



# FOOD ESTABLISHMENT CONSTRUCTION GUIDE

Construction guide from the Nevada Division of Public and Behavioral Health, Environmental Health Section describing plan review, licensing and operational requirements for food establishments.

Nevada Division of Public and Behavioral Health  
EHScustomerservice@health.nv.gov

## **Food Establishment Construction Guide**

Nevada Division of Public and Behavioral Health

Environmental Health Section

727 Fairview Drive

Carson City, Nevada 89701

Phone: 775-687-7533

Website: [dpbh.nv.gov](http://dpbh.nv.gov)

For questions please contact EHS Customer Service at: [EHScustomerservice@health.nv.gov](mailto:EHScustomerservice@health.nv.gov)

## Table of Contents

Purpose .....	4
Definitions.....	4
Restrictions .....	4
Plan Submittal and Review .....	5
Plan Review Process.....	5
Projects that Require Plan Review.....	5
Plan Submittal.....	5
Adoption by reference of Uniform Plumbing Code.....	6
Licensing and Preoperational Inspection.....	8
General Equipment Information.....	9
Equipment Design and Construction .....	9
Equipment Numbers and Capacities .....	9
Equipment Location and Installation.....	10
Unapproved Equipment.....	10
STORAGE .....	11
Storage: Refrigeration.....	11
Storage: Dry Storage.....	12
Handwashing Sinks .....	12
Manual Warewashing Sink .....	12
Food Preparation Sink.....	13
Service Sink or Mop Sink.....	13
Other Sinks.....	13
Hand Washing Facility.....	13
Warewashing Machines.....	13
Ventilation Systems .....	14
Tables, Counters and Cabinetry.....	14
Food-contact Surfaces and Warewashing .....	14
Non-food-contact Surfaces.....	15
Floors, Walls and Ceilings .....	15
Floors.....	15
Walls and Ceilings .....	16
Non-Food Areas .....	16

Restrooms ..... 16  
Garbage and Recyclables ..... 17  
Personal Items ..... 17  
Laundry Facilities ..... 17  
Utilities ..... 17  
Water Supply..... 17  
Water Heaters..... 17  
Sewage Disposal..... 17  
Lighting..... 18

## PURPOSE

This document is intended to assist individuals or groups in submitting plans to the Nevada Division of Public and Behavioral Health, Environmental Health Section. Food establishment construction, equipment, and operational standards outlined in this guide are minimum requirements per the Nevada Administrative Code.

Food establishments in Nevada are licensed by a variety of different agencies. The menu and location of operation will be used to determine which agency is responsible for plan review, licensing and inspection.

State of Nevada Division of Public and Behavioral Health:

- All Retail Food Establishments: Churchill, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, Pershing, Storey, White Pine
- Bottled Water: All Counties
- Supplements: Churchill, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, Pershing, Storey, Washoe, White Pine
- Campuses of Higher Learning: Churchill, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, Pershing, Storey, Washoe, White Pine

To determine whether your license will be issued by DPBH-EHS, call your local field office. (See Page 6)

## DEFINITIONS

*A full list of definitions may be found in Nevada Revised Statute, Chapter 446 and the Nevada Administrative Code, Chapter 446.*

### **“Accessible” means:**

1. When applied to equipment other than plumbing equipment, fabricated to be exposed for cleaning and inspection using simple tools, including, without limitation, handheld screwdrivers, pliers and open-ended wrenches.
2. When applied to plumbing fixtures, plumbing connections, plumbing appliances or plumbing equipment:
  - (a) Having access thereto, but which may require the removal of an access panel, door or similar obstruction; and
  - (b) Not blocked by equipment or other barriers.

### **“Food establishment” means:**

“food establishment” means any place, structure, premises, vehicle or vessel, or any part thereof, in which any food intended for ultimate human consumption is manufactured or prepared by any manner or means whatever, or in which any food is sold, offered or displayed for sale or served.

### **“Hazard analysis and critical control point plan” and “HACCP plan” means:**

“Hazard analysis and critical control point plan” or “HACCP plan” means a written document that delineates the formal procedures for following the Hazard Analysis and Critical Control Point principles developed by the National Advisory Committee on Microbiological Criteria for Foods to include pertinent critical items and critical limits.

