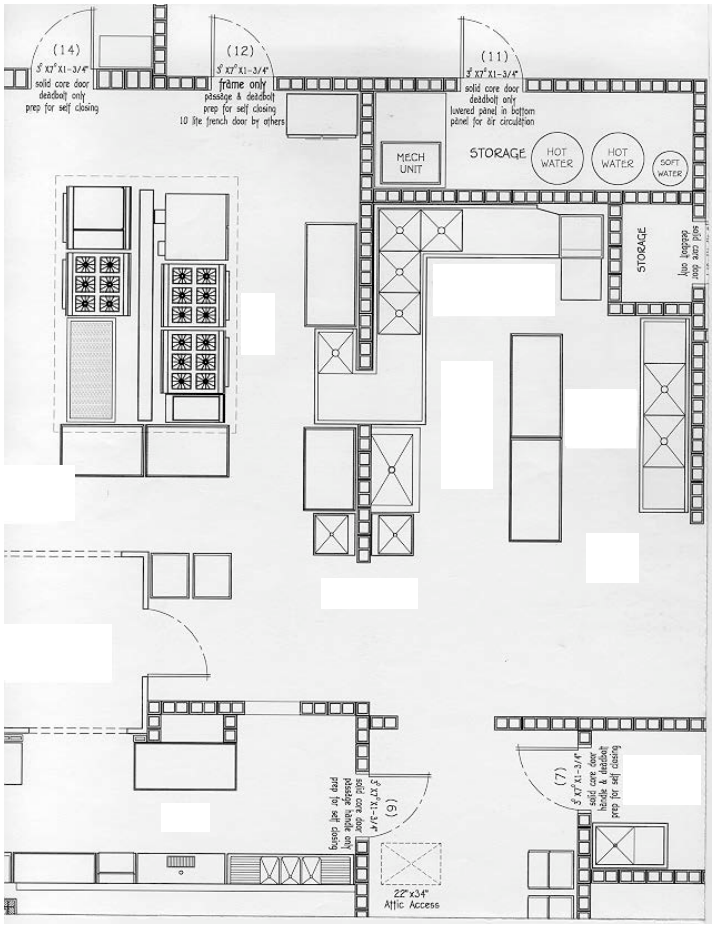
The flow of edibles through the retail marijuana establishment are integral parts of the plan review process. The listing of all of the edible and beverage items to be offered at marijuana retail establishment must be submitted as part of the plan review application to the regulatory authority. (It is understood that this information is limited in calendar year 2016).

As with the inspection process, the plan review process should focus on the products and its flow through receipt, storage, preparation and service. It is imperative to have knowledge of this information so that a proper assessment of the physical facilities can be made.

Special attention should be given to the review of consumables which involve:

- Time/Temperature Control for Safety(TCS) products
- Warewashing of containers for sniffing loose marijuana

The process approach can be described as dividing the flow in a marijuana retail establishment into broad categories, analyzing the risks, and placing manager controls on each grouping of processes. These groupings will also impact the facility design; product flow; and the numbers, types, function and placement of equipment.



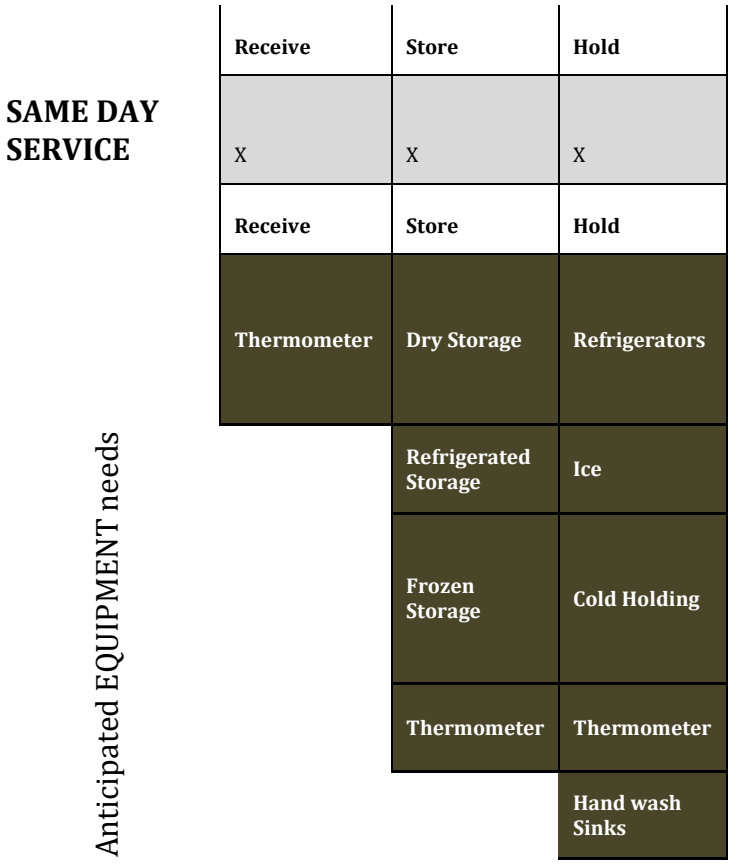
The drawing above is an example of a fixture plan submitted for plan review. It is a handy tool when following the product process as described by the marijuana establishment operator or their representative.

This example is a restaurant, but it shows clear storage, receiving, etc.

Layout, flow and edibles should be major considerations to help facilitate an operator's Active Managerial Control (AMC) of the risk factors for foodborne illness. Strategic layout and placing of facilities and equipment will separate different product preparation processes, a major step towards preventing contamination of products and employees that may result from poor personal hygiene, contaminated equipment, and improper holding temperatures. Adequate and convenient storage will also enhance operations.

