



# CONSTRUCTION GUIDE FOR FOOD ESTABLISHMENTS

## SANTA CRUZ COUNTY HEALTH DEPARTMENT - ENVIRONMENTAL HEALTH SERVICES

PLAN REVIEW OFFICE: Santa Cruz County Health Department  
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### INTRODUCTION

This construction guide is available to any person intending to construct or remodel a food establishment in Santa Cruz County. It is intended as a general overview of our requirements and should not be considered all inclusive. Please contact our office at the above number, if you require further information regarding your particular plan.

### PLAN CHECK FEES

New Construction:	\$300.00	Plans must be sealed by a registered engineer or architect.
Remodel (major):	\$300.00	Plans must be sealed by a registered engineer or architect.
Remodel (minor):	\$300.00	May be prepared by a non-registrant.

A remodel is an alteration to the structure or equipment of an existing food establishment (this information is to be confirmed by Environmental Health's files or by a site survey or inspection).

### PLAN SUBMITTAL

**NOTE:** USE WHITE PAPER ONLY, DARK INK OR LEAD. MINIMUM SIZE OF PLAN MUST BE 16 X 24 INCHES.

BEFORE CONSTRUCTING, ENLARGING, ALTERING, OR CONVERTING ANY BUILDING FOR USE AS A FOOD ESTABLISHMENT, COPIES OF DETAILED PLANS AND SPECIFICATIONS MUST BE SUBMITTED TO THE SANTA CRUZ COUNTY HEALTH DEPARTMENT, ENVIRONMENTAL HEALTH SERVICES, 2150 N. CONGRESS DRIVE, NOGALES, AZ 85621.

Plans shall be drawn to scale (e.g. 1/4" = 1'); if no scale, give all pertinent dimensions. Plans submitted shall include the following:

1. Complete floor plan with plumbing and electrical outlets and electric panels.
2. Complete equipment layout, including elevations of equipment.
3. Complete exhaust ventilation plans including make-up air.
4. Finish schedule for walls, ceilings, and floors that indicates the type of material, the surface finish, the color, and the type of coved baseboard at the floor-wall juncture.
5. Show toilet rooms and location in relation to food preparation area.
6. Plumbing site plan.

Plans that are incomplete and plans that have a multitude of changes will be returned for revision before approval may be granted.

If any changes are desired after approval has been obtained, additional approval must be obtained for such changes.

Approved materials and good workmanship are significant factors in the evaluation and approval of food establishment construction and equipment installation.

## FINAL INSPECTION

Upon completion of 100% of the construction, including all finishing work, you must call the Sanitarian assigned to review your plans to arrange for a final inspection. You will not be issued a Health Permit until you pass a final inspection. In no case should a final inspection be requested less than 2 working days prior to the proposed opening of the establishment.

## GENERAL CONSTRUCTION AND EQUIPMENT REQUIREMENTS

The plans shall show and specify in detail the following:

1. **FLOORS:** Floors in food establishments (customer's area requirements are less stringent) shall be smooth and impervious to water, grease and acid, and of easily cleanable construction. A coved base is required in all kitchen food preparation, janitorial and toilet areas and possibly other areas, depending upon the use activities. Samples and specifications of flooring other than concrete shall be submitted with plans. concrete floors are acceptable when properly installed, smooth finished and sealed with approved commercial concrete sealers specific for this purpose.
2. **WALLS:** Walls in kitchen, food preparation areas and dishwashing areas shall be smooth and nonabsorbent, with a light colored, easily cleanable finish. (Note: brick, concrete block or rough concrete and plaster are not acceptable). Material other than smooth plaster or putty coat plaster, drywall with sealed and taped joints, or plywood with properly sealed joints requires submission of sample. All surfaces shall be sealed with a high gloss enamel, epoxy, varnish, or other approved sealer or wall covering. Other wall surface materials are subject to evaluation and compliance with the same or similar requirements prior to installation. Wall surface requirements in customer areas are less stringent. Metal, ceramic tiles, F.R.P. panels are also approved in heavy use wet or cooking areas.
3. **CEILINGS:** Ceilings in kitchen, food preparation, and utensil washing area shall be smooth and nonabsorbent, with a light colored, washable finish. Acoustical tile may be approved if:
  - a. It complies with the above requirements.
  - b. **A SAMPLE IS SUBMITTED AND APPROVED.**
4. **CONDUIT:** All plumbing, electrical, and gas lines shall be concealed within the structure to as great an extent as possible. Where it is not possible, all runs shall be at least 1/2 inch away from the walls or ceiling and 4 - 6 inches off the floor. Where conduit or pipe lines enter a wall, ceiling or floor, the opening around the line shall be tightly sealed, Conduit or pipe lines shall not be installed across any aisle, traffic area or door opening at or near the floor surface.

Multiple runs or clusters of conduit or pipe lines shall be furred in, encased in an approved runway or

other Environmental Health Department approved sealed enclosure.