## RESTRICTIONS

Menu and process determine the type of equipment required and whether the operation can be approved. Complex food items usually require additional or specialized equipment, and will not be approved unless necessary equipment is provided.

Food and beverage service establishments may not store or prepare food in a private home.

The challenges of safely preparing, storing, and transporting large volumes of food typically associated with catered events or mobile food vehicles present increased food safety risks. When these operations are included in medium and large food establishment fee category definitions, and are considered during the plan review process.

## PLAN SUBMITTAL AND REVIEW

**Plans must be submitted to DPBH-EHS at least 30 days before beginning construction, extensive remodeling or conversion of an existing structure to a food establishment.**

### Plan Review Process

The DPBH-EHS plan review process follows these steps:

Submit your plan review application, all required information and appropriate fee on-line. Plan review applications are available on the food establishment page, see link

[http://dpbh.nv.gov/Reg/Food/dta/Forms/Food\\_Establishments\\_-\\_Forms/](http://dpbh.nv.gov/Reg/Food/dta/Forms/Food_Establishments_-_Forms/)

DPBH-EHS staff reviews plans in the order they are received. To provide timely and accurate review of your application, all required information listed in [Plan Submittal](#) must be received before DPBH-EHS staff can complete your plan review.

DPBH-EHS plan review staff calls or emails to request any needed additional information.

When review is complete, you will receive a letter reporting the findings of the review (approval or denial).

Wait to begin construction until after plans are approved.

Plans may take up to **30 days** to review from the time a complete application and plan review documents are submitted. Incomplete plans may take longer.

### Projects that Require Plan Review

Following are examples of situations that require a plan review:

- **New construction:** Building that is newly constructed or existing building that has never been licensed as a food establishment by DPBH-EHS.
- **Remodeling:** Addition or change to the building, a major equipment addition, or the addition of equipment due to a menu change of a food establishment. Extensive remodeling does not include redecorating, cosmetic refurbishing, altering seating design or reducing seating capacity.

Please contact your local field office if you have questions about whether a plan review is needed for your food establishment or which application to use.

### Plan Submittal

Submit plans with the completed application, all the required information, and correct fee to the on-line licensing System: <https://nvdpbh.aithent.com/login.aspx>

In addition to the online submission, a set of paper plans may be required. Please contact the Environmental Health Specialist for your area to determine requirement. Plans may be mailed into the local field office at:

Office	Areas	Street Address
Carson City	Storey County, Lyon County, Parts of Washoe County. Virginia City, Mound House, Dayton, Silver Springs	775-687-7533 727 Fairview Drive, Suite D Carson City, Nevada 89701
Elko,	Elko County, Northern Lander and Northern Eureka County	775-753-1138 1020 Ruby Vista, #103 Elko, NV 89801
Ely	Eureka, McGill, Ely, Pioche, Panaca, Caliente, Hiko, and Alamo	775-289-3325 725 Avenue K Ely, Nevada 89315
Fallon	Fallon, Tonopah, Beatty, Goldfield, Gabbs, Dyer, Silver Peak, Round Mountain, Manhattan and Belmont.	775-423-2281 485 B Street #103 Fallon, NV 89406
Las Vegas	Pahrump & Armargosa Valley	702-486-5068 or 702-486-3999 2080 E. Flamingo Rd., Suite 319 Las Vegas, NV 89119
Winnemucca	Humboldt and Pershing Counties. Denio, McDermitt, Orovada, Winnemucca, Lovelock, Imlay, Valmy, Paradise Valley, Rye Patch, Golconda and Midas (Elko County).	775-623-6588 475 W. Haskell St., Rm 38 Winnemucca, NV 89445

Your plan review will not be completed until all information has been received. Make sure to include all of the following when you submit your completed plan review application and the required fees.