The products for a marijuana retail establishment dictates the space and equipment requirements for the safe holding and service of various food items. The products will determine if the proposed receiving and delivery areas, storage area, preparation and handling areas are available and adequate to handle the types and volumes of products being sold.

With a proper understanding of the products and flow, the plans for retail marijuana establishments can be reviewed to help assure that the edible or consumable items being considered can be protected during all aspects of the retail marijuana operation.



PREVENTIVE TOOLS FOR THE RETAIL MARIJUANA ESTABLISHMENT

Active Managerial Control (AMC)

To effectively reduce the occurrence of foodborne illness risk factors, operators of retail marijuana establishments must focus their efforts on achieving active managerial control. The term "active managerial control" is used to describe industry's responsibility for developing and implementing marijuana and edible safety management systems to prevent, eliminate, or reduce the occurrence of foodborne illness risk factors.

Elements of an effective marijuana safety management system may include the following:

- Certified food handlers who have shown a proficiency in required information by passing a test that is part of an accredited program
- Purchase specifications and storage of the item, i.e. refrigerated or frozen.

FACILITIES TO MAINTAIN PRODUCT TEMPERATURE

Refrigerators and freezers are required to maintain TCS FOOD at or below 41°F and 0°F (frozen) respectively. It is recommended that refrigerators be maintained between 36°F and 38°F. All refrigeration units must have numerically scaled indicating thermometers accurate to ±3°F. Sufficient refrigeration and freezers shall be provided to support the intended consumables. Consideration must be taken with the placement and installation of refrigeration units to allow for adequate ventilation. Air circulation within refrigeration and freezer units should not be obstructed and should allow for an even and consistent flow of cold air throughout the units

Refrigeration and freezer storage involves five major areas:

1. Storage for short-term holding of perishable and TCS consumables.
2. Long-term storage.
3. Display storage for customer service.

Refrigeration units, unless designed for such use, should not be located directly adjacent to high heat equipment which may adversely impact the cooling system's operation.

A. Refrigeration Storage Calculations

The amount and location of refrigeration and freezer equipment should complement the product flow of the operation from receiving, storage, and to the point of service.

To plan refrigeration storage, the following items should be considered: type of edibles, number of deliveries per week, and adequate ventilation in the areas where the refrigeration systems will be located. When assessing the refrigeration needs, shelving space within the refrigeration and freezer units should be designed to prevent the cross-contamination of edibles. Thermometers must be conspicuously located in all units. Thermometer sensing elements should be located near the door

B. Walk-in Cooler/Freezer Units

Walk-in units should meet an ANSI accredited certification or equivalent, or deemed acceptable by the regulatory authority. A walk-in beverage or beer cooler is not recommended for edibles storage. Approved flooring and integral cove bases need to be provided. Quarry tile, ceramic, and galvanized flooring are not recommended flooring materials for walk-in units. All gaps, cracks, penetrations, seams, and plug holes shall be sealed smooth and flush with the surface material.

Walk-in units should be installed when there is a need for long-term storage of perishable and/or TCS edibles. These coolers should be located near delivery or receiving areas. Easily cleanable curtain strips are recommended at walk-in doors. This not only helps in maintaining the temperature of the walk-in but also leads to an energy cost savings.
If the walk-in floors will be water-flushed for cleaning or receive the discharge of liquid waste or excessive melt water, the floors should be sloped to drain. If the structure of the

walk-in is integral with the building, properly installed floor drains may be installed inside the unit.

Each walk-in unit shall be equipped with lighting that provides 10 foot candles of light throughout the unit when it is full of product. Lights must be properly shielded or shatter resistant.

Condensate lines from walk-in units shall drain to approved floor drains or alternative method approved by the regulatory authority. Without prior approval floor sinks or floor drain sinks shall not be installed in walk-in units. All walk-in units shall be properly flashed off and sealed to the ceiling and side walls.

C. Reach-in Refrigerators

These units are for short-term storage of perishable and TCS edibles. These units should be considered to meet the daily storage demands of the marijuana operation.

D. Reach-in Freezers

Freezers are for long-term storage. These units should be located near delivery and dry storage areas.

E. Display Storage Refrigerators

These units are designed to display TCS consumables under refrigeration. Examples of these units are deli display, fresh fish, and meat and poultry cases seen in food establishments.

F. Customer Service Display Units/ Cold Buffet Units

These units are designed for holding consumables under refrigeration for access. They are designed for short-term display and are not designed for the cooling of consumables.

EQUIPMENT AND INSTALLATION

All equipment in a marijuana retail establishment must comply with the design and construction standards contained in Chapter 4 of the FDA Food Code. Food equipment that is certified or classified for sanitation by an ANSI accredited program is deemed to comply with Parts 4-1 and 4-2 of the FDA Food Code (see links below).

http://www.fda.gov/downloads/Food/GuidanceRegulation/RetailFoodProtection/FoodCode/UCM374510.pdf

http://www.fda.gov/downloads/Food/GuidanceRegulation/RetailFoodProtection/FoodCode/UCM374510.pdf

Equipment shall not be located under exposed or unprotected sewer lines, open stairwells or other sources of contamination.

The following equipment installation recommendations will help ensure proper spacing and sealing allowing for adequate and easy cleaning.

