

PLUMAS COUNTY

Guidelines for the Construction of Food Facilities

THIS INFORMATION IS PROVIDED BY
PLUMAS COUNTY ENVIRONMENTAL HEALTH



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INTRODUCTION

The purpose of this guide is to inform prospective business owners, plan designers, and contractors of the requirements of California Retail Food Code (Cal Code) and policies of Plumas County Environmental Health as they pertain to construction and/or renovation of food establishments. Cal Code is the regulatory standard for this document and should be referred to for specific language regarding the construction and operation of food facilities in California.

Pursuant to the California Health & Safety Code, Section 113915, plan approval must be obtained from the Environmental Health before constructing, enlarging, altering, converting or remodeling any building for use as a food facility.

Note: A remodel is defined as an addition, substantial repair, or enlargement to the existing permitted facility. Structural, electrical, or plumbing changes require permits from the appropriate Planning and Building agency.

The use of approved materials and good installation workmanship are significant factors in the evaluation and final approval of a food facility. Facility construction and equipment must meet the basic rule-of-thumb: durable, smooth, non-toxic, protective of food, designed and constructed for ease of cleaning, non-absorbent, and effective in excluding insects and vermin.

PERMIT APPLICATION PROCESS

Step 1: Research and preparation:

- a) Check with the appropriate Planning Department to ensure your proposed business is compatible with the selected location.
- b) Gather required documentation:
 - i) Source of potable water:
 - (1) Municipal Water - Provide a utility clearance letter (will-serve letter) from the municipal water district; OR
 - (2) On-site Water Source - Provide documentation that the water supply is under permit by the California Department of Health Services (DHS) or Plumas County Environmental Health.
 - ii) Method of liquid waste disposal:
 - (1) Municipal Sewer - Provide a copy of a will-serve letter issued by the municipal sewer district, including the size of the grease interceptor required (or a waiver of the grease interceptor requirement); OR
 - (2) On-site Wastewater Disposal System - Provide documentation that the system is of sufficient capacity for the facility and was installed under permit by Environmental Health.
 - iii) Create a sample menu or food product list that describes all food and beverages intended for sale.

Step 2: Consult with Environmental Health:

Consult with an Environmental Health Specialist about the proposed facility. Bring to the meeting: information regarding proposed menu, layout, construction, equipment, water supply, liquid waste disposal, and overall proposed operation of the food facility.

Step 3: Prepare Building Plans:

Plans must be drawn in a professional manner encompassing all applicable requirements of this construction guide and must include sufficient detail and information to demonstrate compliance with Cal Code.

- a) Plans addressing changes to structural elements, electrical loads, and building plumbing may require a certification from a registered professional engineer and must be approved by the Planning and Building Agency.
- b) Plans limited to building internal surface finishes and the location of equipment may be prepared by the building owner or occupant.

Step 4: Start Approval Process:

- a) Submit the following to the appropriate Planning and Building agency:
 - i) Water supply and liquid waste disposal documentation;
 - ii) Sample menu or food product list / menu;
 - iii) Three (3) complete sets of plans with review fees:
- b) Plans must be reviewed and approved by both the Planning and Building agency and Environmental Health.
 - i) The applicant will be notified of plan status following plan review.
 - ii) Incomplete documentation or plans, plans with significant changes, or plans that are otherwise not approved will be returned.
- c) Changes to plans following approval require both Planning and Building agency and Environmental Health approvals.
- d) Approved plans and permits are held for pickup at the Planning and Building agency.

Step 5: Start Construction

Step 6: Schedule Construction Inspections:

All construction and equipment installations are subject to inspection by both the Planning and Building agency and Environmental Health during all phases of construction. Requests for inspections should be coordinated in advance to minimize scheduling conflicts.

- a) 4R (rough framing, plumbing, electrical, and mechanical);
- b) Final:
 - i) The facility conforms to the latest set of approved plans and all construction and trim-out is complete;

- ii) Construction job site cards are on-site and signed off by the Planning and Building agency, and the Fire Department (if applicable).

Step 7: Schedule a Pre-Opening Inspection:

- a) Approval of the Health Permit is dependent upon the following:
 - i) The facility is clean and ready to prepare food;
 - ii) All utilities are on (electric, gas, water, sewer);
 - iii) All equipment is in place, clean, operational, and at proper temperature; and
 - iv) All Health Permit fees are paid.
- b) Release of the Alcoholic Beverage Control (ABC) license hold will occur following Health Permit approval.

Step 8: Open for Business!

Within sixty (60) days of opening, one employee, or business owner must obtain Food Handler Certification.

Note: Food handler certifications are applicable to only one facility at a time (with limited exceptions). Environmental Health recommends obtaining a food certification prior to opening. Environmental Health can provide a list of certification options.

SUMMARY OF REQUIRED PLAN ELEMENTS

1) General Plan Specifications:

Draw all plans to scale - min 1/4" = 1' using non-erasable ink or print (no pencil);

The plan set cover page must include:

- The facility name and address;
- The name and telephone number of owner, contractor and/or contact person;
- The square footage of food preparation area;
- The customer seating capacity of the facility;
- The source of potable water (individual well or community water system);
- The method of waste disposal (on-site sewage disposal or municipal sewer district).

2) Site Plan:

Must include: the building perimeter and parking area; exterior trash bin storage location; on-site septic system(s) and/or water supply well(s) as applicable; grease interceptor (if applicable).

3) Facility Floor Plan:

The floor plan must include:

- a) Kitchen / food preparation area(s);
- b) Storage areas: food, dry goods, and equipment storage area(s);
- c) Serving area: waitress station, salad bar, soda dispensing;
- d) Employee and customer restrooms;
- e) Dressing/change area(s) for employees;
- f) Customer seating areas;
- g) Offices (if applicable);
- h) Interior garbage/trash storage areas (if applicable);
- i) Locations of all interior and exterior doors and windows

Note: Spaces such as change rooms, restrooms, and offices can not be used for the storage or preparation of food, food equipment, or utensils.

4) Equipment layout, elevations and details:

Provide a complete equipment layout, including 3-compartment sink(s), food preparation sink(s), hand sink(s), janitorial sink, floor sinks, food preparation table(s), cook line and hood(s), walk-in refrigeration, reach-in refrigeration, etc.

Provide manufacturer specification sheets (cut sheets) for all proposed equipment. Identify on each cut sheet the specific model and options proposed.

5) Plumbing and Electrical Plans:

Provide a complete plumbing layout showing: water source, water lines, water heater(s), sewer connection, waste drains, floor sinks, funnel drains, vents, cleanouts, indirect drain connections, and back flow prevention devices, etc.

Provide a complete electrical layout including the location of electrical and phone panels and transformers. This is required to demonstrate that there are sufficient electrical outlets for proposed equipment (avoid extension cord wiring), and that areas designated as "storage" are not used as office space.

