

Restaurant/Food Service Construction Guide

Portsmouth Health Department

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PURPOSE

This document is intended to assist in the submission of information for plan review and construction or renovation of food establishments in Portsmouth. For further information, please refer to the Web site at <http://www.cityofportsmouth.com/health/foodpermits.htm> or contact the Portsmouth Health Department at 603-610-7238. This document is not meant to be all inclusive.

PLAN REVIEW

The Portsmouth Health Department (PHD) must approve plans before new construction or remodeling may begin. Prior to opening a new food establishment or renovating an existing establishment, or any change of ownership, there are certain critical steps that must be followed. A checklist has been developed in order to make this process as easy as possible. Steps must be completed in the order listed.

For existing establishments that are undergoing an ownership change, the Health Department will conduct a walk-through and identify any additional needs at no cost to the prospective owner. Existing establishments may need extensive upgrades to be permitted by the Health Department. There are also restrictions on basement areas. If the location you are considering has any basement component, you MUST contact the Health Department for further information.

Food may not be brought into the establishment and food preparation may not take place until the facility has passed all required inspections (electrical, mechanical/plumbing, building, fire), certificates have been issued for Final Occupancy and Place of Assembly (required if your facility will seat over 50 people or if a liquor license application will be made regardless of seating capacity.) and the facility successfully passes a final PRE-OPERATIONAL INSPECTION with the Health Department.

Checklist:

Plan Review Process

Plans are reviewed in the order they are received. Please allow one week for the PHD to conduct a review of your plans. You will be notified once your plans have been approved. Please note that the PHD must sign off on your floor plans prior to the Building Inspections Department issuing permits for any related trade work (electrical, plumbing/mechanical, construction.)

Starting construction prior to approval may result in costly corrections and delayed openings.

Plan Submittal

Submit detailed Floor Plans along with Site Plans using our online permitting system **VIEWPOINT CLOUD**. Please select the permit application that fits your needs. Does your project involve adding a new structure on a parcel that is currently vacant? If so, select "BUILDING: New Construction – Commercial or Residential." If you are planning on converting an existing commercial space or if you are purchasing an existing business, please select "BUILDING: Tenant Fit-UP/New Use/Change in Use." These applications are found under the **INSPECTIONS** tab.

Viewpoint Cloud: <https://portsmouthnh.viewpointcloud.com/>

Plan Submittal Requirements – Building Permit Process for Food Establishments

In order to complete a timely review of your project, all the information listed below should be included with the application.

- A completed [Tenant Fit Up/New Use/Change in Use](#) Application form or a [New Construction](#) Application form (Completed online at Viewpoint Cloud: <https://portsmouthnh.viewpointcloud.com/>)
- Site Plan** (to include parking and exterior grease trap locations)
- One complete set of plans drawn to scale, including proposed layout, mechanical schematics, construction material showing:
 - Dimensions of all rooms and spaces, including handicap accessible toilet room layout
 - Location and sizes of all doors (include door swing and hardware information)
 - Detailed kitchen equipment layout, storage area layout and exterior garbage/grease container area.
(All food service equipment shall be National Sanitation Foundation International (NSF) or equivalent – Intertek Testing and Certification (ETL), Underwriters Laboratory Environmental Public Health (UL-EPH), Canadian Standards Association (CSA) as meeting applicable NSF International standards for sanitation.)
- Proposed seating layout with number and location of tables, chairs, benches, booths, stools and size of standup/sit-down counter.
- LABEL** plan with proposed facility name, street address, scale used to draw plans and the date
- A 1,000 gallon exterior grease trap is required per City Ordinance. Contact Raymond Pezullo, P.E., Assistant City Engineer, at the Department of Public Works (603) 766-1755.

**Plans do not need to be drawn by a licensed architect in all cases, however, they do need to be clear, complete and drawn to scale. Plans that include basement preparation, ware-washing or other activities requiring plumbing will not be approved.*

Your application and plans will be submitted to the Planning Department for zoning review. When the plans return to the Building Inspector's office, a FINAL PLAN REVIEW is made. The following plans are needed at this time:

- A. Structural plans (if required); dimensioned interior fit-up plans
- B. Electrical, plumbing, mechanical (heating, ventilation and air conditioning) plans. **(Separate electric, plumbing and mechanical permits are required.)**
- C. Range hood and grease duct design. **(Separate hood and suppression system permits required.)**
- D. Gas piping plans.
- E. Sprinkler and Fire Alarm plans, if applicable. **(Separate permits required.)**

NOTE: Any Trade work performed must be done by a licensed contractor with the appropriate permits.

EQUIPMENT

General Information

1. Food and beverage equipment shall meet the applicable standards for one of the following:
 - a. National Sanitation Foundation (NSF),
 - b. Edison Testing Laboratories (ETL) to NSF Standards,
 - c. Underwriters Laboratory (UL-EPH) to NSF, or
 - d. Canadian Standards Association (CSA) to NSF Standards.