- A brief description of the proposed project.
- Intended menu including a description of how, when, and where food will be received, stored, prepared, and served.
- Easily readable layout to scale indicating the location of all equipment (e.g., cooking equipment, ventilation hood, refrigerators, food prep counters, handwashing sink(s), three-compartment sink, and food prep sink).
- Intended materials for floors, base coving, walls and ceilings.
- Manufacturer’s equipment specifications sheets for all equipment, including sinks.
- Intended materials for counters and cabinetry.
- Information on well and septic system (certificate of compliance) for private or commercial systems.

In addition to the items listed above, other information may be requested during the plan review process.

#### **Adoption by reference of Uniform Plumbing Code**

All plumbing must be installed and maintained per the Uniform Plumbing Code.

DPBH-EHS oversees plumbing plan review, enforcement and inspection of drains and drainage systems. A full plan review of plumbing will be conducted by the local building authority. Plumbing code adoption may vary

by county. Contact a licensed plumbing contractor for assistance with preparing and submitting plumbing plans for your establishment.

Plan review may be by multiple jurisdictions in some counties

County	Fire	Building	Water	Sewer	Grease Interceptor
Churchill	State Fire Marshal – Fire Protection Licensing	Churchill County Building Department	Churchill County Building Department	Churchill County Building Department	Churchill County Building Department
Elko	Fire Marshal	Elko County Building Dept.	Elko County Building Dept.	Elko County Building Dept.	Elko County Building Dept.
Esmeralda	State Fire Marshal	NA	City	City	
Eureka	State Fire Marshal	NA	City	City	
Humboldt	Fire Code reviews will be performed by the Humboldt County Building & Safety Department for the Fire Marshal's office.	Humboldt Building Department	Nevada Division of Water Resources	Nevada Department of Environmental Protection - Sewage Disposal/Waste Permits	City of Winnemucca Water & Sewer Department
Lander	State Fire Marshall	Lander Building Dept.	Lander Building Dept.	Lander County Public Works	Lander County Public Works
Lincoln	State Fire Marshal out of Las Vegas Office	Lincoln County Planning and Building Department	Lincoln County Planning and Building Department	Lincoln County Planning and Building Department	Lincoln County Planning and Building Department
Lyon	Your local fire department (4 different locations)	Lyon County Building Department	Lyon County Building Department	Lyon County Building Department	Lyon County Building Department
Mineral County Hawthorne	ABC Fire & Cylinder Service Nick Martinez, Out of Reno, Hawthorne Fire Department	Mineral County Building Department Mike Fontaine (945-3671)	Mineral County Building Department Mike Fontaine (945-3671)	Mineral County Building Department Mike Fontaine (945-3671)	Mineral County Building Department Mike Fontaine (945-3671)
Nye	Nye County Building Department	Nye County Building Department	Nye County Building Department	Nye County Building Department	Nye County Building Department
Nye-Pahrump	Pahrump Fire	Nye County	Depends on location	Depends on location	Nye County
Pershing	State Fire Marshal	Pershing County Building Department	Unincorporated and Grass Valley-Pershing County Building Lovelock- Planning Department	Unincorporated and Grass Valley-Pershing County Building Lovelock- Planning Department	Unincorporated and Grass Valley-Pershing County Building Lovelock- Planning Department
Storey	Storey County Fire Department	Storey County Building Community Development	Storey County Public Works	Storey County Public Works	Storey County Public Works
White Pine	State Fire Marshal	County Building Department	County Building Department	County Building Department	County Building Department



## Licensing and Preoperational Inspection

During construction, remodeling or equipment installation, it is frequently necessary for staff to make one or more site visits. Once plans are approved and construction is completed, follow these steps to get your establishment license:

### **Prepare for a pre-opening inspection**

Ensure that you have the following items on hand during the inspection. No food is permitted to be in the establishment at the time of the inspection

- Sanitizer
- Test Strips
- Hand soap and paper towels
- Food utensils, kitchen ware and dishware are permitted to be on hand during inspection

### **Have your establishment inspected.**

Contact DPBH-EHS 10 working days before the intended opening date to schedule a preoperational inspection. The inspection will cover all aspects of your approved project, including:

- Equipment is present, correctly installed and operational. Cold holding equipment must be running at 41 °F.
- Floor, wall and ceiling finishes are installed as approved.
- Mechanical and plumbing installations are approved by the appropriate authority.