6) Exhaust Ventilation and Air Conditioning Plan:

Mechanical exhaust ventilation is required at or above all cooking equipment and shall comply with the California Mechanical Code, "Part II - Commercial Hoods and Kitchen Ventilation" (commencing with Section 507.0).

Provide a complete exhaust ventilation layout plan and information describing the hood types, hood locations, wall covering, and make-up air for each hood. Provide elevation drawings showing the wall and coving at the back of the hood area and the interface of the hood with the room ceiling.

Indicate the type of comfort heating and cooling in the building, e.g., "refrigerated air conditioning", "evaporative cooling", etc.

7) Interior Finish Schedule:

Provide a finish schedule for all walls, ceilings, and floors. The finish schedule must describe the type of materials, surface finish, and coved base at the floor/wall junctures.

Samples of proposed materials may be required for review before plan approval.

LOCATION	FLOORS	COVED BASE	WALLS	CEILINGS
-Kitchen & Deli Preparation -Buffet & Bar Service -Waitress Stations -Dishwashing & - Janitorial -Indoor Garbage Storage	Commercial sheet vinyl, sealed concrete, or quarry tile	-Four (4) inch continuous self-cove up wall or up to toe kick of counter or equipment that sets flush on the floor **** -Four (4) inch sanitary tile base or radius base for sealed concrete floors	Painted gypsum board smooth, semi-gloss or gloss enamel w/FRP* board behind all sinks (min from the top of the coved base to at least twelve (12) inches above the backsplash)	-T-Bar w/acoustic ceiling tile, smooth, light in color*, non-absorbent, and washable. Sample to be submitted for approval prior to installation, or -Painted gypsum board smooth, light color* semi-gloss or gloss enamel
-Employee Restrooms -Employee Change Room	Commercial sheet vinyl, sealed concrete, or quarry tile	-Four (4) inch continuous self-cove up wall -Four (4) inch sanitary tile base or radius base for sealed concrete floors	Painted gypsum board smooth, light color semi-gloss or gloss enamel w/4' min. ceramic tile or FRP board wainscoting	Painted gypsum board smooth, light color semi-gloss or gloss enamel
Dry Storage & Liquor Storage ***	VCT **	4" vinyl top set coving **	Painted gypsum board smooth, light color semi-gloss or gloss enamel	Painted gypsum board smooth, light color semi-gloss or gloss enamel
Walk-in Refrigerator / Freezer	Sealed concrete	4" continuous self-cove (aluminum or stainless steel)	Manufactured prefabricated wall panel	Manufactured prefabricated ceiling panel

* FRP (fiber reinforced panels) / VCT (vinyl cut tile)
 ** If no plumbing fixtures in room
 *** A room where food is stored only in unopened bottles, cans, cartons, sacks, or other original shipping containers.
 **** If unable to cove up to the equipment, install a min 4" high curbing with 3/8" min radius coved base to elevate equipment.

INTERIOR FINISH AND EQUIPMENT REQUIREMENT DETAILS

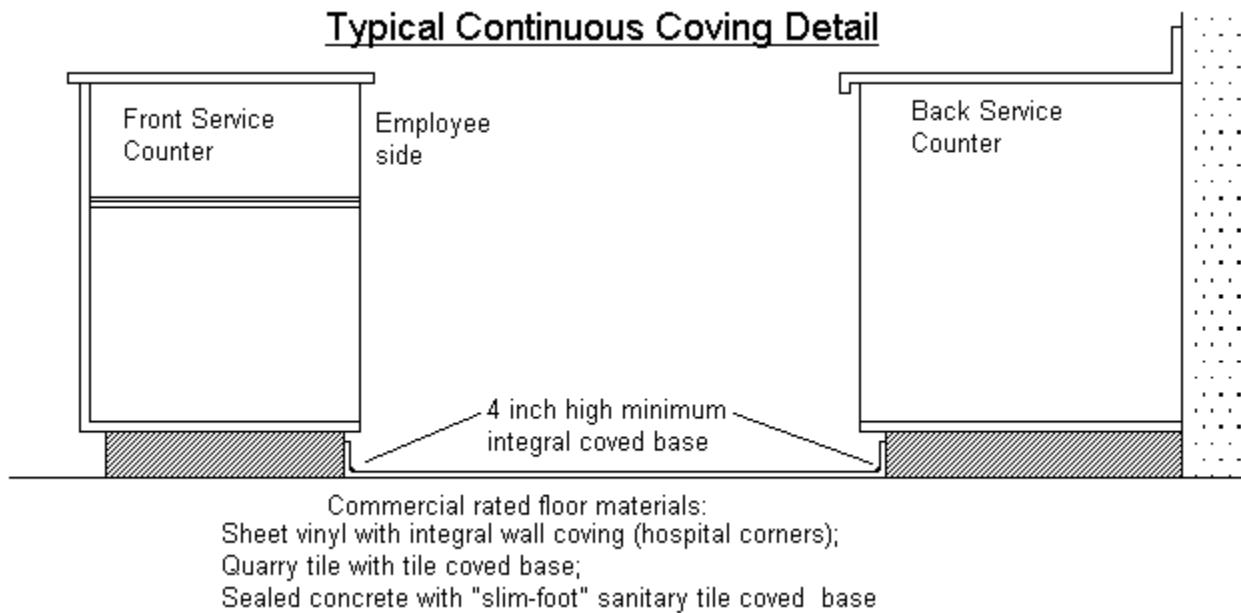
1) General:

- All food related equipment and utensils must meet applicable American National Standards Institute (ANSI), National Sanitation Foundation (NSF) standards, or other equivalent and recognized food equipment standards.[Cal Code 114130(b)]
- In the case of the absence of applicable standards, the equipment design, construction and installation are subject to approval by Environmental Health prior to installation. All used equipment is also subject to approval by Environmental Health prior to installation.

2) Floors:

- a) In areas where food is prepared, packaged, dispensed, or stored in open containers, where utensils are washed, where refuse or garbage is stored, where janitorial facilities are located, these floor surfaces shall be durable, smooth and impervious to water, and of easily cleanable construction. Approved floor coverings include quarry tile, commercial grade sheet vinyl with welded seams and no embossment or patterns, or sealed smooth concrete. Other materials are subject to approval on a case-by-case basis.
- b) The floor surface shall be coved at the wall/floor juncture. The best coving is floor material that continues up the walls at least four (4) inches, forming a radius cove as an integral unit. Recommend vinyl rubber top set base in locations where unopened containers are stored. [Cal Code 114268]

Typical Continuous Coving Detail



See Appendix A for additional flooring examples

- c) Anti-slip floor finishes are acceptable for safety reasons provided they are limited to traffic areas. [Cal Code 114268(e)]
- d) Floors shall be sloped 1:50 and drained to floor drains where floors are water flushed for cleaning and/or where pressure spray methods for cleaning equipment are used. [Cal Code 114269(a)]
- e) When floor drains are added to an existing establishment where the floor surface is not sloped, a two (2) foot surrounding depression/slope to the floor drain may be required. [Cal Code 114269(a)]

3) Walls and Ceilings:

- a) Walls and ceilings (except bar areas, rooms where food is stored in unopened containers, and dining areas) shall be durable, smooth, nonabsorbent and washable (e.g., gloss or semi-gloss enamel paint, epoxy paint, fiberglass

reinforced plastic (FRP), stainless steel, ceramic tile, or other approved materials and finishes).