2. Used equipment may be approved if it meets NSF standards when it was manufactured has been properly maintained and not modified. Used equipment must be approved by the Health Department prior to installation.
3. Primary food contact surfaces shall be of stainless steel construction in compliance with NSF Standard No. 2 or equivalent.
4. Plastic laminate surfaces are not acceptable for food contact and food preparation surfaces.
5. Table-mounted equipment that is not easily movable shall be sealed to the table or elevated on four (4) inch NSF legs.
6. All floor mounted equipment shall be elevated on six (6) inch NSF legs or casters. Display cases may be less than six inches if a removable panel for cleaning the floor is part of the equipment.
7. Enough equipment for cooking, heating and hot holding shall be provided. Equipment should be sufficient in number and capacity to meet the needs of the establishment.
8. All custom fabricated equipment shall meet NSF International or equivalent standards and bear the name of the manufacturer and an NSF sticker indicating which standard the equipment meets.
9. Unfinished wood is prohibited in food, beverage, utensil washing and storage areas. Including, wood doors or frames, wood shelving, wood cabinets and wood windows.

Ventilation

1. All cooking equipment that produces excessive heat, grease vapor, steam, fumes, smoke, condensation or odor shall be located under a local exhaust ventilation system. Contact Brian Kiely, Plumbing/Mechanical Inspector for ventilation requirements.
2. Make-up Air:
 - a. Make-up units must be electrically interlocked with ventilation exhaust hoods.
 - b. The temperature differential between *makeup air* and the air in the conditioned space shall not exceed 10°F (6°C).
 - c. The amount of *makeup air* supplied to the building from all sources shall be approximately equal to the amount of *exhaust air* for all exhaust systems for the building.

Exhaust Hoods

1. Type I hoods shall be installed where cooking *appliances* produce grease or smoke. Type I hoods shall be installed over *medium-duty, heavy-duty* and *extra-heavy-duty cooking appliances*. Type I hoods shall be installed over *light-duty cooking appliances* that produce grease or smoke.
2. Type II hoods shall be installed above dishwashers and *light-duty appliances* that produce heat or moisture and do not produce grease or smoke, except where the heat and moisture loads from such appliances are incorporated into the HVAC system design or into the design of a separate removal system. Type II hoods shall be installed above all *light-duty appliances* that produce products of

- combustion* and do not produce grease or smoke.
3. Type I hood systems shall be designed and installed to automatically activate the exhaust fan whenever cooking operations occur. The activation of the exhaust fan shall occur through an interlock with the cooking appliances, by means of heat sensors or by means of other *approved* methods.
 4. Ventilation hood systems or equivalents must be sufficient in number and capacity to prevent grease or condensation from collecting on the walls and ceilings.
 5. Ventilation hoods must be constructed and installed in accordance with the 2009 International Mechanical Code and NSF Standard No. 2.
 6. All open sides of the ventilation hood must overhang equipment by **at least 6 inches**.
 7. Grease filters or other grease extracting equipment, used in a ventilation hood, shall be designed to be readily removable for cleaning and/or replacing if not designed to be cleaned in place.
 8. Ventilation hood systems and components in food preparation and warewashing areas must be designed to prevent grease or condensation from draining or dripping onto food, equipment, utensils, linens, and single-service and single-use articles.
 9. Above-counter mechanical dishmachines require a Type II ventilation hood to exhaust condensate and humidity. Under-counter warewashing machines and glass washers may not require a ventilation hood. Check with the Plumbing Inspector for requirements.
 10. Used hoods shall meet NSF International or equivalent standards and identify the manufacturer and be approved by the Mechanical Inspector.
 11. Custom fabricated hoods must be made to NSF International or equivalent standards and bear the NSF sticker and name of the manufacturer. Galvanized hoods are not permitted.
 11. Solid Fuel burning equipment shall have a separate ventilation system installed. (NFPA 96)
 12. All smokers (solid fuel and gas) require an approved exhaust hood. Smoker must not be installed outside.
 13. Insulated stainless steel, ceramic tile or equivalent shall be installed behind cooking equipment.

Refrigeration

1. Adequate refrigeration and freezers must be provided to support the intended menu. Additional freezers and refrigerators may be required by the Health Department to prevent cross-contamination and to provide for safe cold holding, cooling and display.
2. NSF standard No. 2 refrigerators (e.g. Coke/Pepsi glass-front style refrigerators) may only be used for storage of pre-packaged food, canned or bottled beverages.