### **Post the license in the establishment.**

DPBH-EHS will issue a license after approval. It will be mailed to you. Post the original license in the establishment at all times. The license is valid for one year and must be renewed on-line annually.

### **Re-inspection**

If equipment is not installed as approved on plans, a re-inspection may be necessary. As-built plans will be required to complete the inspection.

### **Failure to pass inspection**





The Nevada Division of Public and Behavioral Health is not obligated to approve the plans or pass a facility for failure to notify the Division of changes during construction.

## GENERAL EQUIPMENT INFORMATION

Include specifications, proposed locations and intended uses for all equipment in submitted plans.

### Equipment Design and Construction

The most common certifying groups for equipment are:

<b>Certifying Group</b>	<b>Mark</b>
<b>NSF International (NSF)</b>	
<b>Intertek</b> Marked "ETL Sanitation."	
<b>Underwriters Laboratory (UL)</b> Marked "classified UL EPH."	
<b>Canadian Standards Association (CSA)</b> Marked "CSA sanitation to NSF/ANSI."	

Equipment may not be changed or altered from its original design.

All custom fabricated equipment must be made by an NSF custom fabricator and bear a sticker indicating the equipment meets the standard. Equipment must be designed for its intended use. Equipment (e.g., heating elements for hot holding units, sinks, smokers, walk-in coolers or freezers or any other equipment) cannot be homemade.

Used equipment may be approved as part of your plan if it:

- Met existing applicable standards when it was manufactured.
- Is in good repair.
- Is easy to clean.
- Has non-toxic food-contact surfaces.
- Does not pose a health hazard.

If the equipment was purchased used and an equipment specification sheet with this information was not provided, look on-line for equipment specification sheet with this information as it may not be posted on the piece of equipment.

### Equipment Numbers and Capacities

Provide mechanical equipment that meets the cooking, heating, ventilation and hot and cold holding needs of the establishment. Install and use equipment as intended by the manufacturer.

Some common circumstances with special equipment requirements include:

- Walk-in refrigeration units installed outside must be designed for extra structural loads from snow and ice.
- Display coolers may only be used for canned or bottled beverages or prepackaged foods.
- Food guards or display cases must be provided to protect unpackaged food from contamination while on display.
- Food grade containers capable of maintaining food at safe temperatures in a sanitary manner are required.

### Equipment Location and Installation

Locate or install equipment so food, ice and food-contact surfaces are not exposed to contamination and the areas around and beneath every unit are accessible for cleaning.

If equipment is not easily moveable, seal it to the surface or mount it on legs. Four (4)-inch legs are required for table-mounted equipment; six (6)-inch legs are required for floor-mounted equipment.

Examples of equipment and storage locations that are frequently submitted but **not approved** include:

- Under an open stairwell
- In a mechanical room
- In a garbage room
- Under a sewer line that is not shielded
- In a toilet room
- Under a line on which water has condensed
- Above unprotected food, such as beverage dispensing equipment or ice bin

### Unapproved Equipment

Examples of equipment that is frequently submitted but **not approved** include: Unfinished wood

- Household crock pots
- Galvanized containers for acidic foods or table tops
- Enamelware
- Paintbrushes
- Wooden spoons
- Plastic tables, as food preparation surfaces
- Household roasters
- Drills
- Non-food grade plastic containers
- Tubing or beverage cold plates in contact with stored ice

## STORAGE

When considering how much storage the food establishment will need consider the following questions

- *How much food will be cooked and immediately served, or prepared in advance for later service?* Consider that preparing in advance required more refrigeration space for thawing foods, cooking hot foods and storing of cold foods.
- *How often will supplies be delivered?* The delivery frequency is important in determining the amount of refrigerated, frozen and dry food storage space.
- *What is the maximum number of employees on one shift?* The number of employees is necessary to determine work and aisle space and the number of lockers to provide.
- *Will raw meats, poultry and seafood be stored in the same refrigerator with cooked and ready-to-eat foods?* How will cross contamination be prevented.
- *Will the facility be open 24 hours?* Increased equipment capacity and storage space should be considered for establishments with extended hours of operation
- *Will you be using single service or disposable cups, lids, utensils, napkins, containers?* These items take up considerable space in the facility and may not be stored on top of the ice machine, refrigerators or freezers.