- b) Recommend that walls and ceilings in food preparation and utensil washing areas be light colored.
- c) Exposed brick, concrete block, rough concrete, rough plaster or textured gypsum board is not acceptable.
- d) Acoustical ceiling tile (t-bar) may be used if the panels meet the requirements of Cal Code section 114271(c). A sample may be required for review.
- e) Walls at, or adjacent to, the cook line shall be one-hour fire rated, durable, smooth and easily cleanable and shall comply with the requirements established in the California Mechanical Code, "Part II - Commercial Hoods and Kitchen Ventilation", Sections 509.2 and 509.4 (e.g., stainless steel, smooth galvanized steel, copper, or smooth glazed ceramic tile w/narrow grout lines). [Cal Code 113730]
- f) Recommend covering the wall behind sinks and dishtables, and walls adjacent to floor mounted mop sinks with a durable waterproof material (e.g., FRP, ceramic tile, stainless steel, etc.) that extends from the top of the coved base to at least twelve (12) inches above the backsplash. [Cal Code 114271(a)]

4) Conduits and Plumbing:

- a) Where conduits or pipelines enter a wall, ceiling or floor, the opening shall be tightly sealed, smooth and easily cleanable. [Cal Code 114271(d)]
- b) Conduits or pipelines shall not be installed across any aisle, traffic area or door opening. [Cal Code 114271(d)]
- c) Recommend that all plumbing, electrical and gas lines are concealed within the building structure to as great an extent as possible. When otherwise installed, they should be mounted or enclosed so as to facilitate cleaning (e.g., at least $\frac{1}{2}$ inch from the wall and six (6) inches above the floor). [Cal Code 114271(d)]
- d) Recommend that all multiple runs or clusters of conduits or pipelines are installed within the walls or encased in an approved sealed enclosure. [Cal Code 114271(d)]

5) Food Protection Equipment:

- 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) Customer access to a food establishment through the food preparation area is permissible provided the route of access shall be separated from the required space by a rail or wall at least three feet high or otherwise clearly delineated. [Cal Code 113984.1]

- c) 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)]
- d) Approved self-service containers shall have tight-fitting, individual covers. [Cal Code 114060(a)]

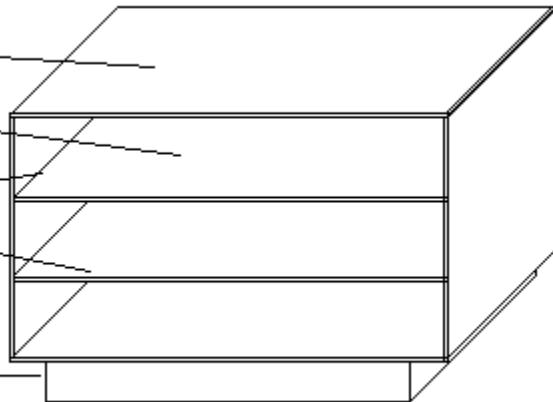
See Appendix B for examples of Sneeze Guards

6) Dry Food and Equipment Storage:

- a) Adequate and suitable space shall be provided and designated for food and food related equipment storage purposes within the confines of the permitted food facility. No external storage containers, sheds, walk-in refrigerators, etc. shall be used for food or food related equipment storage. [Cal Code 114266]
- b) Shelving in dry food and equipment storage areas shall be smooth, durable, easily cleanable, nonabsorbent and vermin tight. [Cal Code 114130.4]

Custom Mill Work Shelving, Cabinets, and Counters

- All wood must be sanded smooth (avoid particle board or rough plywood)
- Seal all surfaces w/light colored gloss or semi-gloss washable paint, or cover with laminate (no contact paper or foil)
- Fill and seal all gaps and joints
- Avoid ledges on shelving or counter facing
- Fixed location shelving or counters must be coved at the base (same as walls and floors)
- Shelving legs must be 6 inches in height that are smooth and easily cleanable
- Movable shelving or counters on caster wheels have no height off floor or coving requirement



- c) The lowest shelf shall be at least six (6) inches above the floor with clear unobstructed area below or shall be boxed and coved forming a curbing with approved floor coving. Unfinished wood is not acceptable. [Cal Code 114175, 114969(a), 114969(b)]
- d) Dollies or pallets are acceptable if they can be moved easily and are smooth, durable, easily cleanable, and nonabsorbent. No unfinished wood surfaces. [Cal Code 114165)]
- e) Recommend sizing shelving needs according to one of the methods listed below (select whichever is greater): [Cal Code 114047(a)]
 - i) A floor area equivalent to 25% of all kitchen space; OR
 - ii) One square foot of floor space per customer seat; OR
 - iii) Ninety-six (96) linear feet of eighteen (18) inch deep shelving is the minimum recommended shelving area for a small food establishment. Additional shelving may be required for larger establishments.

7) Other Required Storage Areas:

a) Clean Linen Storage:

Adequate and suitable space shall be provided for the separate storage of clean and soiled linens. [Cal Code 114185.4]

b) Janitorial Storage:

A room, area or cabinet separated from any food preparation or storage area, or utensil washing or storage area, shall be provided for the storage of all cleaning equipment, supplies and poisonous substances (e.g., mops, buckets, brooms, cleaning compounds, waxes, detergents, bleaches, cleaning compounds, or any other injurious or poisonous materials). [Cal Code 114254(b), 114281]

c) Employee Change Area:

A room, enclosure (e.g., locker, cabinet, etc.) or designated area shall be provided where employees may change and store clothing and personal effects. The room, enclosure or area shall be separated from toilets, food storage, food preparation and utensil washing areas. The floors, walls and ceilings shall have surfaces that are smooth, nonabsorbent and easily cleanable (refer to Floors and Walls above). [Cal Code 114256]

Recommend that the room, enclosure or designated area is sized to accommodate the number of employees.

d) Refuse Storage and Disposal:

i) Garbage and grease waste shall be disposed into adequate, leak proof and rodent proof containers and shall be contained so as to minimize odor and insect development by covering with close fitting lids. [Cal Code 114245.1]

ii) If an interior refuse holding room or area is planned, the following applies:

(1) Floors shall be smooth, durable, grease resistant, nonabsorbent, coved, easily cleanable and sloped to a floor drain discharging to the sanitary sewer. [Cal Code 114245.3]

(2) Walls and ceilings shall be durable, easily cleanable, impervious to grease and moisture, and capable of withstanding the expected impacts. [Cal Code 114271]

(3) The room or enclosure shall be well ventilated. [Cal Code 114149(a)]

(4) Recommend hot and cold running water through a mixing valve protected with a backflow protection is provided and located so that the room or enclosure can be cleaned. [Cal Code 114190]

iii) Recommendations for exterior refuse disposal facilities:

(1) A securable enclosure.

