



SAN MATEO COUNTY HEALTH  
**ENVIRONMENTAL  
HEALTH SERVICES**

**Environmental Health Services**  
**Food Program**

2000 Alameda de las Pulgas Suite #100  
San Mateo, CA 94403  
(650) 372-6200 | FAX (650) 627-8244  
[smchealth.org/food](http://smchealth.org/food)

**COMPREHENSIVE GUIDELINES FOR  
FOOD FACILITIES CONSTRUCTION  
AND  
PLAN REVIEW**

**BASED ON THE CALIFORNIA RETAIL FOOD CODE**

# Table of Contents

<b>PURPOSE .....</b>	<b>4</b>
<b>PLAN SUBMITTAL AND REVIEW.....</b>	<b>4</b>
PROJECTS THAT REQUIRE PLAN REVIEW .....	4
PLAN SUBMITTAL CHECKLIST .....	5
EQUIPMENT CERTIFICATION GROUPS .....	6
FIELD CONSTRUCTION INSPECTIONS .....	6
Pre-Final/ Construction Inspections.....	6
Final Construction Inspection .....	6
<b>GENERAL CONSTRUCTION AND EQUIPMENT REQUIREMENTS .....</b>	<b>7</b>
Floors.....	7
Walls and Ceilings .....	7
Insect Control Devices, Design and Installation .....	8
Food Protection Equipment .....	9
Food Display .....	9
Food Storage .....	9
Other Required Storage Facilities .....	10
Refuse Disposal Facilities .....	10
Toilet Facilities .....	11
Designated Employee Areas/Lockers.....	12
Exterior Doors and Windows .....	12
Pass-through Windows .....	12
Delivery and Cargo Doors .....	13
Lighting.....	13
Water .....	14
Backflow Protection.....	14
Indirect Waste Receptors.....	14
Sewage Disposal, Grease Traps and Interceptors.....	15
Equipment.....	15
Refrigeration .....	16
Sinks .....	17
Warewashing Sinks .....	17
Food Preparation Sink.....	17

Handwashing Sinks .....	17
Janitorial Sink .....	18
Dishwashing and Glass Washing Machines .....	18
Dipper Well .....	19
<b>Ventilation.....</b>	<b>19</b>
Ventilation Hood Systems.....	20
Heating, Ventilating, Air Conditioning System Vents.....	20

## PURPOSE

These guidelines are intended to guide owners, designers, architects, and other professionals designing/building a foodservice facility. It is intended to serve as a general overview of the requirements and should not be considered as all-inclusive.

Pursuant to the California Retail Food Code, Chapter 13, Article 1, Section 114380, a plan approval must be obtained from the local Environmental Health Agency before construction, enlarging, altering, converting, or remodeling any building for use as a food facility.

This guide only encompasses health aspects and should not be construed to encompass requirements of other agencies involved such as, the local planning and zoning department, the local building authority, or local fire department. Owners and agents are advised to contact the appropriate local agencies to obtain any permits and/or to clarify other local codes.

## PLAN SUBMITTAL AND REVIEW

Before constructing or altering any building for use as food establishment, 3 sets of plans must be submitted to San Mateo County Environmental Health Services for review and approval.

Plans may be dropped off in person or mailed to our office with a completed application and plan review fee. Refer to the plan submittal checklist below.

After plans are stamped and approved, one copy will be retained by this agency and two copies will be returned to the applicant. A copy of the approved plans and any letters must be kept at the job site during construction until final construction approval.

In order to complete a timely review of your project, all the information listed below should be included with the plan. **Plans may take up to 20 business days to review. Incomplete plans may take longer. Expedited plan review is available. The fee is 1.5 times the regular plan review fee.**

**Any changes to the approved drawings will require a re-submittal. There is no fee for the first resubmittal. Subsequent re-submittals will be charged at an hourly rate.**

## PROJECTS THAT REQUIRE PLAN REVIEW

- **New Construction-** is defined as entirely **new** structures and/or significant extensions to existing structures whether or not the site was previously occupied.
- **Remodel-** is defined as any construction, addition, major repairs, or work that alters the facility's configuration or method of operation to the existing facility.
- **Mobile Food Preparation Units**

- **Plans may be required for the following:**
  - Minor remodeling
  - Equipment installation or replacement
  - Change in the type of food service
  - Change of ownership
  - Re-opening a food establishment that has been closed for more than 90 days