Walk-In Refrigerators/Beer Coolers/Freezer

1. Approved flooring for the walk-in cooler or freezer.
 - a. Quarry tile or ceramic tile.
 - b. Aluminum or stainless steel floor as provided by the manufacturer.
 - c. Poured flooring; information submitted before installation for approval.
 - d. Galvanized flooring is not permitted in walk-in units.
2. An integral basecove may include:
 - a. a quarry tile cove base.
 - b. stainless steel.
 - c. vinyl screed base provided by the manufacturer.
 - d. epoxy resin troweled up the wall (for poured flooring only).
 - e. The basecove shall provide a minimum cove of 3/8" radius at the floor juncture and should be sealed to the wall and floor.
 - f. Vinyl bases.
3. Walk-in refrigerators or freezers shall meet NSF international standards or equivalent. A walk in keg cooler is not recommended for food storage.
4. Shelving shall meet NSF standards for cold storage use and be corrosion resistant. Chrome-plated, zinc

and galvanized shelving is not be permitted.

5. Condensate lines from walk-in coolers shall run to a floor drain located outside of the unit or to an evaporator pan as specified by the pump manufacturer.
6. No floor drains are allowed inside a walk-in refrigeration unit.
 - a. The area above the walk-in cooler freezer may not be used for storage.

Outdoor Walk-In Refrigeration

1. These units must be designed for extra structural loads from snow or other environmental concerns. They must be built flush to the building with interior access provided from within the kitchen only. Their location needs to be approved by the Health Department. It is recommended that exterior units be provided with a roof.
2. Condensate from drain lines may run onto the ground as long as it does not create an environmental nuisance.

Warewashing

1. General:

- a. Dishwashing facilities must be adequately sized to meet the needs of the establishment. A three compartment sink and a dishmachine must be provided.
- b. All warewashing machines must be provided with a ventilation hood to remove condensate, except under-counter type machines and bar glass washers may not require ventilation, check with Brian Kiely, Plumbing Inspector, for requirements.
- c. A warewashing machine shall be equipped with a pressure gauge or similar device that measures the pressure in the hot water rinse cycle.
- d. A warewashing machine shall be equipped with a temperature measuring device that indicates the temperature of the wash and rinse cycle.
- e. Integral drainboards, utensil racks or tables large enough to accommodate all soiled and clean items shall be provided. The soiled dish table shall not drain into the washing compartment of the warewashing machine.
- f. All warewashing activities require an area for disposal of garbage and scrapping.

2. Chemical Sanitizing Machines:

- a. Shall be equipped with a device that indicates audibly or visually when additional chemical sanitizer is needed.
- b. Have a test kit for checking the sanitizer concentration of the rinse water.

3. Hot Water Sanitizing Machines:

- a. An additional booster heater may be required.
- b. Have a minimum/maximum registering waterproof thermometer for checking the temperature of the final rinse. Paper thermometers may be used in place of the min/max thermometer.

4. Ventless Warewashing Machines:

- a. Ventless warewashing machines must be evaluated and approved by the Plumbing Inspector prior to installation.

5. Undercounter Warewashing Machines:

- a. Machines must be on six inch legs/casters or skids.
- b. A warewashing machine under a three-compartment sink needs to be approved.
- c. A flexible installation may be necessary so that the machine can be moved for cleaning.
- d. Provide space, dollies, tables or racks for air drying of clean equipment and utensils.

6. Three Compartment Sink:

- a. A three-compartment sink shall have integral drainboards on both ends, be NSF approved, stainless steel and have no welded seams.
- b. Each compartment shall be large enough to accommodate immersion of the largest utensil or piece of equipment when the sink is used for warewashing.
- c. Soap and chemical dispensers attached to the faucet of a three-compartment sink must be installed according to the Plumbing Code and have appropriate backflow prevention.
- d. Approved racks, shelves or dish tables for storing soiled equipment and utensils and air drying clean equipment and utensils may be required.
- e. Have a test kit for checking the sanitizer concentration of the rinse water.

Storage/Shelving

1. Adequate storage areas and shelving are required for storing food, equipment, utensils, linens, single service and single use items. Items must be stored on approved shelving at least six inches off the floor.
2. Wood or other solid fuel, poisonous and toxic materials must be stored so they do not contaminate food, equipment, utensils, linens, single service and single use items.

Dipper Wells

1. Dipper wells, with running water, are required when bulk ice cream is scooped. A dipper well may also be required for other in-use food scoops.
 - a. The dipper well shall be located adjacent to the proposed area of use.
 - b. The water drain line shall have an approved air gap.
 - c. The dipper well shall be indirectly wasted to a floor drain or trapped waste line.

Customer Self-Service Buffets

1. Shall utilize mechanical refrigeration and/or hot-holding units.
2. Shall be indirectly wasted to a floor drain.
3. Shall be located on a smooth, durable, easily cleanable floor which extends three feet beyond the edge of the salad bars and buffets.
4. Single-service articles shall be dispensed in a manner that protects the eating surface from contamination.
5. Sneeze guards and other food shields shall be provided where necessary.