(2) Ground surfaces and enclosure surfaces are durable and cleanable. [Cal Code 114245.4]

(3) A wash down area hose connection with backflow protection.

8) Restroom Facilities:

- a) In each food establishment, there shall be provided clean toilet facilities in good repair for use by employees. [Cal Code 114250]
- b) Food facilities that provide space for consumption of food shall provide toilet facilities for use by patrons, guests, or invitees and shall be so situated that patrons do not pass through food preparation, food storage or utensil washing areas (see exception noted above in "Food Protection Equipment... Customer access to food establishment..."). [Cal Code 114276(b)]
- c) The floors, walls and ceilings shall have surfaces that are smooth, nonabsorbent and easily cleanable (refer to Floors and Walls above). [Cal Code 114268, 114271]
- d) 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)]
- e) Toilet rooms shall not be used for the storage of food, equipment, or supplies. [Cal Code 114250]
- f) Toilet tissue shall be provided in a permanently installed dispenser at each toilet. [Cal Code 114250]
- g) Hand washing facilities shall be provided within or adjacent to toilet rooms and shall be equipped with an adequate supply of hot and cold running water under pressure from a premixing faucet for a minimum of 10 seconds while both hands are free for washing. [Cal Code 114115]
- h) Recommend hot water delivery to each handsink within 15 seconds.
- i) Hand washing cleanser and single use sanitary towels (recommend permanently installed dispensers) or hot air blowers shall be provided at each handsink. [Cal Code 113953.2, 114276(d)]
- j) Toilet rooms shall be vented to the outside air by means of an openable screened window, an air shaft or a light switch-activated exhaust fan, consistent with the requirements of local building codes. [Cal Code 114149(b)]

9) Exterior Doors and Openable Windows:

a) Exterior Walk-Through Doors and Openable Windows:

Doors shall be tight-fitting and self-closing. Openable windows shall have tight-fitted fly screens to effectively prevent the entrance of flies and vermin. [Cal Code 114259]

b) Pass-Through Windows:

Recommend service openings are limited to 216 square inches each. The service openings should not be closer together than 18 inches. Each opening shall have a self-closing solid or screened window. [Cal Code 114259.2]

c) Delivery and Cargo Doors:

All delivery doors leading to the outside shall open outward and be self-closing. Large cargo type doors shall not open directly into a food preparation area.

d) Air Curtains:

- i) Recommend that air curtains are installed at each delivery door as to effectively exclude insects, dust, dirt and fumes. Air curtains should be installed so as to automatically operate when the door is opened.
- ii) Air curtains, when installed should 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. [Cal Code 114259] [State of California, Food and Drug Circular 80-7]

10) Water Supply:

- a) Each food facility shall have a potable water supply system under permit by the California Department of Health Services or Environmental Health. [Cal Code 114189]
- b) An adequate, protected, pressurized, potable supply of hot water at least 120 degrees Fahrenheit (49 degrees Celsius) and cold water shall be provided. Recommend limiting the temperature of water at handsinks to a maximum of 110 degrees F. [Cal Code 114192(a)]
- c) The minimum water heater recovery rate shall be determined by combining the peak hourly demands for all sinks and dishwashing machines. [Cal Code 114195]
- d) Approved backflow prevention devices 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.) [Cal Code 114192(c)]

11) Liquid Waste Disposal:

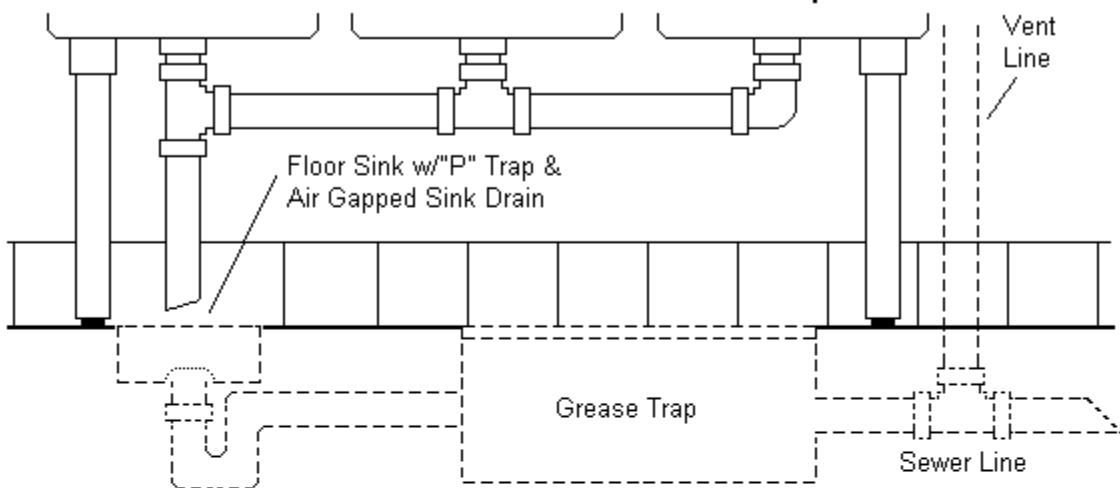
a) Liquid Waste Disposal:

All liquid waste, including sewage generated by a food establishment, shall be disposed of in an approved manner into either a public sewer system or to an approved on-site sewage disposal system. [Cal Code 114197]

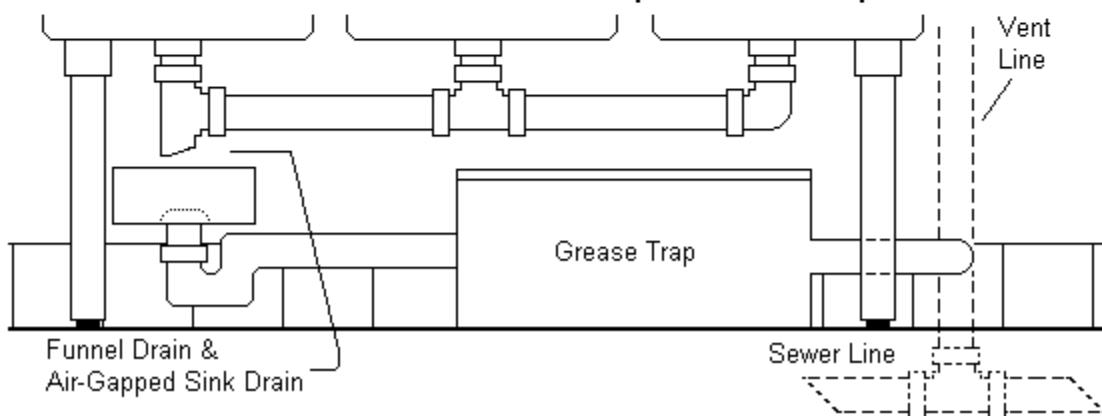
b) Indirect Drain Line Connections:

All food preparation equipment and sinks, utensil washing sinks, dipper wells, steam tables, ice machines and bins, refrigeration condensate, beverage dispensers, and other similar equipment shall discharge their liquid waste to the sanitary sewer system via an air gapped connection into a floor sink or funnel drain (exception: refrigeration units with approved evaporators). [Cal Code 114193]

Floor Sink and In-Floor Grease Trap



Funnel Drain and Floor-top Grease Trap



c) Grease Traps and Interceptors:

- i) Environmental Health requires grease traps or interceptor tanks for all food facilities connected to on-site sewer systems.
- ii) Community sewer agencies will usually require grease traps or grease interceptor tanks for any grease producing food facilities connected to their sewage collection system.
- iii) Under sink grease traps must be located outside of food preparation areas. [Cal Code 114201]

12) Lighting:

In every room and area in which any food is prepared, manufactured, processed or packaged, or in which utensils are cleaned, or restrooms, shall have sufficient natural or artificial lighting provided to allow for normal activities, effective cleaning and inspection. Light fixtures shall be of shatterproof construction or protected with shatterproof shields and be readily cleanable. [Cal Code 114252, 114252.1]

13) Ventilation:

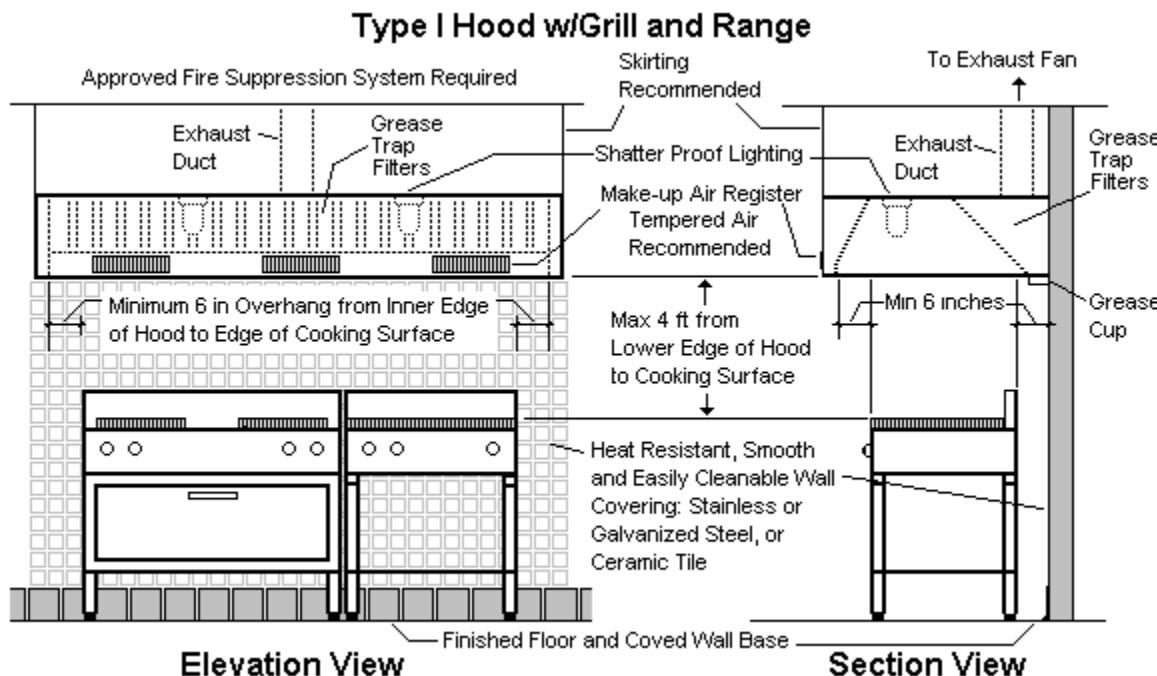
a) General:

There must be adequate ventilation to remove gases, odors, steam, heat, grease, vapors and smoke from all rooms of the food facility including: food preparation areas, toilet rooms, janitorial areas, garbage and change rooms [Cal Code 114149]

Specifically exempted ovens do not require hoods. [Cal Code 114149.1(c)]

b) Exhaust Hoods:

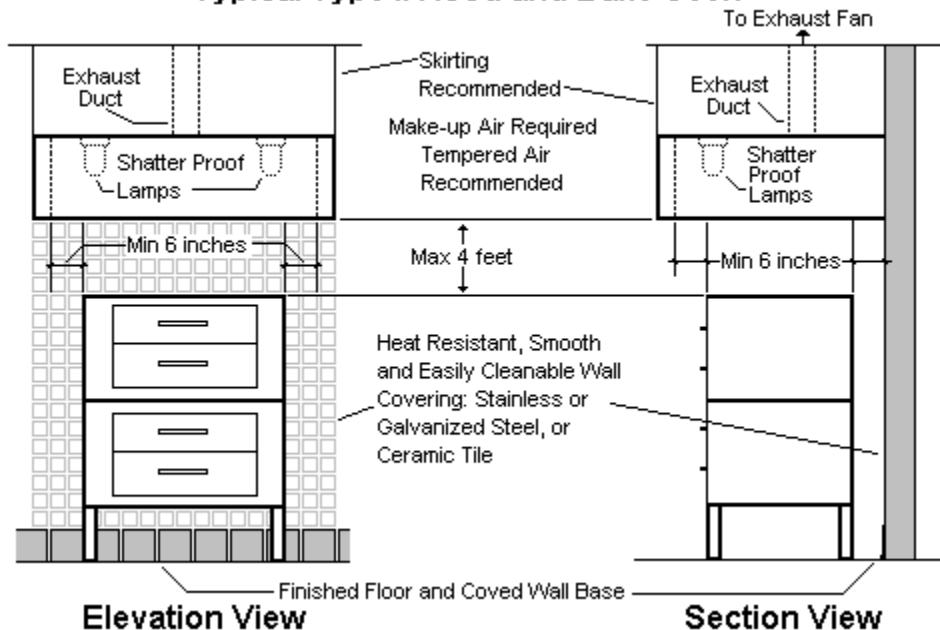
- i) Must have a certification by NSF (or equivalent) for commercial food service
- ii) Must meet the construction and make-up air requirements of the California Mechanical Code, "Part II - Commercial Hoods and Kitchen Ventilation" (commencing with Section 507.0). Windows and doorways may not be used for the source of make-up air. Recommend tempering make-up air to avoid extremes in air temperature [Cal Code 114149.3];
- iii) Must be sized to provide a perimeter overlap of at least six (6) inches beyond the equipment to ensure proper capture of grease and smoke [CA Mechanical Code 509.6]
- iv) Type I hoods:
 - (1) Have grease traps and fire protection and are required above all deep fat fryers, broilers, fry grills, steam jacketed kettles, ranges, ovens (unless) exempted), indoor barbecues, rotisseries, and similar equipment to effectively remove gases, odors, steam, heat, grease vapors and smoke. [Cal Code 114149.1(a)]



v) Type II hoods:

- (1) Are required above pizza ovens, hot water sanitizing dishwashing machines, and similar smoke and grease free equipment to effectively remove gases, odors, steam, and heat;
- (2) Usually chemical sanitizing or under counter dishwashing machines do not require exhaust hoods;

Typical Type II Hood and Bake Oven



14) Equipment Requirements:

a) General utensils and equipment:

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, durable materials, and shall be constructed, installed and maintained so as to be easily cleaned. [Cal Code 114130]

b) New and replacement equipment:

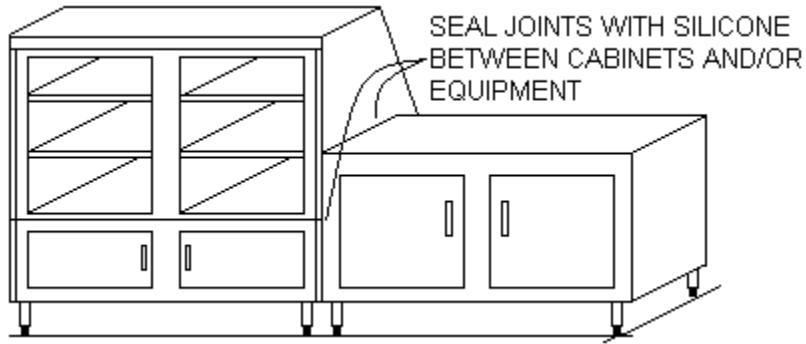
All new and replacement equipment shall meet NSF (or equivalent) sanitation standards for commercial food preparation. Equipment design, construction and installation are subject to approval by the Environmental Health prior to installation. [Cal Code 114130(b)]

c) Used equipment:

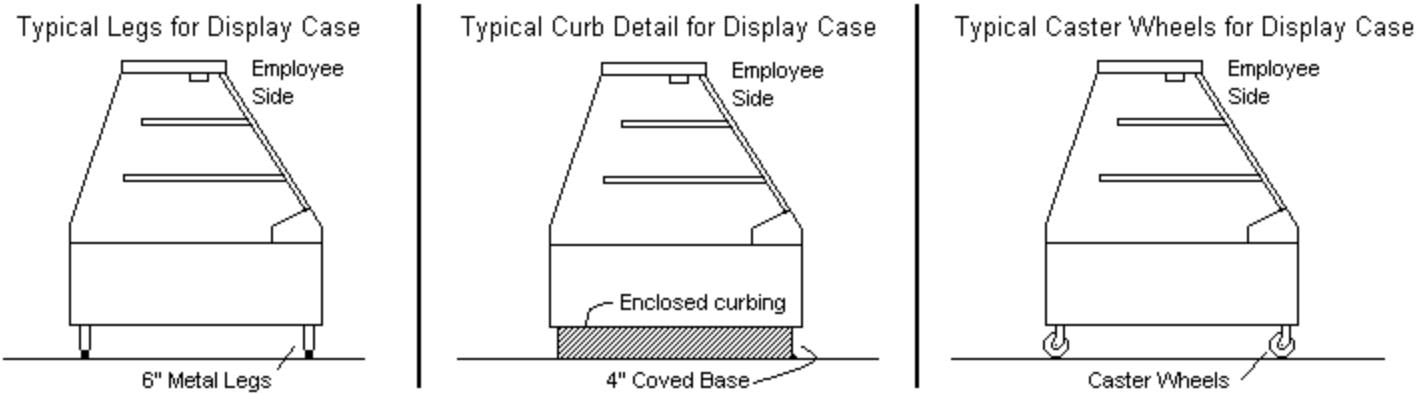
All used equipment is subject to approval by Environmental Health prior to installation.

d) Equipment installation for cleaning:

i) 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 or should be spaced away from the adjacent walls and equipment at least six (6) inches for every four (4) linear feet of equipment. [Cal Code 114169(a)]



ii) Floor mounted equipment shall be placed on minimum six (6) inch easily cleanable legs or be completely sealed in position on at least a four (4) inch high continuously coved base or curb. [Cal Code 114169(b)]



15) Walk-in Refrigerators and Freezers:

a) General:

i) All gaps shall be flashed and sealed to eliminate inaccessible areas. [Cal Code 114169(b), 114259]

ii) All liquids, including condensate, shall drain to the sanitary sewer via fixed drain line to an approved floor sink, funnel drain, or evaporator located outside the refrigerator. [Cal Code 114193(a)]

iii) Floor/wall coving:

- (1) Inside walls: manufacturer provided metal coving;
- (2) Outside walls: must be the same as general food prep area coving.

iv) The inside floor and coving surface must be one of the following:

- (1) A metal floor and metal coving provided by the manufacturer;
- (2) Smooth sealed concrete with "slim-foot" ceramic coving;
- (3) Quarry tile with quarry tile integral coved base; OR
- (4) Trowel applied epoxy coatings;
- (5) Other floor coverings will be reviewed on a case-by-case basis. Vinyl coving, cut vinyl tile, or sheet vinyl are not approved for the inside of walk-in refrigerators.

v) No direct sewer connections are allowed within any walk-in refrigerator. Floor drains within walk-in refrigerators must have an indirect waste connection to the sanitary sewer.

b) Prefabricated / manufactured units:

- i) Must be ANSI, NSF, or equivalent approved for commercial food use and installed according to manufacturer instructions;
- ii) Provide cut-sheets that identify the specific make and model of the unit proposed and describes in detail the floor surface and coving proposed.
- iii) Provide information on the proposed location of the compressor and evaporator units and means of condensate disposal.

c) Site-built / customer fabricated units:

- i) Detailed plans for the walk-in units must be included with the facility review package;
- ii) The surfaces of floors and walls shall be made from materials that are non-toxic, durable, smooth, non-absorbent, moisture proof, easily cleanable and shall be sealed at all joints. Suggest FRP or corrosion proof metal for the walls and ceiling, and corrosion proof metal or ceramic tile for the floor.
- iii) The wall-floor juncture shall be coved with a 3/8" minimum radius metal or tile cove base that is sealed to the wall and floor to prevent the entrance of moisture. [Cal Code 114268(b)]

16) Sinks:

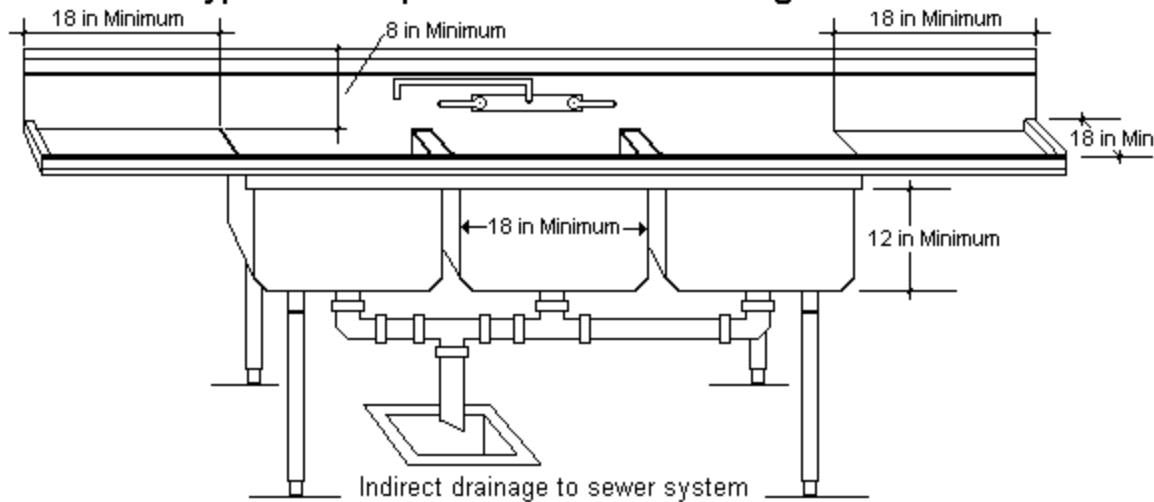
a) General information:

- i) The following sinks are required for each food establishment prepares food for retail sale:
 - (1) A hand sink at each restroom;
 - (2) A hand sink at each functional area where food is prepared or served;
 - (3) A food preparation sink;
 - (4) A stainless steel 3-compartment utensil washing sink; and
 - (5) A janitorial sink or curbed janitorial basin.
- ii) Hot and cold water under pressure must be delivered through a mixing faucet to each sink compartment. [Cal Code 114192(a)];
- iii) Backflow protection is required at each threaded hose bib and threaded mixing faucet arm;
- iv) Sink backsplashes should be sealed to the protective wall covering to minimize wall damage and facilitate cleaning. Refer to "Walls and Ceilings" above.

b) Utensil washing sinks:

- i) At least one 3-compartment, ANSI, NSF, or equivalent certified stainless steel sink with dual integral stainless steel drainboards is required in every food establishment that utilizes multiuse utensils. [Cal Code 114099(a)]

Typical 3-Compartment Utensil Washing Sink



- ii) The 3-compartment sink must be capable of accommodating the largest utensil to be washed and the drain boards shall be as large as the largest sink compartment. A compartment size of approximately 18 x 18 x 12 inches deep will generally be adequate for most utensils. [Cal Code 114099(b)]

- iii) Additional 3-compartment sinks may be required at each functional area of a large food establishment that handles unpackaged food (i.e., deli, meat, bakery, sushi bars, oyster bars, etc.). [Cal Code 114095]
- iv) All utensil washing sinks must be indirectly drained to the sanitary sewer system (refer to Liquid Waste Disposal above).
- c) Food preparation sinks:
 - i) Special purpose food preparation sinks are required for salad preparation, meat thawing, etc. [Cal Code 114163]
 - ii) Must be constructed of stainless steel and have an NSF or other recognized certification for food service.
 - iii) Must be indirectly drained to the sanitary sewer system (refer to Liquid Waste Disposal above).
- d) Bar glass washing sinks:
 - i) Must be constructed of stainless steel with a minimum of 3 compartments and integral drain boards with an NSF or other recognized certification for food service;
 - ii) Must be indirectly drained to the sanitary sewer system (refer to Liquid Waste Disposal above).
 - iii) Provide a sanitary method to separate ice and drink waste disposal operations from glassware washing. Suggest a separate sink for ice and drink waste disposal.
- e) Handwashing Sinks:
 - i) Handwashing sinks shall be provided in each food preparation area (i.e., deli, meat, bakery, sushi bar, oyster bar, etc.) [Cal Code 113953(b)(1)]
 - ii) Soap and single-use sanitary towels shall be provided (recommend permanently installed dispensers) at handwashing sinks [Cal Code 113953.2]
 - iii) Handwashing sinks shall have water provided from a combination faucet, or a premixing faucet that supplies warm water for a minimum of ten (10) seconds while both hands are free for washing. [Cal Code 113953.3]
 - iv) Suggest limiting hot water temperature at the handwashing to a maximum of 110 degrees Fahrenheit to avoid scalding injuries.
 - v) Handwashing sinks shall be drained to an approved sanitary sewer system and need not be indirectly drained. [Cal Code 114193]
- f) Janitorial Sinks and Curbed Basins:
 - i) Food establishments shall be equipped with at least one of the following used exclusively for general cleaning purposes and for the disposal of mop bucket waste and other liquid waste: [Cal Code 114279(a)]:
 - (1) A single compartment, non-porous janitorial sink.;

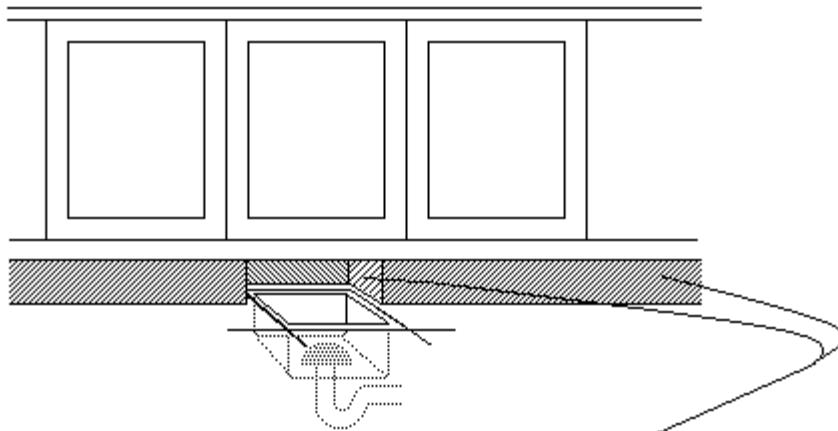
OR

(2) A slab, basin or floor constructed of concrete or equivalent material, curbed and sloped to a drain.

- ii) The sink (or basin) shall be located so as not to contaminate any food preparation areas, food storage areas, utensils or equipment. [Cal Code 114281];
- iii) All threaded faucets, including the sink faucet mixing arm, shall be equipped with a backflow prevention device such as non-removable vacuum breaker. [Cal Code 114192(c)];
- iv) The sink (or basin) shall be drained to an approved sanitary sewer system and need not be indirectly drained.

g) Floor Sinks and Funnel Drains:

- i) Floor sinks, funnel drains, or other approved waste receptors must be located to provide adequate drainage of the equipment being served. [Cal Code 114193]
- ii) Floor sinks, funnel drains, or other approved waste receptors shall be located so that they are readily accessible for inspection, cleaning and repair. Avoid enclosing floor sinks inside cabinets. Locate floor sinks at recessed toe kicks of cabinets and clear of traffic areas. [Cal Code 114193(c)]



Install cabinet line floor sinks in recessed toe kick alcoves and away from traffic pathways.