## PLAN SUBMITTAL CHECKLIST

- A completed plan review application with the required fees. Plan review fees are to be paid at the time of plan submittal. The current fee schedule is available on the website or by contacting our office at (650) 372-6200.
- Three complete set of plans. Plans may be prepared by an architect, draftsman, contractor or owner. All plans must be drawn in a professional manner. Incomplete plans will be rejected.
- A description of the project
- Finish schedule for floors, base cove, wall and ceilings
- A proposed menu
- Equipment locations on the layout
- Equipment specifications sheets for all equipment (All food service equipment shall be National Sanitation Foundation International (NSF) or equivalent - Edison Testing Laboratories (ETL), Underwriters Laboratory (UL), Canadian Standards Association (CSA) as meeting applicable NSF International standards for sanitation)
- One complete set of elevations and drawings for all custom equipment
- A site plan showing proposed waste storage receptacle location.
- Detailed exhaust ventilation and make-up systems (indicate types of hoods, etc.)
- Counters and cabinetry shop drawings indication cabinet construction and countertop finish
- Plumbing layout, include restroom location and water heater specifications
- Electrical layout
- Other information may be requested during the plan review process

## EQUIPMENT CERTIFICATION GROUPS

The most common certifying groups for equipment are:

CERTIFYING GROUP	MARK
NSF International (NSF)	
Intertek Marked "ETL Sanitation"	
Underwriters Laboratory (UL) Marked "classified UL EPH"	
Canadian Standards Association (CSA) Marked "CSA sanitation to NSF/ANSI."	

## FIELD CONSTRUCTION INSPECTIONS

Contact Environmental Health to schedule inspections. The contractor, owner or representative is responsible for scheduling the following inspections:

**Pre-Final/ Construction Inspections.** Contact the plan check specialist when your project is about 80% completed or before the installation of equipment. The Plan Review Specialist may conduct construction inspections during your remodel to verify compliance with the California Retail Food Code (Cal Code), and approved plans.

**Final Construction Inspection.** Upon completion of construction, including finishing work, you must contact the plan check specialist to arrange for a final construction inspection. Approved materials and good workmanship are significant factors in the evaluation and final field approval of food facility construction and equipment installation.

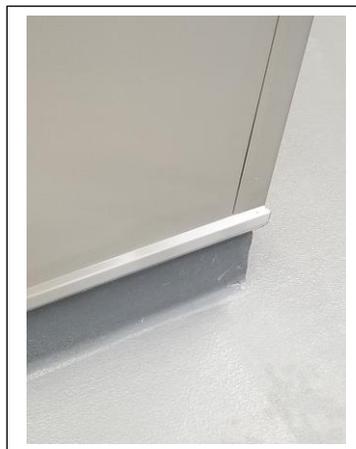
Inspection appointments must be made directly with an inspector at least 5 working days in advance. During remodel work, businesses that are open for business must provide protective measures to prevent contamination of food, food contact surfaces and equipment. Failure to do so will result in closure of the establishment until remodeling is completed.

## GENERAL CONSTRUCTION AND EQUIPMENT REQUIREMENTS

### Floors

- a. Floors in food establishments (except in sales and dining areas) shall be durable, smooth and impervious to water, and grease, and of easily cleanable construction (e.g., quarry tile or seamless epoxy pour, solid sheet vinyl etc.). Floor surfaces shall be coved at the juncture of the floor and wall with a 3/8 inch minimum radius coving and shall extend up the walls or toe-kicks at least four (4) inches, as an integral unit. (Vinyl rubber topset base is not acceptable.) [Cal Code 114268]

**Coving**-Coving is the floor material found at the base of walls (wall/floor junctures) and equipment toe-kicks (toe kick/floor junctures). Toe-kicks include the bases of counters, cabinets, salad bars, and other floor-mounted equipment (including floor-mounted mop sinks) that is not placed on approved legs or casters.



- b. Floor drains are required in floors that are water- flushed for cleaning and/or where pressure spray methods for cleaning equipment are used. Where floor drains are utilized, the floor surfaces shall be sloped 1:50 (1/4 inch per foot) to the floor drains. [Cal Code 114269 ]
- c. Approved anti-slip floor finishes or materials are acceptable in areas where necessary for safety reasons, such as high traffic areas. [Cal Code 114268 (e)]

### Walls and Ceilings

- a. Walls and ceilings of all rooms shall be durable, smooth, nonabsorbent and easily cleanable (e.g., gloss or semi-gloss enamel paint, epoxy paint, FRP {Fiberglass Reinforced Panel}, stainless steel, ceramic tile or other approved materials and finishes). Exposed brick, concrete block, rough concrete, rough plaster or textured gypsum board is not acceptable. Acoustical ceiling tile may be used if it meets the requirements of Section 114155 and is installed not less than six (6) feet above the floor. A sample may be required for review. [Cal Code 114271]



Typical FRP installation behind wall surface of sinks and prone splashing areas.