### Storage: Refrigeration

Specific refrigeration needs will be based upon the menu, number of meals, frequency of delivery, and preparation in advance of service. All refrigerators must be capable of maintaining potentially hazardous foods (PHF) at 41°F or below.

If potentially hazardous foods are prepared a day or more in advance of service, a rapid cooling procedure capable of cooling potentially hazardous foods from final cooking temperature to 41°F within 6 hours (140°F to 70°F in 2 hrs. and 70°F to 41°F in 4 hrs.) should be provided. The capacity of the rapid cooling facilities must be sufficient to accommodate the volume of food required to be cooled to 41°F within 6 hours.

Provide point-of-use refrigerators and freezers at work stations for operations requiring preparation and handling of potentially hazardous foods.

Refrigeration units, unless designed for such use, should not be located directly adjacent to cooking equipment or other high heat producing equipment which may tax the cooling system's operation.

### Sizing Consideration for Calculating Total Refrigerated Storage Needs, Including Walk-Ins.

The following is a suggested formula to establish required reserve storage. Only 40% of any walk-in unit actually provides usable space.

**Total Interior Storage Volume Needed:** (Vol. per meal (Cu. ft.) x number of meals)/(.40)

- Meat, Poultry and Seafood is .010-.030 Cu. ft. per meal
- Dairy is .007-.015 Cu. ft. per meal
- Vegetables and Fruit is .020-.040 Cu. ft. per meal

The end of this document shows examples and sample charts for calculation of storage space. Charts are courtesy of North Carolina Department of Health, Food Lodging and Institutional Sanitation Branch, Plan Review Subcommittee

### Storage: Dry Storage

The dry storage space required depends upon the menu, number of meals, quantities purchased, and frequency of delivery. The location of the storeroom should be adjacent to the food preparation area and convenient to receiving. Adequate ventilation should be provided. Ideally, the storeroom should be free of uninsulated steam and water pipes, water heaters, transformers, refrigeration condensing units, steam generators or other heat producing equipment. Temperatures of 50°F to 70°F are recommended.

A suggested formula used in estimating required storage space is as follows:

Required Storage Area (square feet) =

$$\frac{\text{Volume per meal} \times \text{Number of meals between deliveries}}{\text{Average height} \times \text{Fraction of usable storeroom floor area}}$$

- Volume per meal = .025 to .050 cu. ft. per meal served
- Useful storeroom height = 4 to 7 feet
- Storage time between deliveries = 3 to 14 days
- Fraction of useable storeroom floor area = .3 to .6

The end of this document shows examples and sample charts for calculation of dry storage space. Charts are courtesy of North Carolina Department of Health, Food Lodging and Institutional Sanitation Branch.

### SINKS

Include specifications, proposed locations and intended uses for all sinks in submitted plans.

#### Handwashing Sinks

Provide enough handwashing sinks to meet the needs of the establishment. Install handwashing sinks to provide easy access for all employees who are preparing food, dispensing food and beverages, conducting warewashing, and using the restroom. Handwashing sinks must be easily accessible and located within 25 feet (7.62 meters) of all work stations and food preparation and warewashing areas.

Each handwashing sink must be provided with hot and cold water under pressure through a mixing valve or combination faucet. DPBH-EHS may require splash guards at handwashing sinks to limit contamination of food, beverages, clean equipment or single-use items.

#### Manual Warewashing Sink

If your plans do not include a warewashing machine, provide a sink with at least three compartments and drainboards on each end. All compartments and the drainboards must be part of the same piece of equipment. Additional drainboards, utensil racks, or tables may also be required for storing dirty and clean equipment and utensils.

Each compartment must be large enough to allow immersion of the largest utensil or piece of equipment used in the operation. The warewashing sink must be supplied with water under pressure with a mixing valve.

## Food Preparation Sink

If the proposed menu calls for a food preparation process requiring washing or thawing of food in a sink, include a food preparation sink in submitted plans. The sink must be designed for use as a food preparation sink.