A. Floor-Mounted Equipment

Equipment should be mounted on approved lockable casters, gliders or wheels to facilitate easy moving, cleaning, and flexibility of operation whenever possible. Moveable equipment requiring utility services such as gas or electrical connections should be provided with easily accessible quick-disconnects or the utility service lines should be flexible and of sufficient length to permit moving the equipment for cleaning. If a flexible utility line is used, a safety chain that is shorter than the utility line must be installed. Check with local fire safety and building codes to ensure that such installations are acceptable.

Floor-mounted equipment that is not mounted on wheels or casters with the above utility connections should be:

1. Permanently sealed to the floor around the entire perimeter of the equipment. The sealing compound should be pliable and non-shrinking. It should retain its elasticity and provide a water- and vermin-tight joint; or
2. Installed on a solid, smooth, non-absorbent masonry base. Masonry bases and curbs should have a minimum height of 2" and be coved at the junction of the platform and the floor with at least a 1/4" radius. The equipment should overhang the base by at least 1" but not more than 4". Spaces between the masonry base and the equipment must be sealed as above; or
3. Elevated on legs to provide at least a 6" clearance between the floor and equipment. The legs shall contain no hollow open ends.
4. For equipment not readily moveable by one person, spacing between and behind equipment must be sufficient to permit cleaning under and around the unit. Equipment shall be spaced to allow access for cleaning along the sides, behind and above. At least 6" of clear, unobstructed space under each piece of equipment must be provided or equipment must be sealed to the floor.
5. If equipment is against a wall and is not movable, the equipment must be joined to and/or sealed to the wall in a manner to prevent liquid waste, dust and debris from collecting between the wall and the equipment.
6. When equipment is joined together, or spreader plates are used between equipment, the resultant joint must be sealed to prevent liquid waste, dust and debris from collecting between the equipment.

Unobstructed and functional aisle and working spaces must be provided. A minimum width of 36" is required by fire and building codes.

All utility and service lines and openings through the floor and walls must be adequately sealed. Penetrations through walls and floors must be minimized. Exposed vertical and

horizontal pipes and lines must be kept to a minimum. The installation of exposed horizontal utility lines and pipes on the floor is prohibited. Any insulation materials used on utility pipes or lines in the dishwashing areas must be smooth, non-absorbent, and easy to clean. Electrical units which are installed in areas subject to splash from necessary cleaning operations should be water-tight and washable.

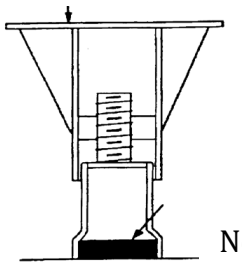
B. Other

Equipment that is open underneath, such as tables that are not moveable, should be spaced to allow for ease of cleaning or should be sealed to the wall.

Equipment that is exposed to splash, spillage, or other soiling or that require frequent cleaning shall be constructed of corrosion-resistant, non-absorbent, and smooth material.

Legs of all equipment should not have hollow, open ends.

Equipment sealed to floor

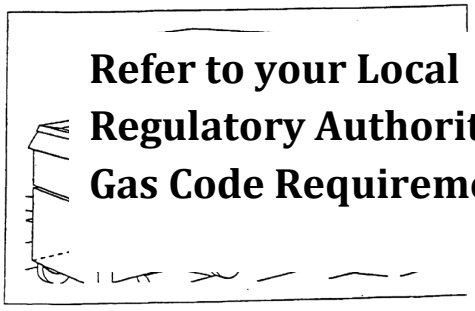


No hollow open ends

Elevate equipment for effective cleaning.

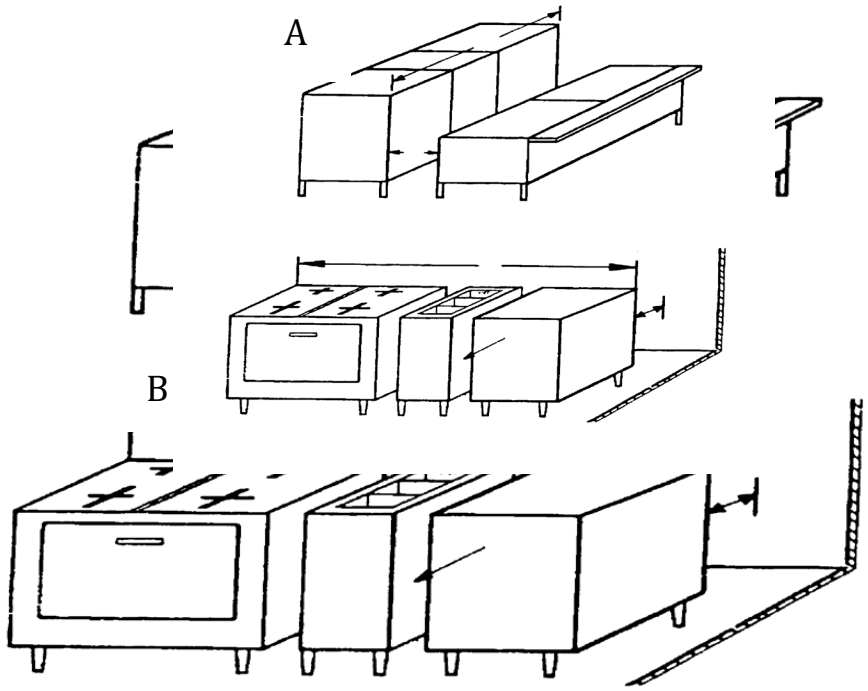
Sanitary Leg Example

Mobile equipment mounted on Castors



Refer to your Local Regulatory Authority for Gas Code Requirements

Equipment Spacing



Recommended EQUIPMENT spacing; provided access is available from both ends:

EQUIPMENT Length (A)	Space From Walls and Adjacent EQUIPMENT (B)
4' or less	6"
4' - 8'	12"
8' or more	18

WAREWASHING FACILITIES

The minimum requirement for warewashing in a retail marijuana establishment is a three-compartment sink. A mechanical warewashing machine may be installed in addition to the three-compartment sink.