- b. Conduits of all types shall be installed within walls as practicable. When otherwise installed, they shall be mounted or enclosed so as to facilitate cleaning [Cal Code 114271 (d)].
- c. Attachments to walls and ceilings, such as light fixtures, mechanical room ventilation system components, vent covers, wall-mounted fans, decorative items, and other attachments shall be easily cleanable. [Cal Code 114271(e)].
- d. These requirements **do not apply** in any of the following areas:
  - i. Walls and ceilings of bar areas in which alcoholic beverages are sold or served directly to the consumers, except wall areas adjacent to bar sinks and areas where food is prepared.
  - ii. Areas where food is stored only in unopened bottles, cans, cartons, sacks, or other original shipping containers.
  - iii. Dining and sales areas
  - iv. Offices
  - v. Restrooms that are used exclusively by consumers, except that the walls and ceilings in the restrooms shall be of nonabsorbent and washable surface. [Cal Code 114271 (a)]

### **Insect Control Devices, Design and Installation**

- a. Insect control devices that are used to electrocute or stun flying insects shall be designed to retain the insect within the device. [Cal Code 114259.3 (a)]
- b. Insect control devices shall be installed so that the devices are not located over a food or utensil handling area and dead insects and insect fragments are prevented from being impelled onto or falling on non-prepackaged food, clean equipment, utensils, linens, and unwrapped single-use articles. [Cal Code 114259.3 (b)]

## Food Protection Equipment

Food on display shall be protected from contamination by the use of packaging, counter, service line, or sneeze guards that intercept a direct line between the customer's mouth and the food being displayed, containers with tight-fitting securely attached lids, display cases, mechanical dispensers, or other effective means. [Cal Code 114060]

**Service of unpackaged foods/utensils directly to or by the customer: (Refer to "CCDEH Buffet/Service Guidelines"). Guidelines available upon request.**



Typical sneeze guard installation examples

## Food Display

- a. Displays of unpackaged foods or utensils shall be shielded so as to intercept a direct line between the customer's mouth and the food or utensils being displayed or shall be dispensed from approved self-service containers. [Cal Code 114060 (a) (b)]
- b. Cafeteria, buffet, and salad bar self-service; food preparation equipment and food preparation areas etc., shall be protected by approved sneeze guards. [Cal Code 114060 (a)]
- c. Approved self-service containers shall have tight fitting, individual covers. [Cal Code 14060 (a)]
- d. Each approved container shall have its own suitable food dispensing utensil or effective dispensing method that protect the food from contamination. [Cal Code 114060 (d)]

## Food Storage

- a. Adequate and suitable space shall be provided for the storage of food. [Cal Code 114047] This area shall be equipped with sufficient and approved shelving to accommodate anticipated needs. It shall include only aisle space and floor area where shelving, cabinets or other storage facilities are located. It shall not include floor area where desks, equipment, ladders or other items may be placed. The following recommended methods of determining adequate storage space may be used: [Cal Code 114047 (a)]

- i) A floor area equivalent to 25 percent of all kitchen space or,
- ii) One square foot of floor space per customer seat or whichever is greater.
- iii) Sufficient approved shelving\* dispersed throughout kitchen area may be substituted for 1 and 2 above.

\*Sufficient approved shelving for a small food service establishment means ninety-six (96) linear feet of eighteen (18) inch deep, shall meet or be equivalent to applicable NSF standards, shelving. More shelving may be required for larger establishments.

- b. Shelving shall meet or be equivalent to applicable NSF standards or other approved shelving which is smooth, durable, easily cleanable, nonabsorbent and vermin tight. The lowest shelf shall be at least six (6) inches above the floor with clear unobstructed area below. Unfinished wood is not acceptable.

### **Other Required Storage Facilities**

- a. Adequate and suitable space shall be provided for the separate storage of clean and soiled
- b. linens. Linens shall be stored in clean, nonabsorbent receptacles or clean, washable laundry bags. [Cal Code 114185.4]
- c. A room, area or cabinet separated from any food preparation or storage area, or warewashing or storage area, shall be provided for the storage of cleaning equipment, and supplies (e.g., mops, buckets, brooms, cleaning compounds, waxes, insecticides, rodenticides, detergents, bleaches or any other injurious or poisonous materials). [Cal Code 114281]

### **Refuse Disposal Facilities**

- a. Each facility shall be provided with any facilities and equipment necessary to store or dispose of all waste material. Waste receptacles shall be provided for use by consumers and each area of the facility or premises where refuse is generated. Garbage and waste grease shall be disposed into durable, cleanable, leak-proof, rodent proof containers with closed-fitting lids. An area designated for refuse, recyclables, returnables, or a redeeming machine for recyclables or returnables shall be located in a designated area that it is separate from food, equipment, utensils, linens and single-service and single use articles. [Cal Code 114244, 114245 to 114245.8, 114257, 114175]
- b. A designated area shall be provided for the storage and washing of these containers. Suitable cleaning implements and supplies such as high-pressure pumps, hot water, steam, and detergent shall be provided as necessary for effective cleaning of receptacles and waste handling units for refuse, recyclables, and returnables. [Cal Code 114245.6 & 114245.7]

A floor mounted janitorial sink may be sufficient to clean the food waste containers of a small food facility.