BEVERAGE AREAS

Beverage Dispensing Equipment

1. Beverage lines shall be run inside walls or ceilings, when possible.
2. Beverage lines extending through a floor or wall shall be installed so they do not obstruct the cleaning of floors and walls or create rough, uncleanable surfaces.
3. Beverage dispensing guns and drains shall not be installed directly over food, ice or clean glassware.
4. An approved stainless steel backflow preventer shall be installed on post-mix carbonated beverage systems. Copper tubing may not be used after the backflow preventer.
5. If PVC pipe is used as a conduit, it must be 4" above the floor.
6. Customer self-service beverage dispensers should be push-button operated or lever-activated to allow for a contamination free fill.

Espresso Areas

1. A separate handwashing sink may be required.
2. A separate dump sink may be required.
3. A running water dipper well or a means for supplying clean working utensils must be provided for.

4. A dedicated container for emptying coffee grinds must be provided. Trash cans may not be used.
5. In a fixed or permanent location, the espresso coffee maker shall comply with the Plumbing Code, including provisions for backflow protection.
6. If a filtration system is used, it must be NSF approved.

Alcohol/Bar Facilities

1. At least one hand washing sink is required depending on size, more handsinks may be required.
2. A handwashing sink(s) shall be provided for wait staff that dispense beverages.
3. All equipment, including refrigeration, must meet NSF International Standards or equivalent.
4. Provide glass sanitizing equipment. See Warewashing.
5. Ice bins shall be self-draining to an indirect waste in compliance with the Plumbing Code. All cold plates must be integrally formed into the ice bin unit. **Separate drop-in cold plates in ice bins are not permitted.** Ice bins must be shielded from soiled activities.
7. Ice bins, in areas of public access, shall be equipped with protective covers.
8. A liquor store room shall have room finishes similar to those required for food storage rooms.
9. Wood used as the bar top should be finished with a minimum of three coats of polyurethane or equivalent.
10. Stone or tile finished bar tops shall have an approved sealer applied so that the surface is impervious to liquids and grease.
11. The interior of bar shall be finished with approved flooring, base cove and wall materials.

SINKS

Handwashing Sinks

1. A minimum of one hand washing sink that is easily accessible to all employee food service areas shall be provided. The number of hand washing sinks required is determined by a number of factors, including size of facility and accessibility.
2. All handwashing sinks shall be conveniently located and used for no other purpose.
3. Each handwashing sink shall be provided with hot and cold water through a mixing valve or combination faucet.
4. An eye wash station may not be connected directly to a handwashing sink. Check OSHA standard for eye wash regulations.
5. Each hand washing lavatory shall have:
 - a. a supply of dispensed hand soap,
 - b. individual single service disposable towels.

Food Preparation Sinks

1. A separate food preparation sink must be installed if produce and other foods are washed or thawed.
2. Depending on the menu, other factors may warrant the installation of a food prep sink.
3. It must be NSF approved, stainless steel, have no welded seams and an appropriate air gap.

Mop Sinks

1. A mop sink shall be provided. The mop sink should be conveniently located.
2. The sink shall have a drain that connects to a sanitary sewer and be supplied with hot and cold water.
3. Mop sink room finishes shall be smooth, durable and easily cleanable. See room finish schedule for details.
4. A mop hanger, broom rack or other device shall be provided for hanging wet mops.
5. If a chemical dispensing system is installed at the mop sink it shall be installed according to Plumbing Code.

6. Wye adapters are prohibited. Provide a dedicated water line to chemical dispensing systems.

Dump Sinks

Dump sinks are used when operations produce excess beverage waste that needs to be dumped. Operations such as, bars with mixed drinks, ice, blender drinks, coffee drinks, smoothies or espresso areas may require a dump sink.

1. A three compartment sink or food preparation sink must not be used as a dump sink.

Three Compartment Sinks

See “Warewashing” section

Rinser Sinks/Blender Stations

1. Plumbing plans must be submitted for approval. Items may include.
 - a. The smoothie blender washer must either discharge to the drainage system into a dedicated vented receptor through an air break, an air gap, or;
 - b. directly to the sanitary drain without a backwater valve installed on the individual drainage branch.
 - c. The water supply to the washer is located below the spill line of the machine must be protected with an approved backflow preventer.
 - d. Hot water is required to any equipment/fixtures used for washing.
2. All equipment must be NSF approved.
3. An approved handsink must be conveniently located to the operation.

FLOOR, WALLS AND CEILING FINISHES

Floors

Floors shall be constructed of commercial grade, smooth, durable, nonabsorbent, grease-resistant, and easily cleanable material. VCT is not an approved flooring finish. If commercial grade sheet material is used, it must be continuous without seams.

