



# Construction Guideline for Retail Food Facilities

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City and County of San Francisco  
**DEPARTMENT OF PUBLIC HEALTH**  
**ENVIRONMENTAL HEALTH**

- This guide only encompasses health aspects and should not be construed to encompass requirements of other agencies involved such as, the local planning and zoning department, the local building authority, or local fire department. Owners and agents are advised to contact the appropriate local agencies to obtain any permits and/or to clarify other local codes.
- A remodel is an alteration to the structure, equipment, or menu of an existing food establishment.
- The sample drawings in this guideline may not be drawn-to-scale and cannot be copied as approved documents.

**THIS CONSTRUCTION GUIDE IS INTENDED AS A GENERAL OVERVIEW OF THE STRUCTURAL REQUIREMENTS FOR ANY PERSON INTENDING TO CONSTRUCT AND REMODEL A FOOD FACILITY IN SAN FRANCISCO COUNTY. THIS GUIDE SHOULD NOT BE CONSIDERED ALL-INCLUSIVE.**

# Table of Contents

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Construction Plan Submittal Process.....	4
Plan Review Checklist.....	5
Sample Equipment Floor Plan and Equipment Schedule.....	6
Field Construction Inspections.....	7
Floors.....	8
Walls and Ceilings.....	9
Hot Water and Sinks.....	10
Sneeze Guard Protection.....	11
Floors Sinks and Floor Drains.....	12
Dry Food Storage.....	13
Adequate Refrigeration.....	14
Trash, Compost, and Recycle Storage Area.....	15
Mechanical Ventilation.....	16
Noise.....	17
Pass-Through Windows.....	18

# Construction Plan Submittal Process

- Before constructing, enlarging, altering or converting any building for use as a food facility, two (2) sets of detailed plans and specifications must be submitted to the San Francisco Permit Center and routed to the Health Department for review and approval.
- Plans shall be drawn to scale (i.e.  $\frac{1}{4}'' = 1'$ ) in a professional manner.
- Note that plans for overnight animal boarding facilities, laundry facilities, and vending machines are also required for review by the Health Department.

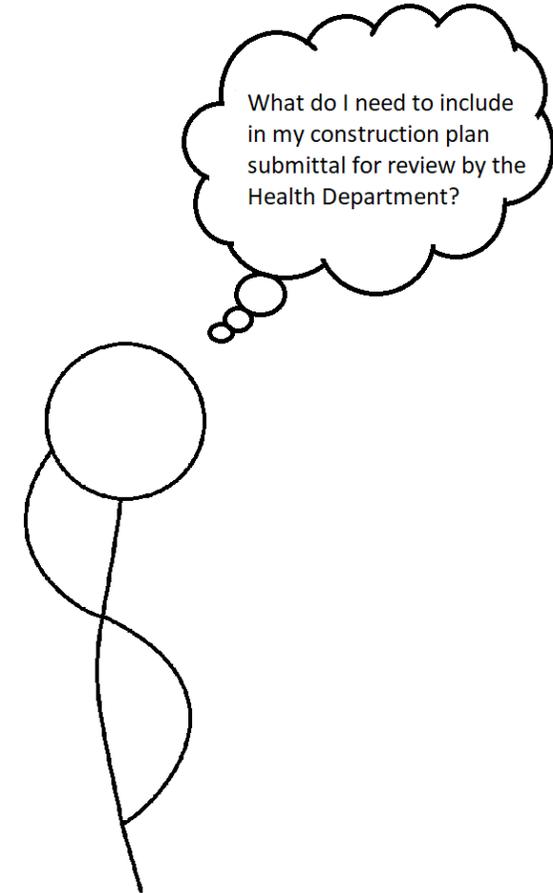
# PLAN REVIEW CHECKLIST

Please note that incomplete submittals will not be accepted.