- c. If located within the facility, refuse disposal, recyclables storage and returnables storage rooms and areas shall meet the following requirements for floors, walls, ceilings, and vermin exclusion as specified in this part: [Cal Code 114245.3 & 114245.7]
- d. Receptacles and waste handling units for refuse, recyclable storage and returnables shall not be located so as to create a public health hazard or nuisance, or Interfere with the cleaning of adjacent space, [Cal Code 114245 (b)]

- e. Floors that are water flushed for cleaning and in areas where pressure spray methods for cleaning equipment are used must be sloped to 1:50 to the floor drain(s) discharging to the sanitary sewer. Where wash-down facilities are provided, liquid waste shall be disposed of to floor drains going to an approved sewage disposal system. [Cal Code 114245.4, 114268, 114269, 114279]
- f. The room or enclosure shall be well ventilated [Cal Code 114149(a)]
- g. Hot and cold running water through a mixing valve protected with a backflow protection device shall be provided and located so that the room or enclosure can be cleaned [Cal Code 114245.7]
- h. An out-door storage area or enclosure used for refuse, recyclables, and returnables should be constructed of nonabsorbent material such as concrete or asphalt and shall be easily cleanable, durable, and sloped to a drain. [Cal Code 114245.4]
- i. Receptacles and waste handling units for refuse and recyclables must be installed so that accumulation or debris and insect and rodent attraction and harborage are minimized and effective cleaning is facilitated around and, if the unit is not installed flushed with the base pad, under the unit. [Cal Code 114245.5]
- j. Ground surfaces of concrete or asphalt and enclosure surfaces shall be constructed to be durable, easily cleanable and maintained in good repair. [Cal Code 114245.1 & 114245.4]

\* Consult with local Planning/ Building Departments for additional refuse area requirements.

### **Toilet Facilities**

- a. In each food establishment, there shall be employee toilet facilities. The requirements on the number of toilet and handicapped facilities shall be in accordance with local building and plumbing ordinances. [Cal Code 114250 & 114276 (e)]
- b. Toilet facilities which are provided for use by patrons shall be so situated that patrons do not pass through food preparation, food storage or utensil washing areas. [Cal Code 114276 (b) (2)]
- c. The floors, walls and ceilings shall have surfaces that are smooth, nonabsorbent and easily cleanable. Toilet rooms shall be provided with at least 20-foot candles of light. [Cal Code 114252 (b)(3), 114268 (a) & 114271]
- d. Handwashing facilities shall be provided within or adjacent to toilet rooms and shall be equipped to provide warm (100°F) water under pressure for a minimum of 15 seconds through a mixing valve or combination faucet. The number of handwashing facilities required shall be in accordance with local and building and plumbing codes. Handwashing cleanser and single use sanitary towels in dispensers or hot air blowers shall be provided at or adjacent to handwashing facilities. [Cal Code 113953, 113953.2 & 114276]
- e. Toilet tissue shall be provided in a permanently installed dispenser at each toilet. [Cal Code 114250]
- f. Toilet rooms shall be separated from other portions of the food establishment by well fitted, self-

closing doors that prevent passage of flies, dust or odors. [Cal Code 114276 (c)]

- g. Public toilet facilities shall be provided in each permanent food facility when there is onsite consumption of food or when the food facility has more than 20,000 square feet of floor space. A food facility with more than 20,000 square feet of floor space shall provide at least one separate toilet facility for men and one separate toilet facility for women. [Cal Code 114276]
- h. Toilet rooms shall be vented to the outside air by means of an open-able screened window, an airshaft or a light switch-activated exhaust fan, consistent with the requirements of local building codes. [Cal Code 114149 (b)]

### **Designated Employee Areas/Lockers**

- a. Areas designated for employees to eat or drink (break rooms) shall be located so that food, equipment, linens, and single-use articles are protected from contamination. [Cal Code 114256(a)]
- b. Lockers or other suitable facilities shall be located in a designated room or area where contamination of food, equipment, utensils, linens, and single-use articles cannot occur. [Cal Code 114256.1 (b)]
- c. Dressing rooms or dressing areas shall be provided and used by employees if the employees regularly change their clothes in the facility. [Cal Code 114256.1(b)]
- d. Restricted food service facilities (i.e. Bed and Breakfast or Homestay facilities) and nonpermanent food facilities are not required to provide lockers, etc., but no person may store clothing or other personal effects in any area used for the storage or preparation of food. [Cal Code 114256.1(c)]

### **Exterior Doors and Windows**

- a. All exterior doors shall be well fitted and self-closing to effectively prevent the entrance of flies, rodents and vermin. [Cal Code 114259]
- b. It is recommended that all windows that open into food preparation and storage areas, warewashing areas, and utensil storage be equipped with a 16-mesh-per square inch screen material to prevent the entrance of flying insects if capable of being left open.