1. **Tile:**
 - a. Examples of approved flooring: Quarry tile, Ceramic tile, porcelain tile and terrazzo.
 - b. Tile grout should be a water-resistant material, such as polyurethane or epoxy based, not exceeding ¼ inch wide.
 - c. A four inch integral base cove shall be installed at the floor/wall junctions.
 - d. All flooring, tile and grout should be sealed per manufacturers’ recommendations.
2. **Poured Flooring:**
 - a. Epoxy flooring systems must be approved before installation.
 - b. An integral minimum four (4) inch base cove should be troweled up the wall. The coving material should be consistent with the floor.
 - c. A minimum of three initial finish coats of epoxy should be provided and be at least a 1/4” thick for high heat or cold areas or per manufacturer’s specifications.
 - d. A minimum of three initial finish coats of epoxy should be provided and be at least an 1/8” thick for low use areas, limited cooking areas or per manufacturer’s specifications.
 - e. The finish coat thickness of an epoxy floor must comply with manufacturers’ specifications.
 - f. Aggregate that creates a rough surface may not be applied under foodservice equipment or cabinetry.

- g. A certified installer may be recommended. The type of substrate material is based on the manufacturer's recommendations.

3. **Vinyl flooring:**

Vinyl flooring (VCT) flooring is not allowed in kitchens, deli areas, food preparation, dishwashing or janitorial areas. VCT may be acceptable in dry storage rooms separate from foodservice area when approved.

Walls

Wall surfaces in splash zones or high moisture areas such as warewashing, food preparation sinks, handsinks and mop sink areas shall be finished with smooth, light in color, durable, non-absorbent materials. Approved materials may include:

1. A fiberglass re-enforced panel (FRP) or equivalent.
2. Ceramic tile that is smooth and cleanable.
3. Stainless steel or equivalent materials.
4. Enamel painted sheetrock is acceptable in separate dry storage rooms.
5. Block walls, where permitted, shall be finished with an epoxy or enamel paint equivalent to an orange peel finish.
6. Insulated panels, stainless steel or ceramic tile must be provided behind cooking equipment. FRP is not permitted in this area. These wall finishes must comply with the Fire Code. See ventilation section.
7. Wood is not an approved material for wall finishes.
8. **No FRP behind cooking equipment.**

Ceilings

Fissured, perforated or rough acoustic tile is not permitted in foodservice areas.

Ceilings in kitchens, bars, service areas and other rooms where food, equipment, single service or linens are stored, employee toilet rooms and mop sink rooms shall be smooth, non-absorbent, durable and easy to clean.

Acceptable materials include:

1. smooth vinyl coated acoustic ceiling panels
2. semi-gloss painted gypsum board (washable)
3. Exposed rafters, bar joists/ trusses over bars or service areas in dining rooms may be allowed if approved.

Finish Schedule Summary

Area of Establishment	Floor			Basecove				Wall				Ceiling				
	Rubber	Quarry/Ceramic Tile	Epoxy Resin Flooring System	Coved Ceramic/Quarry	Vinyl Scred	Stainless Steel	Commercial Rubber Base Cove for use with rubber flooring	Stainless Steel	Ceramic Tile	Fiberglass Reinforced Panel	Epoxy Painted Concrete Block	Painted Drywall	Metal – Non-Galvanized	Painted Drywall	Vinyl-Coated Acoustic Tiles	Open Joists & Rafters
Food Prep Area	■	X	■	X	NA	X	■	X	X	X	X	■	X	X		
Cooking Area	■	X	■	X	NA	X	■	X	X	■		■	X	X		
Dish wash Area	■	X	■	X	NA	X	■	X	X	X	X	■	X	X		
Floorless Walk-In Refrigeration		X	■	X	X	X		NA – Needs to be NSF approved								
Floorless Walk-in Beer Cooler		X	■	X	X	X		NA – Needs to be NSF approved								
Employee Toilet Room	■	X	■	X	NA	X	■	X	X	X	X	X	X	X		
Janitorial Room	■	X	■	X	NA	X	■	X	X	X	X	■	X	X	■	
Buffet Area	■	X	■	X	NA	X	■	X	X	X	X	■	X	X		
Service Area	■	X	■	X	NA	X	■	X	X	X	X	■	X	X		
Wait Station	■	X	■	X	NA	X	■	X	X	X	X	■	X	X		
Handwash Area	■	X	■	X	NA	X	■	X	X	X	X	■	X	X		
Bar Service	■	X	■	X	NA	X	■	X	X	X	X	■	■	X	X	★
Dry Storage Room	■	X	■	X	NA	X	■	X	X	X	X	■	X	X	□	

■ - Shaded areas are not allowed.

X - Approved

◆ - Approved, but not recommended

□ - For storage of **unopened case lots** of single-service, food and beverages.