A. Manual Ware washing

For manual warewashing, a stainless steel sink with no fewer than three compartments must be provided, with the exception that a two-compartment sink may be allowed by the regulatory authority under certain conditions.

- The sink compartments shall be large enough to completely immerse the largest pot, pan or piece of equipment to be used in the establishment that will not be cleaned in-place.
- Each compartment shall be supplied with adequate hot and cold potable running water, temperature of the wash solution shall be maintained at not less than 110°F, or the temperature specified on the cleaning agent manufacturer's label instructions.
- Drain boards, utensil racks or tables large enough to accommodate clean and soiled utensils shall be provided. The drain boards shall be self-draining.
- If hot water is used to sanitize equipment and utensils, the means for heating the water to 171°F in the 3rd compartment must be identified. The racks for the immersion of equipment and utensils must be specified.

B. Mechanical Ware washing

Warewashing machines shall be installed in accordance with the manufacturer's recommendations and applicable code requirements. If used, the hot water booster for warewashing machines must be identified during plan review.

Adequate facilities shall be provided to air dry washed equipment and utensils. Drain boards, utensil racks or tables must be large enough to allow proper and sufficient air drying of equipment and utensils.

Storage facilities shall be provided to store cleaned and sanitized utensils and equipment at least 6" above the floor; protected from splash, dust, overhead plumbing or other contamination. The plan must specify the location and facilities used for storing all utensils and equipment.

PLUMBING

A. Water Supply

The primary concerns relative to the water supply in a marijuana retail establishment are:

1. Ensure the facility is supplied with a safe and adequate water supply, including adequate supply of hot water; and
2. Verify that the water can remain safe while it is in the facility.

Safe Source: Start at the water source. Determine if the water is potable or non-potable. The availability of an approved public water supply must be verified. Any use of a non-public water source (well water) shall comply with local, state, and/or federal laws, and construction and testing standards.

Sufficient potable water: Potable water shall be provided from a source constructed and operated according to law that meets the peak water demands of the marijuana retail

establishment.

A. Hot Water Supply:

The hot water supply shall be sufficient to satisfy peak hot water demands of the marijuana retail establishment. Hot water for hand washing and most marijuana retail establishment uses shall be at least 100°F. Hot water for mechanical warewashing must be boosted up to 150°F-165°F for washing and 165°F-180°F for sanitizing or according to the manufacturer's data plate on the machine. The temperature of the wash solution for spray-type ware washers that use chemicals to sanitize may not be less than 120°F.
The temperature of the wash solution for manual warewashing must be maintained to not be less than 110°F. The water temperature for manual hot water sanitization must be at least 171°F.

Tank less water heaters shall be installed and used in accordance with the manufacturer's recommendations.

For guidance on calculating Hot Water Requirements see Appendix C – Model Calculations

B. Sewage Disposal

All sewage including liquid waste shall be disposed into a public sewage system or an individual sewage disposal system constructed and operated according to law. Where individual sewage disposal systems are utilized, the location shall be noted on the plans and certification of compliance with state and local regulations shall be provided.

C. Backflow Protection

Plumbing shall be sized and installed according to applicable codes. There shall be no cross connections between the potable water supply and any non-potable system or a system of unknown quality. Where non-potable water systems are permitted for purposes such as air conditioning and fire protection, the non-potable water must not contact directly or indirectly: marijuana products, potable water or equipment that contacts marijuana product or utensils. The piping of any non-potable water system shall be durably identified so that it is readily distinguishable from piping that carries potable water.

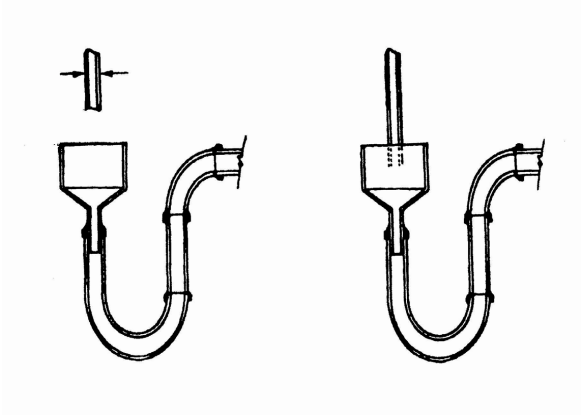
A connection to a sewer line may be direct or indirect. A direct connection may not exist between the sewerage system and any drains originating from equipment in which marijuana products, portable equipment, or utensils are placed, except if otherwise required by law. When a warewashing machine is located within 5 feet of a trapped floor drain, the dishwasher waste outlet may be connected directly on the inlet side of a properly vented floor drain trap.

An **indirect connection** may be one of two types, air gap or air break:

1. For a potable water supply, an **air gap** means the unobstructed, vertical air space that separates a potable system from a non-potable system.

2. An **air break** is a waste line from a fixture that discharges used water or liquid waste to a drain where the waist line terminates below flood level.