### **Pass-through Windows**

- a. Pass-through window service openings shall be limited to 216 square inches each. Pass-through windows of up to 432 square inches are approved if equipped with an air curtain device. It is important to measure only the actual opening to determine compliance and not measure the entire window. [Cal Code 114259.2]
- b. Food service pass-through window openings should be equipped with a self-closing screen or window, or an automatic switch-activated air curtain which will produce an air flow eight (8) inches thick at the discharge opening and with an air velocity of not less than 600 FPM (feet per

minute) across the entire opening measured at a point three (3) feet below the air curtain. (Window openings must be closed when not in use.) [Cal Code 114259.2] [State of California, Food and Drug, Circular 80-7]

- c. The minimum distance between the pass-through window openings may not be less than eighteen (18) inches. [Cal Code 114259.2]
- d. The counter surface of the pass-through window must be smooth, easily cleanable and free of channels and crevices. [Cal Code 114259.2]
- e. Screening, if used, should be at least 16-mesh-per square inch.

### Delivery and Cargo Doors

- a. Overhead air curtains must be provided when delivery doors remain open for an extended period of time and when necessary to exclude insects, dust, dirt and fumes. [Cal Code 114259]
- b. An air curtain installed inside the building shall produce a downward and outward air flow not less than three (3) inches thick at the nozzle with an air velocity of not less than 1600 FPM (feet per minute) across the entire opening at a point three (3) feet above the floor. [State of Calif., Food and Drug Circular 80-7]
- c. An air curtain is installed outside the building, shall produce air at the same velocity (1600 FPM) of air directed straight down over the entire door opening. The air curtain shall turn on automatically when the door is opened. [State of Calif., F&D Circular 80-7]
- d. Large cargo type doors shall not open directly into a food preparation area. Cargo type doors that open into any food warehouse of a food facility may only be open during deliveries. [Cal Code 114266 (a)]

**NOTE:** An overhead air curtain is not a substitute device to permit a door to remain open.

### Lighting

- a. In every room and area in which any food is prepared, manufactured, processed or packaged, or in which utensils are cleaned, sufficient natural or artificial lighting shall be provided to produce the following light intensity:
  - i. 10-footcandles: Walk-in refrigeration units and dry storage areas
  - ii. 20-footcandles: At a surface where food is provided for consumer self-service, or where fresh produce or prepackaged foods are sold or offered for consumption, inside equipment such as reach-in and under-counter refrigerators, at a distance of 30 inches above the floor in areas used for handwashing, warewashing, and equipment and utensil storage, and in toilet rooms.

**NOTE:** The food facility must be capable of providing **50-footcandles of light in all areas while cleaning, although the light intensity may be lowered at other times as specified above.**

- b. Light bulbs shall be shielded, coated, or otherwise shatter-resistant in areas where there is non-prepackaged ready-to-eat food, clean equipment, utensils, and linens, or unwrapped single-use

articles. [Cal Code 114252.1 (a)]

- c. Shielded, coated, or otherwise shatter-proof bulbs are not required in areas used only for storing prepackaged food in unopened packages, if the integrity of the packages cannot be effected by broken glass falling into them and the packages are capable of being cleaned of debris from broken bulbs before the packages are open. [Cal Code 114252.1(b)]
- d. Infrared and other heat lamps must be protected against breakage by a shield surrounding and extending beyond the bulb so that only the face of the bulb is exposed, or by using approved coated shatter-resistant bulbs. [Cal Code 114252.1(c)]

## Water

- a. An adequate, protected, pressurized, potable supply of hot water and cold water shall be provided. The water supply shall be from a water system approved by the health officer or the local enforcement agency. Hot water must be supplied at a minimum temperature of 120°F as measure at the faucet. [Cal Code 114192 (a)]
- b. In sizing the water heater, the peak hourly demands for all sinks, dishwashing machines, etc., are added together to determine the minimum required recovery rate. [Cal Code 114195]. **Refer to water sizing guidelines.**
- c. The potable water supply must be protected with a backflow or back-siphoning protection devices when required by applicable plumbing codes. [Cal Code 114192(c)]
- d. Where the water is used only for handwashing, only warm water must be supplied (100°F). [Cal Code 114192.1(d)]
- e. Hoses for conveying potable water must be constructed of non-toxic materials, must not be used for any other purpose, and must be clearly labeled as to its use. [Cal Code 114192 (b)]