5. **HOODS AND DUCTS:** A hood shall be installed at or above all food heat processing equipment. All hoods, ducts, and exhaust outlets shall be installed in accordance with the current edition of the Uniform Mechanical Code.

All joints and seams shall be tight or soldered for ease of cleaning. Riveted seams are not acceptable. Mechanical exhaust ventilation shall be required at or above all cooking equipment such as ranges, griddles, ovens, deep fat fryers, barbecues and rotisseries to effectively remove cooking odors, smoke, steam, grease and vapors. All seams around hood metal work shall be tight and properly sealed.

- a. **Canopy-Type Hoods:** Canopy type hoods shall not be more than 7 feet above the floor and shall not be more than 3 1/2 feet above the cooking surface. The hood shall extend at least 6 inches beyond all sides of the units served. It shall have grease troughs or drip pans that are easy to clean.
- b. **Non-Canopy-Type Hoods:** Non-canopy type hoods will be approved providing they are constructed to be easily cleanable and they comply with the minimum exhaust air velocity requirements. Shielding at the ends may be necessary to prevent interference from cross drafts.
- c. **Make-Up Air:** Make-up air shall be provided at least equal to 80% of that amount which is mechanically exhausted.
- d. **Fire Extinguishing System:** Fire extinguishing systems may be required by local fire department codes. They shall be installed so as to not obstruct the easy cleaning of the hood-duct system.
- e. Walls behind cooking equipment shall be covered with metal or ceramic tile and have a coved metal or tile floor-wall juncture.

6. **REFRIGERATION:** All refrigeration units shall comply with the following:

- a. Be capable of operating below 41°F at all times.
- b. Be provided with an accurate thermometer.
- c. Have shelving that is nonabsorbent, noncorroding, and easily cleanable. No wood construction.
- d. Open into an approved food preparation area of the building.
- e. Have smooth, nonabsorbent and easily cleanable surfaces. Metal, ceramic tiles, and F.R.P. board are the only interior materials accepted.
- f. Condensate waste from reach-in units may be drained into a floor sink, floor drain or other approved plumbing fixture.
- g. Freezers must maintain a temperature of 0°F at all times.

Walk-in Boxes Shall Also:

- a. Have a cove base with a radius of at least 3/8 inch at floor/wall juncture (metal, tile, cement or factory installed rubber are the only materials to be used).
  - b. Have shelving that is at least 6 inches off the floor with round metal legs or cantilevered from the wall for ease of cleaning.
7. **ICE MACHINES:** All ice machines shall be located within the building in an easily cleanable area and shall be drained to a floor sink or floor drain. Leave a minimum one (1") inch air gap between bottom of drain lines and tops of floor drains.
8. **FLOOR SINKS:** Floor sinks or drains shall be installed flush with the floor surface or as required by the local plumbing departments. All condensate and similar liquid waste shall be drained by means of indirect waste pipes into an open floor sink. Horizontal runs of drain lines shall be at least 1/2 inch from the wall and 4 to 6 inches off the floor and shall terminate at least one inch above the overflow rim of the floor sink. Floor sinks shall be located so that they are readily accessible for inspection, cleaning and repair. The floor sink must be within 15 feet of the drain opening of the equipment served. Waste lines may not cross any aisle, traffic area or door opening at or near the floor. Floor sinks or floor drains are not permitted inside refrigeration walk-in boxes.

9. **EATING AND DRINKING UTENSIL SINKS:** Where multi-use eating and drinking utensils are washed by hand (see exception when dishwasher is used) a 3-compartment sink with dual all metal drain boards shall be provided. The drain boards shall be not less than 16 inches in length. The sinks must be large enough to accommodate the utensils. Where large numbers of pots and pans are used, an additional 3-compartment sink is required.

**KITCHEN UTENSIL SINK:** Where multi-use kitchen utensils (pots and pans) are washed by hand, there shall be provided at least a 3-compartment sink with drain boards of all metal construction. The minimum compartment size shall be at least 18" x 12" deep with minimum 18 inch drain boards, however, the sink must otherwise be capable of holding the largest utensil and the drain boards shall be as large as the largest sink compartment that is over 18 inches. All sinks must meet N.S.F. standards. Sink faucet(s) must reach all compartments and be mixing type.

10. **DISHWASHING MACHINES:** All dishwashing machines must be approved by the National Sanitation Foundation. All spray type machines which are designed for a hot water bactericidal rinse shall be provided with a booster heater that meets the requirements of Standard No. 5 of the National Sanitation Foundation, or be connected to an approved re-circulating water system which is capable of maintaining the rinse water at not less than 180°F. The dishwasher must also be provided with thermometers and pressure gauges to indicate the proper water flow pressures, and temperatures. Appropriate valves for testing the accuracy of the gauges and thermometers shall also be properly installed. Dishwashers are required to drain into a floor sink unless equipped with a scrap tray with an overflow design.
11. **JANITORIAL SINK:** A single-compartment wall-mounted, janitorial sink with hot and cold running water shall be provided and installed for general clean-up activities in all food handling businesses. This sink shall be used for no other purpose.
12. A food preparation sink is required. This sink shall be of sufficient capacity to accommodate the cleaning of food. This sink shall only be used for food preparation and no other purpose.
13. **HANDWASHING SINKS:** Lavatory sinks shall be provided in the food preparation areas. Soap and towels shall be provided in single-service dispensers at the lavatory sink.
14. All sinks shall be properly trapped or drained through an approved air gap. Where required, back-

flow devices shall be installed.