AIR GAP AIR BREAK



A connection to a sewer line may be direct or indirect. A direct connection may not exist between the sewage system and any drains originating from equipment in which marijuana products, portable equipment, or utensils are placed, except if otherwise required by law. When a warewashing machine is located within 5 feet of a trapped floor drain, the dishwasher waste outlet may be connected directly on the inlet side of a properly vented floor drain.

HYGIENE FACILITIES

A. Handwashing

Handwashing is a critical factor to prevent contamination of products. Proper handwashing reduces the amount of pathogens that can be transmitted via cross contamination from hands to marijuana products. It is imperative to have adequate numbers and conveniently placed handwashing sinks to ensure employees are washing hands. It is important that handwashing be done only at properly equipped handwashing sinks to help ensure that employees effectively clean their hands and minimize contamination of marijuana and marijuana contact surfaces.

A handwashing sink, hand drying device or disposable towels, hand cleanser and waste receptacle shall be located for convenient use by employees who work in marijuana retail areas.

Nothing must block the approach to a handwashing sink.

Handwashing sinks must also be located in or immediately adjacent to toilet rooms.

Handwashing sinks shall be of sufficient number and conveniently located for use by all employees in marijuana retail areas.

Handwashing sinks shall be easily accessible and may not be used for purposes other than handwashing. Sinks used for washing equipment or utensils, or service (mop) sinks shall not be used for handwashing.

Each handwashing sink shall be provided with hot and cold water tempered by means of a mixing valve or a combination faucet to provide water at a temperature of at least 100˚F. If used, self-closing, slow-closing or metering faucets shall be designed to provide a flow of water for at least 15 seconds without the need to reactivate the faucet.

Splash from use of a handwashing sink may not contaminate marijuana, marijuana-contact surfaces, clean equipment or utensils. A washable baffle or barrier may be needed if the handwashing sink is located next to unpackaged marijuana, utensil or equipment storage, and if the space between the handwashing sink and unpackaged marijuana, utensil or equipment does not provide adequate protection.

Similarly, the location of soap and paper towel dispensers at handwashing sinks must be reviewed during plan review so that their use does not contaminate unpackaged marijuana, utensils or equipment. In addition, the distance that employees would have to reach the faucet handles, soap and paper towels must be reviewed during plan review to assure that they will have proper access to the at handwashing sinks and will not have to reach across dirty surfaces while washing their hands.

B. Toilet Rooms

Properly functioning toilet facilities must be accessible to employees at all times.

If required by federal, state, local or tribal laws and regulations, toilet facilities must be made available to the customers. If the public toilet facilities are used by employees, separate toilet facilities may not have to be installed for the employees. Toilet facilities must be made accessible in accordance with the Americans with Disabilities Act (ADA) of 1990.

The floors, walls, and ceiling in toilet rooms shall be smooth and easily cleanable. The walls around toilets, urinals, toilet paper dispensers, soap dispensers, and paper towel dispensers should be water resistant and durable for frequent cleaning.

The minimum requirements for toilet facilities shall include:

- **Toilet:** At least one toilet and not fewer than the number of toilets required by law shall be provided. If authorized by law, urinals may be substituted for additional toilets in men's toilet rooms.
- **Handwashing sinks:** Each at handwashing sink shall be provided with hot and cold water tempered by means of a mixing valve or a combination faucet to provide water at a temperature of at least 100˚F. If used, self-closing, slow-closing or metering faucets shall be designed to provide a flow of water for at least 15 seconds without the need to reactivate the faucet.
- **Handwashing cleanser:** Each at handwashing sink or group of two adjacent at handwashing sinks shall be provided with hand cleaning liquid, powder, foam or bar soap. A dispenser shall be provided for handwashing cleanser provided in liquid or powder form.
- **Hand drying facility:** Each at handwashing sink or group of adjacent at handwashing sinks shall be provided with individual, disposable towels; a continuous towel system that supplies the user with a clean towel; heated-air hand drying device; or hand drying device with air-knife, high velocity air at ambient temperatures.
- **Toilet paper:** A supply of toilet paper shall be provided in a dispenser at each toilet.
- **Waste receptacle:** If disposable towels are used, a waste receptacle shall be located at each sink or group of sinks. At least one covered waste receptacle shall be provided in toilet rooms used by females.
- **Ventilation:** Toilet rooms must be vented to the outside. Mechanical Ventilation shall be installed in toilet rooms according to law. If allowed by law, operable screened windows may be used in lieu of mechanical ventilation devices.
- **Toilet room doors:** Toilet room doors shall be tight-fitting and self-closing.
- **Lighting:** At least 215 lux (20 foot candles) shall be provided in toilet rooms.

STORAGE

A. Dry Storage-

The dry storage space needed depends on the menu, number of meals served between deliveries, frequency of deliveries, and the amount and type of single-service articles to be stored. The location of dry storage should be adjacent to the marijuana retail area and convenient to receiving. Adequate ventilation should be provided. Marijuana products should not be stored under exposed sewer lines. Similarly, a cabinet that is used for the storage of marijuana products, shall not be located under exposed or unprotected sewer lines, open stairwells or other sources of contamination. Stationary shelving needs to have a minimum 6" floor clearance.

Shelving, dollies, racks, pallets and skids shall be corrosion-resistant, non- absorbent and smooth. Pallets, racks and skids used for bulk cased or overwrapped items shall be designed to be moved by hand or by conveniently located hand trucks or forklifts. Shelving, dollies, racks, pallets and skids should be spaced away from walls to allow for cleaning and pest

monitoring/inspection.

Approved marijuana containers with tight-fitting covers should be used for storing bulk marijuana such as loose buds for sniffing and similar.