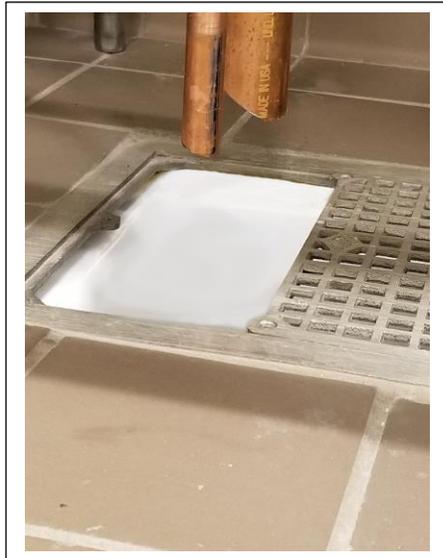
## Backflow Protection

An approved backflow prevention device shall be properly installed upstream of any potential hazard between the potable water system and a source of contamination (e.g., all threaded water outlets, mop sinks, sprayers, dishwashers, etc.). [California Plumbing Code] An air-gap used as a backflow prevention method, between the water supply inlet and the flood level rim of any plumbing fixture, equipment, or non-food equipment, must be at least twice the diameter of the water supply inlet and may not be less than one-inch. [Cal Code 114193.1]

## Indirect Waste Receptors

- a. All steam tables, ice machines and bins, food preparation sinks, warewashing sinks, display cases, and other similar equipment that discharge liquid waste shall be drained by means of indirect waste pipes.  
Condensate and liquid waste from food preparation equipment and sinks, utensil sinks, dishwashers, dipper wells, steam tables, ice machines, beverage dispensers, refrigeration condensers and similar equipment must be drained by indirect drainage into a floor sink or other approved waste receptor. Common waste receptors include funnel drains for slow-draining walk-

in refrigerators, and mop sinks used to catch water heater wastewater. Warewashing sinks may be directly plumbed to the sewer line if required by local building officials. [Cal Code 114193 (a)] [UPC 601 (b)]



Indirect waste drain connection (floor-sink flushed to the floor)

- b. The floor sink or other approved indirect waste receptors should be located to be readily accessible for inspection and cleaning. [Cal Code 114199] Equipment should be located at least within fifteen (15) feet.
- c. In general, floor should be installed flush with the floor sink to prevent tripping hazards and prevent harborage of dirt and debris, however some jurisdictions may require floor sinks to be raised above finished floor surfaces. Contact local plumbing or building official.

### Sewage Disposal, Grease Traps and Interceptors

- a. All liquid waste, including “gray water” and “black water” generated by a food establishment, shall be disposed of through the approved plumbing system and must discharge into either a public sewer system or to an approved private sewage disposal system. [Cal Code 114197]

NOTE: Check with local health, building, sanitary or public works agencies for information or regulations regarding special sewerage, grease trap and interceptor requirements. The California Plumbing Code now refers to “grease traps” as Hydro-mechanical Grease Interceptors. “Grease interceptors” are now referred as Gravity Grease Interceptors.

- b. Sizing of hydro-mechanical grease interceptors and gravity grease interceptors are now based on Drainage Fixture Values assigned by the California Plumbing Code. **Please contact the local sewer authority for interceptor sizing approvals.**

### Equipment

- a. All new and replacement equipment shall meet or be equivalent to approved applicable sanitation standards. Equipment design, construction and installation are subject to approval by

the enforcement officer. [Cal Code 114130]

- b. All utensils, display cases, windows, counters, shelves, tables, refrigeration units, sinks, dishwashing machines and other equipment or utensils used in the preparation, sale, service and display of food shall be made of nontoxic, non-corrosive materials and shall be constructed, installed and maintained to be easily cleaned. [Cal Code 114130.1]
- c. Equipment shall be installed so as to facilitate cleaning under and around the equipment, and of all the adjacent surfaces. Equipment should be sealed to adjacent walls and equipment. Floor-mounted equipment that is not easily movable shall be sealed to the floor or elevated on legs that provide at least six (6) inches clearance between the floor and the equipment [Cal Code 114130, 114169]

It is recommended that all floor mounted equipment shall be placed on NSF approved casters, minimum six (6) inch high easily cleanable legs or be completely sealed in position on at least a four (4) inch high continuously coved base or concrete curb. [See Appendix B] [NSF standard 2]