15. **GENERAL PURPOSE HOT WATER:** Provide a hot water system capable of supplying 120°F temperature water to all sinks, hand lavatories, and other clean-up facilities during periods of maximum demand. Water temperature quoted is minimal and may be higher.
16. **DIPPER WELL:** A running water dipper well must be provided if scoops are used for dipping frozen desserts. The dipper well shall be drained to a floor sink. (Clean and dry storage allowed for limited or small operation).
17. **WINDOW & DOOR SCREENS:** All windows that can be opened, e.g. restroom windows, shall be screened with not greater than 16 mesh screen. If doors are to be left open, screens are required.
18. **SERVICE OF FOODS DIRECTLY TO OR BY THE CUSTOMER:** Sneeze guards shall be installed at all displays of unpackaged foods that are accessible for service to or by customers. See N.S.F. bulletin for detailed requirements of size and design.
19. **BACK-UP FOOD STORAGE:** Adequate and suitable floor space shall be provided for the storage of food and beverages. In addition to working storage (i.e., wall mounted shelves and cabinets over food preparation equipment or under counter storage shelves), additional back-up storage must be provided. As a guide to the adequacy of back-up storage space, reference the following:
  - At least 25% of the food preparation area, or one square foot per seat, whichever is greater, but not less than a total of 100 square feet of floor space.
  - At least 32 linear feet of shelving units, a minimum of 18 inches deep, should be installed in the minimum 100 square feet of floor space provided. (Check with Environmental Health for recommended number of tiers for shelving units.)

Shelving shall be constructed in an easily cleanable design of smooth metal or wood which has been finished and sealed. Shelves installed on a wall shall have at least a one inch open space between the back edge of the shelf and the wall surface, otherwise, the back edge of the shelf shall be sealed to the wall with silicone sealant or equivalent. The lowest shelf shall be at least 6 inches above the

floor, with a clear unobstructed area below or the upper surface of a completely sealed 4 inch minimum height base. All shelves located below a counter or work surface shall be set back at least 2 inches from the drip line of the surface above. If shelves are supported by legs on the floor, the legs shall be round metal or tubular.

20. **RESTROOMS:** Toilet facilities shall be provided, on the premises of each food establishment, convenient for the employees. The floors, walls, and ceiling shall have surfaces that are smooth, nonabsorbent, light in color and easily cleanable. Hand-washing lavatories shall be provided within or adjacent to the toilet rooms. The lavatory shall be provided with hot and cold water in a mixing type faucet. Soap and towels in single service dispensers shall be provided at the lavatory sink. The restrooms shall be provided with tight fitting, self-closing doors. All toilet rooms shall be provided with ventilation; if adequate ventilation cannot be provided by an open window, mechanical ventilation will be required. All restrooms must have garbage receptacles. If the restroom is to be utilized by women, the restroom must have a covered garbage receptacle.
  
21. **DELIVERY DOORS:** All delivery doors leading to the outside shall open outward, be self-closing, and may require an overhead air curtain. The air curtain, when installed inside the building, must produce a downward-outward air velocity of 750 feet per minute minimum over the entire opening down to a point 3 feet above the floor and turn on automatically when the door is opened. When installed outside the building, the same velocity of air must be directed straight down over the entire door opening.
  
22. **CUSTOMER'S DOORS:** All entrance doors leading to the outside shall open outward and be self-closing.
  
23. **LIGHT:** All bar and fountain glass washing sinks, all dishwashing areas, and all food preparation areas, shall be provided with at least 10 foot candles of light, 30 inches above the floor. Utensil storage rooms, toilet rooms, and dressing rooms shall be provided with at least 20 foot candles of light. All lights in food preparation and food storage areas must be properly shielded.
  
24. **EQUIPMENT:** All show and display cases, counters, shelves, tables, refrigeration equipment, sinks and other equipment used in connection with the preparation, service and display of food, shall be

made of nontoxic materials and so constructed and installed as to be readily cleaned. All equipment shall be placed on sanitary legs with a minimum height of 6 inches, on a 4 inch coved base, on approved casters or cantilevered from the wall in an approved manner.

25. All equipment design, construction, and installation are subject to Environmental Health's approval. The National Sanitation Foundation standards are used as a guide for equipment evaluation and approval except where strict compliance with the NSF standards is a specific requirement.

All construction must be performed in accordance with applicable building codes, the Uniform Plumbing Code (as currently amended), the Uniform Mechanical Code (as currently amended), and the National Electrical Code (as currently amended).

26. You are directed to familiarize yourself with all requirements of the Santa Cruz County Sanitary Code.