■ - Approval by the Regulatory Authority is required prior to installation.

★ - Sealed rafters or metal beams may be approved for aesthetic reasons.

NA - Not Applicable

Materials and finishes not listed must be approved by the Regulatory Authority prior to installation

DESIGNATED EMPLOYEE TOILET ROOMS

1. Each food service facility must have a minimum of one rest room dedicated to the sole use and access of the food service facility. Public toilet rooms must meet the requirements of the Building, Plumbing and Mechanical code.
2. A toilet room located on the premises shall be completely enclosed and provided with a tight-fitting and self-closing door and be well lit.
3. A toilet room shall be provided with a minimum of one covered waste receptacle.
4. Refuse containers shall be provided for the disposal of single service towels.

UTILITIES

Plumbing

All plumbing shall be installed in accordance with the 2009 International Plumbing Code and state and local amendments.

Utility Service Lines

1. Utility service lines and pipes shall not be unnecessarily exposed and enclosed within the walls whenever possible.
2. Exposed utility service lines and pipes shall be installed so they do not obstruct or prevent cleaning of the floors, walls, or ceilings.
3. Exposed utility service lines and pipes shall not be installed directly on the walls or floor, except:
 - a. quick disconnect gas hoses approved by the American Gas Association or NSF International; and
 - b. flexible cords/caps for commercial cooking equipment on casters, listed by Underwriter's Laboratory.
4. Utility lines must not be placed on the floor and must be installed at least 6" off the floor.

Backflow Protection

1. Water inlets shall have an air gap between the water inlet and the flood rim of the fixture. The air gap shall be two times the diameter of the water inlet or faucet.
2. Vacuum breakers shall be installed on any submerged inlet such as toilets, urinals, dishwashers, garbage grinders, and any threaded water outlets. Toilets must have anti-siphon ball cock assemblies.
3. Double check valves with atmospheric vents or reduced zone backflow preventers are required on any water outlet on which a vacuum breaker cannot be installed after the last shut-off valve or solenoid switch (e.g. pressure spray hoses).
4. Backflow prevention shall be located in the water line to the carbonator, preferably between the pump and the carbonator.
5. Chemical dispensing systems shall have approved backflow devices.
6. Wye adapters are not permitted. Provide a dedicated water line to chemical dispensing systems.

Indirect Waste Connections

1. An indirect waste connection discharges waste through a trap and an air gap into the sewer system. Equipment, such as walk-in refrigerators and freezers, ice machines, steam tables, steam cookers, ice bins, salad bars, dipper wells and other similar equipment needs to be indirectly wasted to the sewer.
2. The air gap between the indirect waste and the building drainage system shall be at least twice the effective diameter of the drain, but no less than one inch. All other air gaps shall be at least one inch.
3. Indirect waste pipes shall not discharge into hand sinks, prep sinks or three-compartment sinks.
4. Hub drains are not recommended. Floor drains are preferred.

Water Supply

An adequate supply of potable water that meets the needs of the food service establishment shall be provided. Water from a private well must be approved and then tested prior to opening.

Water Heater

1. A commercial water heater must be adequately sized to meet the demands of the foodservice facility.
2. Water heaters must be sized per manufacturers sizing guides or other approved methods. Calculations must be submitted for review and included on plans.
3. Tankless water heaters must be sized to provide the minimum code required gpm (gallons per minute) at periods of peak demand.
4. If water heater is located in the foodservice area, it must be installed on 6" legs or a concrete curb or similar.

Sewage Disposal

1. All sewage shall be disposed in a municipal sewer system or approved septic system.

Grease Traps

1. Interior grease traps shall be installed in accordance with the State Plumbing Code and manufacturers installation instructions.
2. Grease trap size and type are determined by the Assistant City Engineer.
3. A grease trap shall be easily accessible for cleaning.
4. It may not be installed within the kitchen.

Overhead Sewer Lines

1. Sewage and waste lines should not be located directly above food preparation, food display, food storage, utensil washing and storage areas.
2. If sewer lines must be installed over the areas listed above, they shall be equipped with a functional seamless pan or gutter.

EMPLOYEE AREA

1. Dressing rooms/areas shall be designated if employees routinely change clothes in the establishment.
2. Lockers or other suitable facilities shall be provided for the orderly storage of employees' clothing and other possessions.
3. Lockers or other suitable facilities shall be located in a designated area where contamination of food, equipment, utensils, linens, and single-service cannot occur.
4. Employee break areas shall be located so that food, equipment, linens, and single-service and

single-use articles are protected from contamination.

LAUNDRY FACILITIES

1. A mechanical clothes washer may be used for laundering wiping cloths. A dryer is not required if wiping cloths are the only items washed on site.
2. Wiping cloths must be air dried in an area where there is no exposed food, clean equipment, utensils, linens, or unwrapped single-service or single-use articles.
3. Mechanical washers and dryers shall be located so that food, clean equipment, utensils, linens, or unwrapped single-service or single-use articles are protected from contamination.