## Refrigeration

- a. All reach-in and walk-in refrigeration and freezer units shall be adequate in capacity and usage to meet the needs of the proposed operation and shall:  
[Cal Code 114153, 114130] [NSF standard 7]
  - i) Be specifically constructed for commercial use and shall meet or be equivalent to
  - ii) applicable ANSI (NSF) standards. Domestic model refrigerators and freezers will not be accepted. [Cal Code 114130]
  - iii) Have shelving that is nonabsorbent, corrosion resistant, easily cleanable and shall meet or be equivalent to applicable ANSI (NSF) standards. Wood is not acceptable. [Cal Code 114130.1, & 114130.4]
  - iv) Be provided with an accurate, readily visible thermometer. [Cal Code 114157, 114159]
  - v) Drain condensate and other liquid waste in a sanitary manner to a floor sink or other approved device by an indirect connection located outside the refrigerator and freezer units. Condensate may be drained to a properly installed and functioning evaporator. [Cal Code 114193]
  - vi) Open into an approved area of the food facility, (for new facilities, no refrigeration units located outside, including walk-in units). [Cal Code 114049]
- b. Walk-in refrigeration and storage freezer units shall also:
  - i) Be designed to be closed and sealed to the floor or be constructed integral with the
  - ii) floor. Coved bases shall be provided at the intersection of interior floors and walls. [Cal Code 114169 & 114268] [NSF standard 7]
  - iii) Be flushed or sealed to walls and/or ceiling as needed to prevent rodent and vermin harborage or inaccessible areas. [Cal Code 114169 & 114259]

- iv) Have non-corrosive shelving that is at least six (6) inches above the floor and shall meet or be equivalent to applicable NSF standards. Wood is not acceptable.
- v) Have floor drains and floor sinks located outside units, when they are required. [Cal Code 114193, 114269, & 113715]

## Sinks

- a. When a sink is installed next to a wall, the integral metal backsplash shall be sealed to the wall. [Cal Code 114169]
- b. Hot and cold water under pressure shall be provided through a mixing valve to each compartment of the following sinks:

### Warewashing Sinks

Where multi-service kitchen utensils (i.e. pots, pans, etc.) are used, a minimum three (3)-compartment stainless steel sink with dual integral stainless steel drainboards shall be provided. [Cal Code 114099 (a)]

The sink must be capable of accommodating the largest utensil to be washed and the drainboards shall be as large as the largest sink compartment. A minimum compartment size of approximately 18 x 18 x 12 inches deep will generally be adequate for most utensils. [Cal Code 114099 (b)]

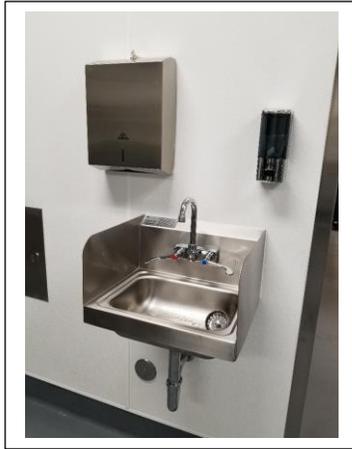
NOTE: A three (3)-compartment sink may be required within each separate section of a large food establishment, which handles unpackaged foods (i.e., deli, meat, bakery, bars, oyster bars, etc.).

### Food Preparation Sink

Food facilities needing a separate sink for food preparation such as, but not limited to, thawing, washing, or soaking shall have a food preparation sink that drains by means of an indirect connection. Minimum dimensions of 18 inches by 18 inches in length and width and 12 inches in depth with an integral drainboard or adjacent table at least 18 by 18 inches in length and width. [Cal Code 114193(a), & 114153(b)(2)] [UPC 601 (b)]

### Handwashing Sinks

Handwashing sinks shall be provided in each food preparation area, sufficient in number and conveniently located so as to be accessible at all times for use by food handlers (i.e., deli, meat, bakery, sushi bar, oyster bar, etc.). The handwashing facility shall be separated from the warewashing sink by a metal splashguard with a height of at least 6 inches that extends from the back edge of the drainboard to the front edge of the drainboard, with the corners of the splashguard barrier to be rounded. No splashguard is required if the distance between the handwashing sink and the warewashing sink drainboards is 24 inches or more. [Cal Code 113953]



Typical hand-sink installation with splash guards in between

Handwash sinks must be provided in or adjacent to toilet rooms. [Cal Code 113953.2]

Soap and single-use sanitary towels shall be provided in permanently installed dispensers at the handwashing sinks. [Cal Code 113953.2]

Handwashing sinks shall have such water provided from a combination faucet, or water from a premixing faucet which supplies warm water for a minimum of fifteen (15) seconds while both hands are free for washing. [Cal Code 113953]

### **Janitorial Sink**

Permanent food facilities shall be equipped with at least one of the following to be used exclusively for general cleaning purposes and for the disposal of mop bucket waste and other liquid waste:

- i. A curbed cleaning facility
- ii. A janitorial sink [Cal Code 114279(a)]

The sink shall be located so as not to contaminate any food preparation areas, food storage areas, utensils or equipment. [Cal Code 113980 & 114290]

The mixing valve faucet shall be equipped with a backflow prevention device. [Cal Code 114190]

### **Dishwashing and Glass Washing Machines**

An area should be provided for scrapping utensils and equipment, as circumstances require. An overhead pre-rinse sprayer with scupper tray, sink or garbage disposal will satisfy this requirement. [Cal Code 114099.1(a)(b)]