B. Poisonous or Toxic Materials Storage

Designate an area for poisonous or toxic material storage that is away from marijuana products and clean utensils. These include detergents, sanitizers, related cleaning or drying agents and caustics, acids, polishes and other chemicals. Install cabinets, cages, or physically separate shelves for storing chemicals.

C. Clean Equipment, Utensil and Linen Storage

Designate areas for clean utensils, glassware, etc. Store them at least 6-inches off the floor in a clean, dry location where they will be protected from dust and splash.

LIGHTING

A. Intensity

The light intensity shall be at least 108 lux (10 foot candles) at a distance of 75 cm (30 inches) above the floor, in walk-in refrigeration units and marijuana product storage areas and rooms during periods of cleaning.

The light intensity shall be at least 215 lux (20 foot candles) at a surface marijuana products are provided for consumers to view or where fresh product or packaged products are sold or offered for consumption; inside equipment such as reach-in and under-counter refrigerators; at a distance of 75 cm (30 inches) above the floor in areas used for handwashing, warewashing, and utensil storage, and in toilet rooms.

The light intensity shall be at least 540 lux (50 foot candles) at a surface where a marijuana employee is working with marijuana products or working with utensils or equipment where employee safety is a factor.

B. Protective Light Shielding

Shielding such as plastic shields, plastic sleeves with end caps, shatterproof bulbs and/or other approved devices shall be provided for all artificial lighting fixtures located in areas where there is exposed marijuana; clean equipment, utensils, and linens.

Heat lamps shall be protected against breakage by a shield surrounding and extending beyond the bulb, leaving only the face of the bulb exposed.

FINISHES

A. Floors

Example floor materials are as follows:

- Quarry tile, ceramic tile
- Sealed concrete
- Seamless poured epoxy minimum 3/16-inch thick.
- Commercial-grade sheet vinyl **(no felt backing)**
- Commercial-grade vinyl composition tile (VCT)

Pre-approval from the REGULATORY AUTHORITY should be obtained prior to use of carpet and/or wood.

B. Walls

Example wall materials are as follows:

- Stainless steel
- Ceramic tile
- Aluminum
- Fiber-glassed reinforced panels (FRP)
- SEALED Concrete blocks or bricks
- Epoxy or glazed drywall

C. Ceilings

Example ceiling materials may include wall finish material listed above along with the following:

- Easily cleanable, non-absorbent ceiling tiles
- Painted drywall

D. Coving

Coving is the floor material found at the base of walls (wall/floor junctures) and is required in most areas of the retail marijuana, such as:
Storage and handling areas

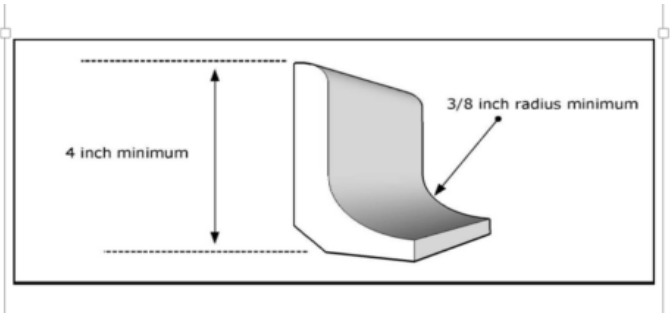
- Utensil washing and storage areas
- Interior waste disposal areas (garbage, refuse)
- Restrooms
- Hand washing areas
- Janitorial facilities
- Walk-in refrigerator and freezer units
- Customer self-serve areas where prepackaged marijuana products are sold or

dispensed

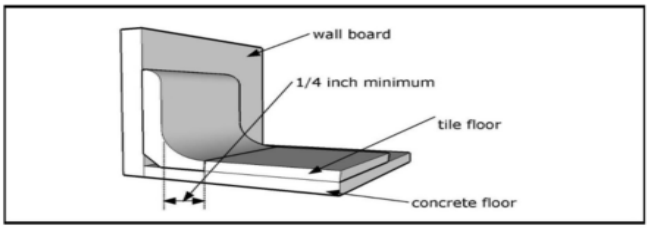
- Employee change and storage areas

Coved flooring material should extend integrally up the walls. Integral coving is not required in areas used exclusively for point-of-sale or the storage of utensils or marijuana products contained in the original **un-opened** container

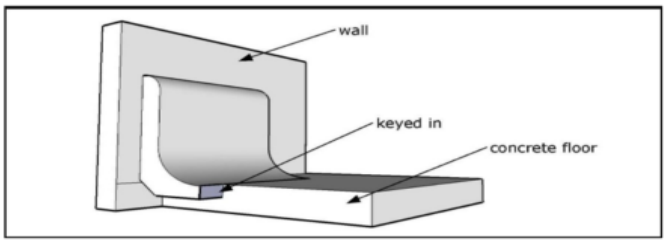
Floor Installation Diagrams



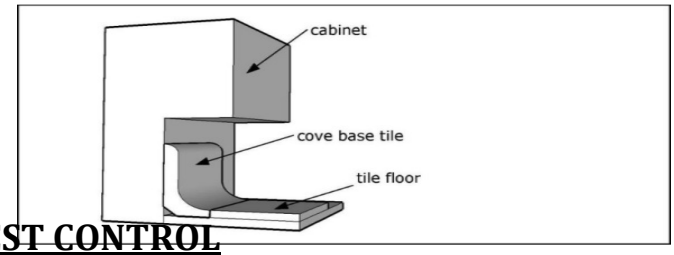
Example of quarry tile cove base.