SOLID WASTE AND RECYCLABLES

1. An area shall be provided for the storage of solid waste and recyclable materials. The area shall be separated from food preparation and storage areas.
2. The surface of an outdoor storage area for refuse, recyclables and returnables shall be constructed of concrete and sloped to drain.
3. Liquid waste from compacting shall be disposed as sewage.
4. If a garbage enclosure is proposed for installation, it shall be constructed of durable, non-absorbent materials, and provided with a washable finish capable of withstanding frequent cleaning.
5. Interior garbage storage and refuse rooms shall have smooth and easily cleanable wall, floor and ceiling surfaces and be equipped with hot and cold running water and a floor drain connected to the sanitary sewer.

LIGHTING

1. All light fixtures in food preparation, food display, food service, food storage, dishwashing and utensil storage areas shall be shielded, coated or otherwise shatter resistant.
2. 50 foot-candles of shielded light is required:
 - a. Over food preparation areas
 - b. In the hood over cooking equipment
 - c. Warewashing areas
3. 20 foot-candles of shielded light is required:
 - a. Areas behind the bar
 - b. Storage areas and rooms toilets and dressing rooms
 - c. Inside reach in refrigerators/freezers
 - d. Inside walk in cooler/freezers
 - e. Self-service buffets and salad bars
 - f. Toilet rooms

INSECT AND RODENT CONTROL

1. Except in temporary food establishments, openings to a portion of a building that is not part of the food establishment or to the outdoors shall be protected against the entry of insects and rodents by:
 - a. filling or closing holes and other gaps along floors, walls, and ceilings;
 - b. closed, tight-fitting windows and
 - c. solid self-closing, tight-fitting doors.
2. If windows or doors are kept open for ventilation or other purposes, or the food operation is conducted in a temporary food establishment that is not provided with windows and solid doors, the openings shall be protected against the entry of insects and rodents by:
 - a. 16 mesh to 25.4 millimeters (one inch) screens;
 - b. properly designed and installed air curtains are acceptable with appropriate alternate screening
 - c. other effective means.
3. Devices that are used to electrocute flying insects and that propel insect parts or insect fragments or to trap insects by adherence must be installed so that the device is not located over food, clean equipment, utensils, linens and unwrapped single-service and single-use articles.
4. Unprotected large openings (garage doors):
 - a. Provide screens, air curtains or other effective means.
 - b. Kitchen to be completely separate and closed from the seating area.
 - c. Garbage removed daily.

CATERING

1. Food must be prepared, stored and delivered from a licensed commercial kitchen. Food, equipment or single use items are not allowed to be prepared or stored at a private residence (home).
2. Food must be maintained at safe temperatures during transport and must be transported in a sanitary manner in food grade containers.
3. All food and beverages must be prepared in a permanent licensed food establishment.
4. Portable handwashing is required.

APPENDICES

PLUMBING CODE AND AMENDMENTS FOR FOOD ESTABLISHMENTS

(Based on IPC 2006)

Adopted October 09

SECTION 202 DEFINITIONS

Add new definition to subsection:

Food service establishment: Any fixed or mobile restaurant, temporary food service establishment, coffee shop, cafeteria, short order café, luncheonette, grill, tearoom, sandwich shop, soda fountain, tavern, bar, cocktail lounge, night club, industrial food service establishment, catering kitchen, commissary and any other eating or drinking establishment where grease laden food is prepared or served, whether private, public, profit or non-profit.

SECTION 416 LAVATORIES

416.5 Tempered water for public hand-washing facilities Tempered water shall be delivered from public hand-washing facilities through an approved water temperature limiting device that conforms to ASSE 1070.

SECTION 607 HOT WATER SUPPLY SYSTEMS

Change subsections to read as follows:

607.1 Where required. In residential occupancies, hot water not to exceed 130 degrees F shall be supplied to all plumbing fixtures and equipment utilized for bathing, washing, culinary purposes, cleansing, laundry or building maintenance. *In nonresidential occupancies, hot water not to exceed 130 degrees F shall be supplied for culinary purposes, cleansing, laundry or building maintenance purposes.* In nonresidential occupancies, hot water or tempered water shall be supplied for bathing and washing purposes. Tempered water shall be supplied through a water temperature limiting device that conforms to ASSE 1070 and shall limit the tempered water to a maximum of 110 degrees F (43 degrees C). This provision shall not supersede the requirement for protective shower valves in accordance with Section 424.3. *See State Food Service Code for further regulations.*

Change subsections to read as follows:

607.2 Hot water supply temperature maintenance. Where the developed length of hot water piping from the source of hot water supply to the farthest fixture exceeds 50 feet (15.24 m), the hot water supply system shall be provided with a method of maintaining the temperature in accordance with the International Energy Code.