Dishwashing machines may be connected directly to the sewer immediately downstream from a floor drain or they may be drained through an approved indirect connection. [Cal Code 114193 (d); UPC 704.3]

Spray type dishwashing and glass washing machines which are designed for a hot water bactericidal rinse shall be capable of achieving a utensil surface of 160°F as measure by an

irreversible registering temperature indicator. These machines normally require an approved type II exhaust hood. [Cal Code 114099.7 (a) & 114149.2] [NSF standards 3]

Spray type dishwashing and glass washing machines that are designed for a chemical bactericidal rinse shall be capable of operating in accordance with its approved applicable sanitation listing. The manufacturer's data plate shall be affixed to the machine, easily accessible and readable. [Cal Code 114101 (a) & NSF standard 3]

Dishwashing machines must have two (2) integral stainless steel drainboards or dish-tables\*, one for soiled utensils and one for clean utensils. The drainboards shall be sloped and drained to an approved waste receptor. [Cal Code 114103 (a)]

For glass washing machines and undercounter dishwashing machines, there shall be two (2) metal drainboards, one for soiled utensils and one for clean utensils, located adjacent to the machine. The drainboards shall be sloped and drained to an approved waste receptor. [Cal Code 114103 (b) (e)]

Drainboards or dish tables shall be large enough to adequately store all utensils above the floor at all times or additional approved shelving, racks or dish-tables shall be provided in the dishwashing area for this purpose. [Cal Code 114178, & 114103]

A minimum of a three (3)-compartment stainless steel sink with dual integral metal drainboards is required in addition to any dishwashing machine. [Cal Code 114095, & 114099]

When a dish-table is installed next to a wall, the integral metal backsplash shall be sealed to the wall. [Cal Code 114103(d), 114169 (a)(3)]

## **Dipper Well**

A cold running water dipper well shall be provided, if scoops or other reusable serving utensils are stored in water. The dipper well shall be drained by means of an indirect connection. [Cal Code 114119 & 114193.1]

## **Ventilation**

- a. All areas of a food facility shall have sufficient ventilation to facilitate proper food storage and to provide a reasonable condition of comfort for each employee, consistent with the job performed by the employee. [Cal Code 114149 (a)]
- b. Toilet rooms shall be vented to the outside air by means an openable, screened window, an airshaft, or a light-switch activated exhaust fan, consistent with the requirements of local building codes [Cal Code 114149(b)]
- c. Mechanical exhaust ventilation shall be provided over all cooking equipment as required to effectively remove cooking odors, steam, heat, grease, smoke, and vapors at the same time. Mechanical ventilation shall be installed and maintained in accordance with the California Mechanical Code. Makeup air shall be provided at the rate exhausted. [Cal Code 114149.1(a)]

## Ventilation Hood Systems

- a. Every hood shall be installed to provide for through cleaning of all interior and exterior surfaces. [Cal Code 114149.2]
- b. Exhaust ventilation systems in food preparation and warewashing areas shall be designed to prevent grease or condensation from draining or dripping onto food, equipment, utensils, single use articles, and linens. [Cal Code 14149.2]

## Heating, Ventilating, Air Conditioning System Vents

- a. Heating, ventilating, and air conditioning systems shall be designed and installed so that make-up air intake and exhaust vents do not cause contamination of food, food-contact surfaces, equipment, or utensils and do not create air currents that cause difficulty in maintaining the required temperatures of potentially hazardous foods. [Cal Code 114149.3]
- b. Filters or other grease extracting equipment shall be designed to be readily removable for cleaning and replacement if not designed to be cleaned in place. [Cal Code 114149.3(c)]
- c. Every joint and seam shall be substantially tight. No solder shall be used, except for sealing a joint or seam. [Cal Code 114149.3 (d)]
- d. When grease gutters are provided they shall drain to a collecting receptacle fabricated, designed, and installed to be readily accessible for cleaning. [Cal Code 114149.3 (e)]
- e. Exhaust hood ducting shall meet the following requirements [Cal Code 114149.3 (f)]:
  - i. All seams in the duct shall be completely tight to prevent the accumulation of grease.
  - ii. The ducts shall have sufficient clean-outs to make the ducts readily accessible for cleaning.
  - iii. All ducts in the exhaust system shall be properly sloped.

Refer to California Mechanical Code Chapter on Commercial Kitchen Ventilation System for construction requirements and CCDEH Recommendations for Mechanical Exhaust Ventilation and Hood Systems for Commercial Food and Utensil Heat Processing Equipment guidelines."

### \*APPENDIX NOTE\*

In addition to Environmental Health, please contact the local building/fire jurisdiction for ventilation hood requirements and/or other additional requirements, as well as illustrating equipment plan layout, equipment checklist, and room finish schedule.