Required for Submittal:

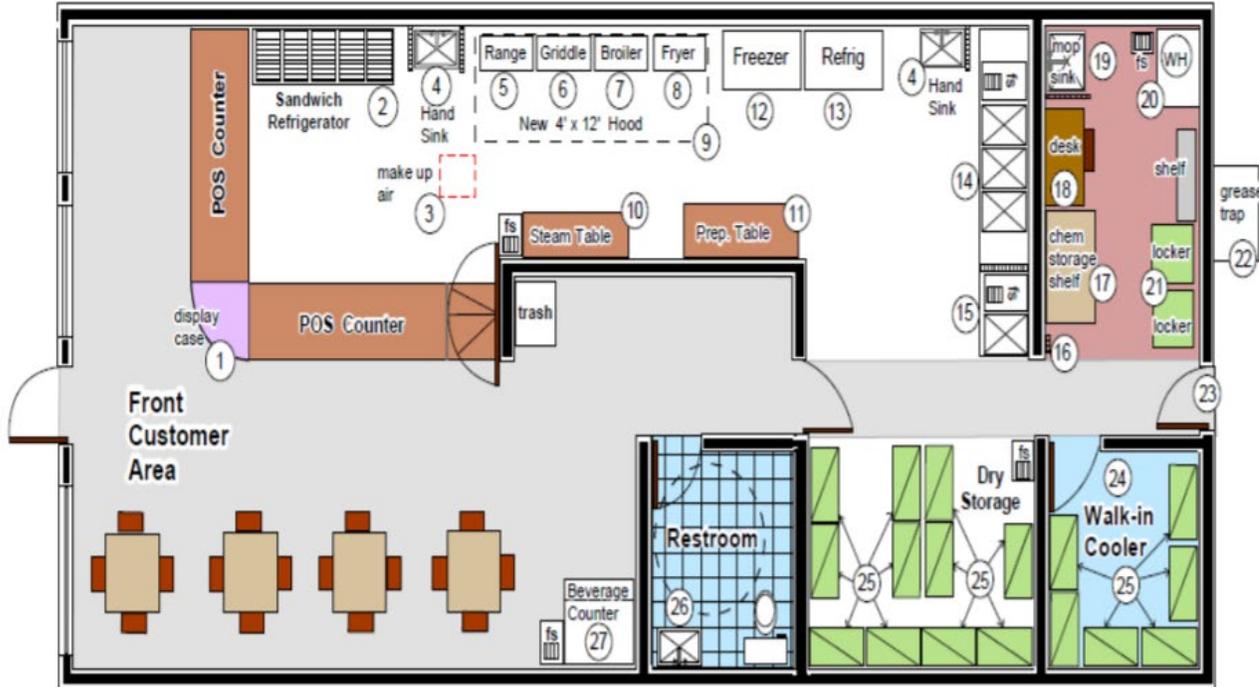
- 1) Completed Plan Review Application
- 2) Construction Plans (2 complete sets, drawn-to-scale in ink)
- 3) Plan Review Fee payment

CONSTRUCTION PLAN COMPONENTS	
<b>Building Permit Application</b>	
<b>Sheet index</b> of all major plan components and scope of work	
<b>Existing Floor Plan</b>	
<b>Proposed Floor Plan</b>	
All equipment drawn on floor plan	
<b>3-Compartment sink with dual-integral drainboards</b>	
<i>Large enough to accommodate the immersion of the largest equipment and utensils</i>	
<b>Handwashing sink(s)</b>	
<i>Sufficient in number and conveniently located for accessibility</i>	
<b>Food preparation sink(s)</b>	
<i>Minimum size of 18"x18"x12" with integral 18"x18" drainboard</i>	
<b>Mop sink(s)</b>	
<i>Faucet with approved back flow prevention device/vacuum breaker</i>	
<ul style="list-style-type: none"> <li>• Mop rack</li> <li>• Chemical storage shelf</li> </ul>	
<b>Dry food storage area</b>	
<b>Storage area for garbage, recycling, and compost collection bins</b>	
<b>Finish Schedule</b> (Required for all rooms including walk-in boxes)	
<ul style="list-style-type: none"> <li>• Floors, walls, and ceilings surfaces shall be durable, smooth, nonabsorbent, and easily cleanable in all ware-washing, food preparation, janitorial, employee restrooms, open food storage, and garbage storage areas.</li> <li>• 3/8"inch radius cove base continuous with the finished floor and extends a minimum of 4" inches up the wall.</li> <li>• Physical samples are required to be submitted prior to purchase and installation.</li> </ul>	
<b>Mechanical Floor Plan</b> with HVAC schedule and labeled HVAC floor plan and/or roof plan	
<b>Plumbing Floor Plan</b> with all floor sinks and floor drains labeled.	
<b>Restrooms</b>	
Toilet facilities that are provided for use by consumers, guests, or invitees shall be in a location where consumers, guests, and invitees do not pass through food preparation, food storage, or utensil washing areas to reach the toilet facilities.	
<ul style="list-style-type: none"> <li>• Soap and paper towel dispensers or automatic hand dryers</li> <li>• Self-closing device on restroom doors</li> </ul>	
<b>OTHER</b>	
<ul style="list-style-type: none"> <li>• <b>Menu</b></li> <li>• <b>Equipment Specification Sheets</b> <ol style="list-style-type: none"> <li>I. All <b>Water Heaters</b></li> <li>II. All <b>Dishmachines</b></li> <li>III. Other equipment (refrigeration, cooking, ventilation, etc.)</li> </ol> </li> </ul>	