Cover floor sinks with approved gratings as necessary.

Install floor sinks flush with finished floor.

- iii) Overflow from floor sinks and funnel drains shall be prevented from flowing into inaccessible areas (e.g., under storage cabinets, display refrigerators, etc.) [Cal Code 1141900]

h) Dipper well:

A cold running water dipper is required for scoops or other reusable serving utensils stored in water. The dipper well shall be drained to the sanitary sewer by means of an indirect connection. [Cal Code 113980, 113982(a)(4)]

17) Dishwashing (warewashing) machines:

Dishwashing machines are recommended in addition to the 3-compartment sink for facilities where a large volume of utensils are washed.

a) General:

- i) Dishwashers shall not substitute for the 3-compartment sink.
- ii) These machines must be indirectly drained to the sanitary sewer or may be directly drained provided the sewer connection is directly downstream of a floor drain (or floor sink). [Cal Code 114193(d)]
- iii) Pre-wash areas are recommended for scraping utensils and equipment as circumstances require. [Cal Code 114099.1]

b) Hot-rinse sanitizing machines:

Machines which are designed for a hot water bactericidal rinse shall be provided with an approved booster heater (internal or external to the machine) or shall be connected to an approved recirculating water system which can achieve a utensil surface temperature of 160 degrees Fahrenheit (82 degrees Celsius). These machines normally require an approved Type II exhaust hood. [Cal Code 114099.6(b)]

c) Chemical sanitizing machines:

Machines which are designed for a chemical bactericidal rinse shall be capable of maintaining the rinse water at a temperature in accordance with its approved applicable sanitation listing.

d) Counter-top machines (hot rinse or chemical sanitizing):

Counter-top machines must have two (2) integral stainless steel drainboards or dishtables, 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)]

e) Under-counter machines (hot rinse or chemical sanitizing):

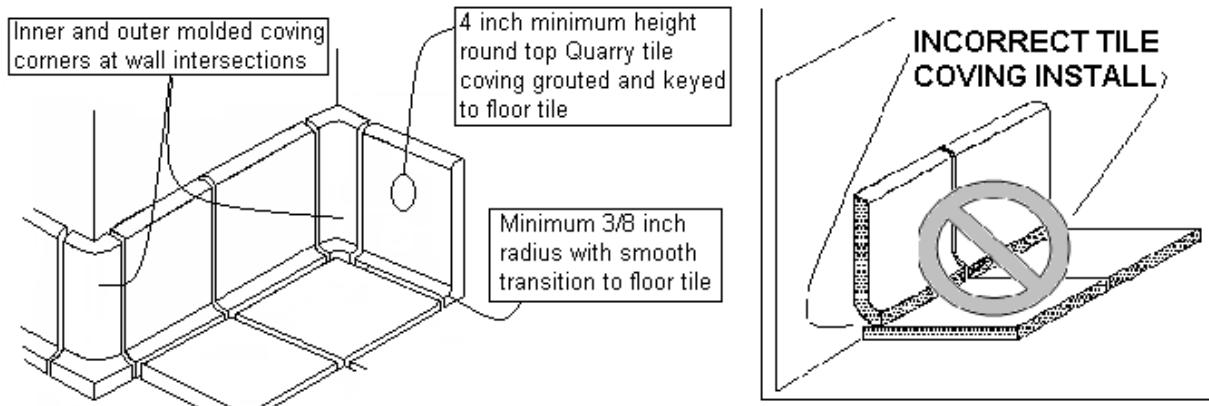
Under-counter machines must have two (2) metal drainboards, one for soiled utensils, and one for clean utensils located adjacent to the machine. The drainboards shall be sloped and drained to an approved waste receptor. The drainboards of the 3-compartment sink may fulfill this drainboard requirement. [Cal Code 114103(b)]

f) Drainboards and dishtables:

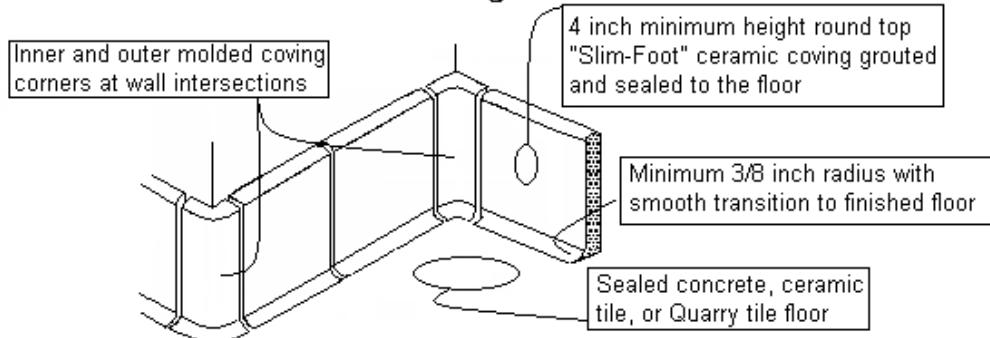
- i) Drainboards, dishtables, or shelving shall be large enough to adequately store all utensils and dish racks off the floor. [Cal Code 114103(d)]
- ii) When a dishtable is installed next to a wall, the integral metal backsplash should be sealed to the water protection wall covering (see "Walls and Ceilings" above). [Cal Code 114271(a)]

APPENDIX A: Floor Tile and Sheet Vinyl Install Examples

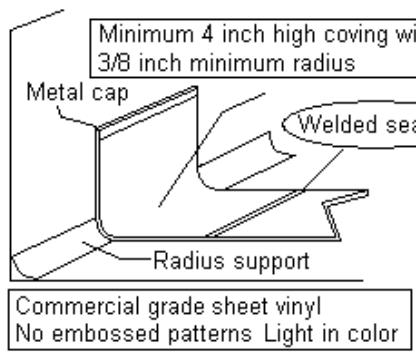
Quarry Tile or Ceramic Tile Detail



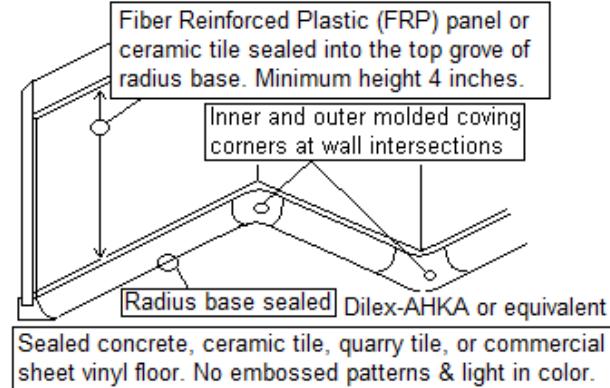
"Slim-foot" Ceramic Tile Coving Over Tile or Sealed Concrete Floor



Commercial Sheet Vinyl Detail



Radius Base Detail



APPENDIX B: Sneeze Guard Examples