It is recommended that you provide separate areas to segregate food handling operations involving raw and ready-to-eat products. For washing raw fruits and vegetables, it is advisable to provide a separate food preparation sink with an 18" drainboard.

## Service Sink or Mop Sink

Provide at least one service sink or curbed floor drain with a faucet. Install service sink(s) to provide easy access for all employees who are cleaning mops or disposing of mop water. Your plan should include a way to store mops between uses so that they do not soil or damage walls, equipment, or supplies.

## Other Sinks

The sinks listed above have use limitations. Other common sinks used in food establishment may include:

- Dump sink - for bars, blender drinks or espresso areas
- Dipper well sink- for in-use utensils such as ice cream scoops

## HAND WASHING FACILITY

Provide a separate handwashing sink; hand drying device, or disposable towels; supply of hand cleaning agent; and waste receptacle for each food preparation area, utensil washing area, and toilet room (required number based on law).

Sinks used for food preparation or for washing equipment or utensils shall not be used for handwashing.

Each handwashing sink shall be provided with hot and cold water tempered by means of a mixing valve or a combination faucet to provide water at a temperature of at least 110°F. Any self-closing, slow-closing or metering faucet shall be designed to provide a flow of water for at least 15 seconds without the need to reactivate the faucet.

Handwashing sinks shall be of sufficient number and conveniently located for use by all employees in food preparation and utensil washing areas. Handwashing sinks shall be easily accessible, not blocked by carts or equipment.

## WAREWASHING MACHINES

Include specifications and proposed locations for all warewashing machines in submitted plans. Drainboards, utensil racks, or tables are required for storing dirty and clean equipment and utensils.

Requirements	Chemical Sanitizing	Hot Water Sanitizing
Sanitizer Verification	Audible or visual indicator of low sanitizer level	Not required
Minimum space for drying – <i>must be adequate as to not interfere with proper use of washing area</i>	Five racks (Recommended)	Three racks (Recommended)

Requirements	Chemical Sanitizing	Hot Water Sanitizing
Pre-cleaning area	Spray sink, garbage disposal or other means for disposal of garbage	
Internal dividers ( <i>conveyer-type machines</i> )	Baffles, curtains or other internal dividers to keep wash and rinse water separate	
Interlocking door device ( <i>ventless dishmachines</i> )	Prevents the door from opening until the vent cycle operation is complete May be an additional accessory for the machine	

## VENTILATION SYSTEMS

Include specifications and proposed locations for ventilation hoods in submitted plans. Design and install ventilation systems according to applicable Nevada codes. See chart to determine local authority.

Adequate ventilation and make-up air is required for equipment that produces excessive steam, condensation, vapors, obnoxious or disagreeable odors, smoke and fumes.

Design ventilation systems to prevent grease or condensation from draining or dripping onto food, equipment, utensils, walls, ceiling, linens and single-service articles. Grease filters used in an exhaust ventilation hood or other grease extracting equipment must be designed to be readily removable for cleaning and/or replacing if not designed to be cleaned in place.

## TABLES, COUNTERS AND CABINETS

Include specifications, proposed locations and intended uses for all tables, counters, cabinetry and customer self-service areas in submitted plans.

Examples of approvable finishes for non-food-contact surfaces (e.g., point of sale counter, dry goods storage cabinets) and the underside and interior of cabinets include: plastic laminate, high gloss paint or polyurethane. Unfinished wood is not allowed.

Hollow enclosed base cabinets are not advised. Base cabinets must be provided with six (6)-inch stainless steel legs, a solid masonry base or sealed to the floor and maintained in good condition.

### Food-contact Surfaces and Warewashing

Provide enough approved food-contact surfaces to meet the food preparation and warewashing needs of your establishment.

Examples of activities requiring approved food-contact surfaces include:

- Chopping, cutting or mixing raw foods
- Cooking foods using equipment such as grills, deep fryers, flat tops, or ovens
- Assembling foods such as sandwiches or salads
- Storing equipment before and after warewashing

*Common food-contact surfaces include: stainless steel, hard maple, or approved cutting boards.*

- Other activities creating splash, food soiling or requiring frequent cleaning

### Non-food-contact Surfaces

Provide enough approved non-food-contact surfaces to meet the needs of your establishment.