Example of quarry tile cove base flush with floor.



Example of quarry tile cove base integral to concrete floor.



Example cove base; cabinet toe-kick

PEST CONTROL

All openings to the outside shall be effectively protected against the entrance of insects and rodents. All roller doors, sliding or bi-fold doors, or similar movable wall systems that are not self- closing and create a continuous opening to the exterior must have an effective means of pest control.

Some examples of effective barriers include:

- Solid, tight fitting, self-closing doors.
- Fixed or self-closing screens of #16 mesh or finer.
- Effective air curtains.

Example Air Curtain

A. Building

All masonry or cement foundations must be rodent proof. Seal all openings into the foundation and exterior walls, including openings & penetrations around wall and ceiling penetrations.

Cover all building vents with a minimum #16 mesh screen. Effectively seal all air ducts, skylight, transoms, and other openings to the outside.

B. Windows

Windows that open to the outside must be properly protected with minimum #16 mesh screen, with the exception of service windows.

C. Delivery, Customer, and Toilet Room Doors

Exterior doors: All outside doors shall be self-closing and tight fitting. Install a door sweep and weather stripping to prevent the entrance of insects and rodents. *Note: Daylight shall not be visible around the perimeter of the door.*

Garage Doors, Roller Doors, and Loading Docks: Garage and roller type delivery doors must be protected against pests. Loading docks shall have properly installed tight fitting dock seals at all loading bays.

Toilet Room (Restroom) doors: All toilet rooms located in a marijuana retail establishment shall be provided with tight fitting, self-closing doors.

D. Insect Control Devices, Design and Installation

Insect control devices that are used to electrocute or stun flying insects shall be designed to retain the insect within the device. These devices must not be located above marijuana display, shelving, or storage areas and installed to prevent the contamination of exposed marijuana, clean equipment, utensils, and linens, from insect fragments

Appendix A - MODEL PLAN REVIEW APPLICATION FOR FOOD ESTABLISHMENTS

MUNICIPALITY OF ANCHORAGE

DHHS
ANCHORAGE DEPARTMENT OF HEALTH & HUMAN SERVICES

TYPE OF APPLICATION: □ New □ Remodel □ Conversion	**Projected Start Date:**_____ **Projected Completion Date:** _____
TYPE OF FOOD OPERATION: □ Retail Marijuana Store	

MARIJUANA RETAIL ESTABLISHMENT INFORMATION

Name of Establishment:			
Establishment Address:	**City:**	**State:**	**ZIP:**

OWNERSHIP INFORMATION

Name of Owner:			
Address:	**City:**	**State:**	**ZIP:**
Email:	**Phone Number:**		

ARCHITECT/ENGINEER INFORMATION

Applicant Name:	**Contact Person:**		
Applicant Mailing Address:	**City:**	**State:**	**ZIP:**
Email:	**Phone Number:**		

FOOD OPERATION INFORMATION

Hours/Days of Operation ☐ **Sun:**_____ ☐ **Mon:**_____ ☐ **Tues:**_____ ☐ **Wed:**_____ ☐ **Thurs:**_____ ☐ **Fri:**_____ ☐ **Sat:**_____	Square Feet of Facility: _____	**Type of Service (check all that apply)** ☐ Off-site consumption ☐ Single-use utensils ☐ Multi-use utensils ☐ Other:_____	**Employees** Max per shift:_____

Designated Point of Contact for questions or additional needed information:
Name:
Phone Number:

The following documents must be submitted along with this application:
Proposed list of marijuana consumables, concentrates and beverages to be offered

- Plans must be clearly drawn to scale (minimum 11 x 14 inches in size) and include these items below:
- The floor plan must identify: retail sales area, restrooms, office, employee change room, storage, warewashing, janitorial and trash area. Include location of any outside equipment or facilities (dumpsters, well, septic system-if applicable).
- Provide equipment layout and specifications, clearly numbered and cross-keyed with the equipment list.

Elevation drawings may be requested by the Regulatory Authority.

- Identify handwashing, warewashing and/or three compartment sinks.
- Provide plumbing layout showing the sewer lines, cleanouts, floor drains, floor sinks, vents, hot and cold water lines, and direction of flow to sanitary sewer.
- Provide exhaust ventilation layout including location of hood and make-up air returns and ducts, if applicable.
- Lighting plan, indicating the exact foot candles for each area as required.
- Finish schedule showing floor, coved base, wall and ceilings for each area shown on the plans.

Note: A color coded flow chart may be requested by the Regulatory Authority demonstrating flow patterns for: receiving, storage, glassware (clean, soiled, cleaning, storage); trash (service area, holding, storage, disposal).

Signature:	**Date:**
Print Name:	**Title:**

Additional Required Documents:

- Copy of valid business license
- Copy of completed food handlers card
- Design plans for the facility
- All specification sheets:
  - 3 Compartment Sink
  - Hand washing sink
  - Refrigerator(s) – commercial grade only
  - Water heater
  - Freezer, etc…

Office Use Only			
Fees:	**Payment Type:**		**Receipt #:**
Marijuana Retail Stores		**Date Paid:**_____	Facility ID:_____
0-1000 sq. ft:	$220.00	PE:_____	
1001-4000 sq ft.	$330.00	Plan Review Project #_____	
4001+ sq ft.	$550.00	Plan Review:_____	

Revised September 9, 2016

Shelley A. Griffith, MPH, RPS

Appendix B – REGULATORY COMPIANCE REVIEW LIST MARIJUANA PRODUCT PROCEDURES

MARIJUANA PRODUCT DELIVERY

1. How often will marijuana products and supplies be delivered? □ Daily □ Weekly □ Other: _____

MARIJUANA PRODUCT STORAGE* - Identify amount of space (in cubic feet) allocated for:

Dry Storage _____; Refrigerated Storage (41°F) _____; Frozen Storage _____;

Utensil Storage _____

* Identify on plans where storage will be located.