SECTION 1003 INTERCEPTORS AND SEPARATORS

Change subsection to read as follows:

1003.2 Approval. All interceptors and separators shall be of the type and capacity approved by the City Engineer. Each interceptor and each separator shall be designed and installed in accordance with the manufacturer's instructions and the requirements of this section based on the anticipated conditions of use. When exceptions are granted under the conditions of Section 1003.3, the applicant shall obtain in writing, approval from the City Engineer for said exceptions. Waste exempted from treatment by the City Engineer, shall not be discharged into separators or interceptors.

Add new subsection to read as follows:

1003.3 Food service grease interceptors required. New and remodeled food service establishments shall install a 1000 gallon in-ground grease interceptor located outside the building envelope in addition to all required grease interceptors at fixtures inside the building. The grease interceptors shall receive drainage from fixtures and equipment with grease laden waste as stated in Section 1003.3.1.

Exception 1: When adequate in-ground space is not available outside on the lot, an automatic grease removal unit (AGRU) sized for the load shall be installed inside.

Exception 2: When the Health officer and City Engineer do not feel the type of food service establishment warrants such protection.

Exception 3: If the drain line connecting a grease laden fixture(s) to the in-ground interceptor exceeds 50 liner feet, then said fixture or fixtures, shall also be protected with a grease removal device or an AGRU as listed in Section 1003.3.4 or 1003.3.5.

PLACE OF ASSEMBLY SEATING DIAGRAM



**Portsmouth Fire Department
Bureau of Fire Prevention and Control**

170 Court St., Portsmouth NH 03801 603-427-1515 Fax 603-427-1555

Seating Guide for tables abutting an aisle with a maximum occupant load of 49.

For locations with an occupant load of 50 or greater, add 8" to the measurements shown.

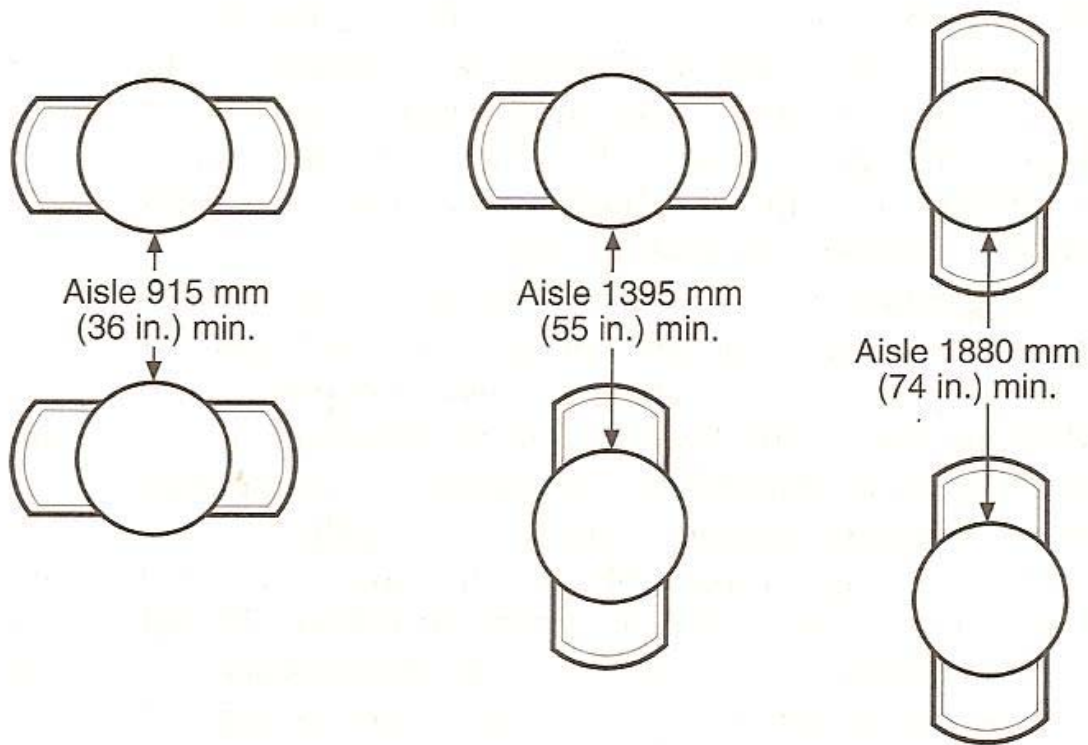


FIGURE A.13.2.5.8.3 Seating at Tables Abutting an Aisle.

Seating diagrams shall be submitted to the Fire Department for review prior to the issuance of a Place of Assembly Permit.

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