Examples of activities that may be placed on a non-food-contact surfaces include:

- Beverage dispensing such as espresso or coffee machines, pop or milk dispenser
- Self-contained, Customer self-service buffets such as continental breakfast, food on display
- Display merchandiser such as popcorn machine, pizza display, hot dog roller
- Countertop warmer such as soup warmer
- Point of sale such as bars or wait stations
- Storage of single-service items such as cups, napkins, straws

*Common non-food-contact surfaces include: stainless steel or solid surface such as sealed granite or quartz.*

### FLOORS, WALLS AND CEILINGS

Include proposed finishes for all floor, wall and ceiling surfaces in submitted plans. Provide smooth, non-absorbent, durable and easily cleanable floors, walls and ceilings in areas where food is stored, prepared or washed; customer self-service areas; toilet and janitorial rooms.

Prior to selecting floor, wall and ceiling surfaces, owners, design professionals, and others involved in preparing the plans should consider the following factors:

- Type and amount of traffic
- Type of soil and cleaning methods
- Life span of the surface

#### Floors

Select and install flooring surfaces that meet the needs of your establishment. Follow all manufacturer's recommendations.

Some specific restrictions are:

- Vinyl flooring is not allowed in walk-in coolers or freezers.
- Carpeting is not allowed under permanently installed bars, salad bars and other food service equipment.
- Mats and duckboards must be constructed of nonabsorbent, nonwood, grease-resistant material.

*Common flooring surfaces include: quarry, ceramic or porcelain tile; commercial vinyl or epoxy floor systems.*



Install a covered base at all floor-wall junctions. Select and install covered base per manufacturer's specifications. Figure 1 shows correct and incorrect positioning of covered base relative to flooring surface.

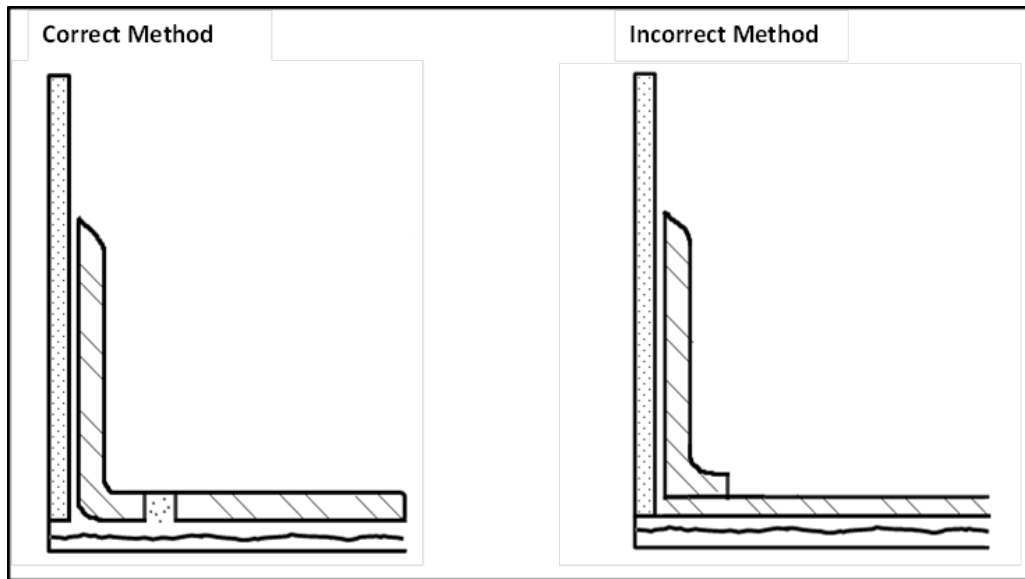


Figure 1

## Walls and Ceilings

Select and install wall and ceiling surfaces that meet the needs of your establishment. Follow all manufacturers' recommendations.