INSTRUCTIONS: Describe the following with as much detail as possible. Indicate Not Applicable (NA) as appropriate.

FINISH SCHEDULE

INSTRUCTIONS: Indicate which materials (quarry tile, stainless steel, fiberglass reinforced panels (FRP), ceramic tile, 4"

ROOM/AREA	FLOOR	FLOOR/WALL JUNCTURE	WALLS	CEILING	MEETS CRITERIA (RA to circle and Initial)
Dry pre-packaged product storage					YES/NO
Warewashing Area					YES/NO
Walk-in Refrigerators Freezers					YES/NO
Service Sink					YES/NO
Refuse Area					YES/NO
Toilet Rooms					YES/NO
Other: Indicate					YES/NO
Identify the finishes of cabinets, countertops, and shelving:					

plastic coved molding, etc.). Indicate Not Applicable (NA) as appropriate.

PHYSICAL FACILITIES

INSTRUCTIONS: Explain the following with as much detail as possible. Indicate Not Applicable (NA) as appropriate.

TOPIC	MINIMUM CRITERIA	MEETS CRITERIA Circle and Initial)
Handwashing facilities	• Identify number of the handwashing sinks in retail sales area: _____Retail Sales	YES/NO
Warewashing Facilities	**MANUAL DISHWASHING** • Identify the length, width, and depth of the compartments of the 3-compartment sink: _____ **MECHANICAL DISHWASHING** • Identify the make and model of the mechanical dishwasher:_____ • What type of sanitizer will be used? □ Chemical Type:_____ □ Hot Water Will ventilation be provided? Yes □ No □	YES/NO
Water Supply	• Is the water supply public or non-public/private? public □ non-public/private □ o If private, has source been approved? Yes □* No □ o Attach copy of written approval and/or permit. • What is the capacity and location* of the water heater? _____Gal. □ Check if Tank-less *Identify location on plan. Provide specifications for the water heater	YES/NO

Sewage Disposal	• Is the sewage system public or non-public/private? public □ non-public/private □ If private, has the sewage system been approved? Yes □* No □ Attach copy of written approval and/or permit.	YES/NO
Backflow Prevention	• Will all potable water sources be protected for backflow? Yes □ No □ • Are all floor drains identified on the submit floor plan? Yes □ No □	YES/NO
Toilet Facilities	• Identify locations and number of toilet facilities: _____ • Hot and cold water provided? Yes □ No □	YES/NO
Dressing Rooms	• Will dressing rooms be provided? Yes □ No □ • Describe storage facilities for employee personal belongings_____	YES/NO
Poisonous/Cleaning Storage	• Identify the location and storage of poisonous or toxic materials • Where will cleaning and sanitizing solutions be stored at workstations? _____ • How will these items be separated from food and food-contact surfaces? _____ 1. Identify the location of the facilities for cleaning of mops and other cleaning equipment?	YES/NO
Pest Control	• Will all outside doors be self-closing and rodent proof? □ Yes □ No □ NA • Will screens be provided on all entrances left open to the outside? □ Yes □ No □ NA • Will all openable windows have a minimum #16 mesh screening? □ Yes □ No □ NA • Will insect control devices be used? □ Yes □ No □ NA • Will air curtains be used? If yes, where? _____ Note: All pipes and electrical conduit chases must be sealed to prevent rodent access.	YES/NO

Refuse, Recyclables, and Returnables	• Will refuse/garbage be stored inside? □ Yes □ No If yes, where _____ • Identify how and where garbage cans and floor mats will be cleaned? _____ • Will a dumpster or a compacter be used? □ Dumpster □ Compactor • Will there be an area to store returnables and recall items? □ Yes □ No If yes, where _____ • Will there be an area to store returnable damaged goods? □ Yes □ No If yes, where _____	YES/NO

PLAN REVIEW FORMULAS

HOT WATER DEMAND

$$\text{Gallons Per Hour (GPH)} = \frac{\text{Sink Size in}^3 \times 7.5\ \text{gal/ft}^3 \times (\text{Number of compartments} \times 0.75\ \text{capacity})}{1728\ \text{in}^3/\text{ft}^3}$$

OR

$$\text{Sink Size in}^3 \times \text{Number components} \times 0.003255\ \text{in}^3$$

$$\text{British Thermal Units (BTU)} = \frac{\text{GPH} \times \text{°Rise} \times 8.33\ \text{lb/gal of water}}{\text{Thermal Efficiency}}$$

$$\text{Kilo-Watt (KW) Input} = \frac{\text{GPH} \times \text{°Rise} \times 8.33\ \text{lb/gal of water}}{3412\ \text{BTU per KW}}$$

Example:

1. How many BTU's or KW's will the booster heater need to raise the incoming hot water (140°F) to 180°F for the final rinse temperature if the dishwasher requires 64 GPH?

$$\frac{64\ \text{GPH} \times 40°\text{F Rise} \times 8.33}{0.70\ (\text{operating efficiency})} = 30{,}464\ \text{BTU}$$

$$\frac{64\ \text{GPH} \times 40°\text{F Rise} \times 8.33}{3412\ \text{BTU per KW}} = 6.2\ \text{KW}$$