Some specific restrictions are:

- Unfinished, porous concrete blocks or bricks are not allowed except in dry storage areas.
- Light fixtures, vent covers, fans or other wall and ceiling attachments must be easily cleanable.
- Exposed studs, joists, and rafters are not allowed except in areas used only for the storage of unopened packages.

---

*Common wall surfaces include:  
fiberglass-reinforced panel (FRP),  
ceramic tile or stainless steel behind  
cooking equipment.*

---

---

*Common ceiling surfaces include:  
painted drywall or smooth metal or  
vinyl tile.*

---

## NON-FOOD AREAS

Include proposed locations for non-food areas such as restrooms, storage of employee personal items, garbage and recyclables, and laundry facilities. Provide non-food areas to meet the needs of your establishment.

### Restrooms

If a food establishment is the only occupant of a building, the establishment must have toilets which are conveniently located within the building. A food establishment that provides public seating must have

separate rooms with toilets for males and females. If the establishment has less than 15 total sets, the establishment may install one unisex restroom. Restrooms must not open directly into a food preparation area. If public restrooms are not required under NAC 446, provide at least one toilet and handwashing sink for employee use. Refer to UPC plumbing code or local building authority, for minimum number of toilets required for your establishment. Completely enclose the restrooms.

### **Garbage and Recyclables**

Provide an area separate from food preparation and storage areas for collection and storage of garbage and recyclable materials.

Use concrete, asphalt, or other nonabsorbent material for outdoor areas such as garbage or recyclables storage. The pad must be curbed and graded to drain.

### **Personal Items**

Provide an area separate from food preparation and storage areas for employee personal items such as jackets and bags.

### **Laundry Facilities**

If laundry facilities are provided on-site, locate the washer and dryer to prevent contamination of food, clean equipment, utensils, linens, or unwrapped single-service or single-use articles.

## **UTILITIES**

Include specific information for water supply, water heaters, sewage disposal system, and other utilities in submitted plans. Provide utilities to meet the needs of your food establishment.

Enclose utility service lines and pipes, including beverage lines, when possible. Install utilities so they do not obstruct or prevent cleaning of the floors, walls and ceilings.

### **Water Supply**

Identify the source of water for your establishment in submitted plans. Provide an adequate supply of water to meet the needs of your establishment.

Several different terms (e.g., drinking water, potable water, and fresh water) are used to describe water that is approved and safe for use in a food establishment. Use only drinking water from an approved source per NAC 446.

If the food establishment is on a private well, you must provide approval for use from Nevada Division of Environmental Protection, Safe Drinking Water. Testing will be required annually.

### **Water Heaters**

Include specifications and proposed locations for water heaters in submitted plans. Select and install commercial water heaters (traditional or tankless) that are adequately sized to meet the peak hot water demands of the foodservice facility.

### **Sewage Disposal**

Identify the method of sewage disposal (public or private) for your establishment in submitted plans. Provide a sewage disposal system that meets the peak sewage needs of your establishment.

Approved septic systems must be designed, installed and maintained per NAC 444. Onsite sewage disposal requirements are regulated by NDEP, Water Pollution Control.

### Lighting

Include locations of all light fixtures in submitted plans. Provide adequate lighting to meet the needs of your establishment. Use either shatter-resistant bulbs or shielded light fixtures.

Light intensity is measured 30 inches above the floor. Requirements vary depending on food activities:

- 10 foot candles - walk-in cooler, walk-in freezer, or dry storage area
- 20 foot candles - inside reach-in equipment, customer self-service area, or behind a bar
- 50 foot candles - food preparation area, warewashing area, or where employee safety is a factor

### Use of Devices to Electrocute Flying Insects

Devices used to electrocute flying insects are acceptable for use in a food establishment. However, devices may not be located closer than 5 feet from areas of food preparation areas, exposed food, food contact surfaces or clean equipment and utensils.

Only wall mounted devices may be used. Ceiling units are not acceptable in areas where food, food contact surfaces, equipment or utensils are exposed. Devices must be installed so that the center of the device is not more than 3 feet (91 centimeters) above the floor.

The device must be located or positioned so that employees are not required to work continuously within 3 feet (91 centimeters) of the device.