# Sample Equipment Floor Plan and Equipment Schedule

(note: this sample floor plan is not drawn-to-scale)



ITEM NO.	DESCRIPTION	BASE	MANUFACTURER & MODEL ###	WATER HOT COLD	WASTE	REMARKS
1	DISPLAY CASE	ON CASTERS	DISPCS #45B	N/A	SELF-CONTAINED	CONDENSATE EVAPORATOR
2	SANDWICH REFRIGERATOR	CASTERS	LETTOM INC #VBV2	N/A	SELF-CONTAINED	CONDENSATE EVAPORATOR
3	MAKE-UP AIR	ON ROOF				
4	HAND WASH SINK	WALL MOUNTED	WASH CO #XYZ	½" ½"	DIRECT	SOAP & PAPER TOWELS
5	RANGE	6" LEGS	WOODCO #2B	N/A	N/A	
6	GRIDDLE	6" LEGS	COOKUP #3XB	N/A	N/A	
7	BROILER	6" LEGS	BROILCO #B35	N/A	N/A	
8	FRYER	CASTERS	KRISPYCO #582L	N/A	N/A	
9	HOOD		FIREFLY #BUZZ	N/A	N/A	GREASE FILTERS
10	STEAM TABLE	6" LEGS	HOTFDCO #259B	N/A	FLOOR SINK	
11	PREPARATION TABLE	6" LEGS	AMERICAN STEEL #72	N/A	N/A	
12	FREEZER	CASTERS	ICE-KOLD #FZ94	N/A	SELF-CONTAINED	CONDENSATE EVAPORATOR
13	REFRIGERATOR	CASTERS	ICE-KOLD #RF94	N/A	SELF-CONTAINED	CONDENSATE EVAPORATOR
14	WAREWASHING SINK	20" LEGS	BUM EQUIP. #3-18-LR	½" ½"	FLOOR SINK	DUAL DRAINBOARDS
15	FOOD PREP SINK	20" LEGS	BUM EQUIP. #1-18-R	½" ½"	FLOOR SINK	DRAINBOARD
16	MOP/BROOM RACK	WALL MOUNTED				
17	CHEMICAL STORAGE SHELF	72" POSTS	SHELF CO. INC	N/A	N/A	
18	DESK	30" LEGS				
19	MOP SINK	20" LEGS	BUM EQUIP. #1-UTILXB	½" ½"	DIRECT	WITH VACUUM BREAKER
20	WATER HEATER	6" STAND	HTWTR-50B		FLOOR SINK	40,000 BTU'S
21	EMPLOYEE LOCKERS	6" LEGS		N/A	N/A	6 LOCKERS
22	GREASE TRAP	UNDERGROUND	GRTP-500ZC	N/A	DIRECT	OUTSIDE
23	AIR CURTAIN	ABOVE REAR DOOR	NOFLY CO #55GH	N/A	N/A	
24	STORAGE SHELVING	72" POSTS	SHELF CO. INC.	N/A	N/A	
25	WALK-IN COOLER	FLOOR MOUNTED	ICE-KOLD #WKIN58	N/A	FLOOR SINK	
26	HAND WASH SINK	WALL MOUNTED	PORCWSH #45XP	½" ½"	DIRECT	SOAP & PAPER TOWELS
27	SODA MACHINE	ON BEVERAGE COUNTER	BEVERGEUP #6BC	½"	FLOOR SINK	FOR CUSTOMER SELF-SERVICE

# Field Construction Inspections

*After your plan review has been approved by all necessary city agencies, it is your responsibility to contact your DPH plan reviewer for the construction site inspections.*

- Preliminary Construction Inspection

When construction work is approximately 80% complete, with plumbing and walls, floor, and ceiling finishes in place, you must contact our department to schedule an inspection. Minimum 1-2 weeks advance notice required.

- Final Construction Inspection

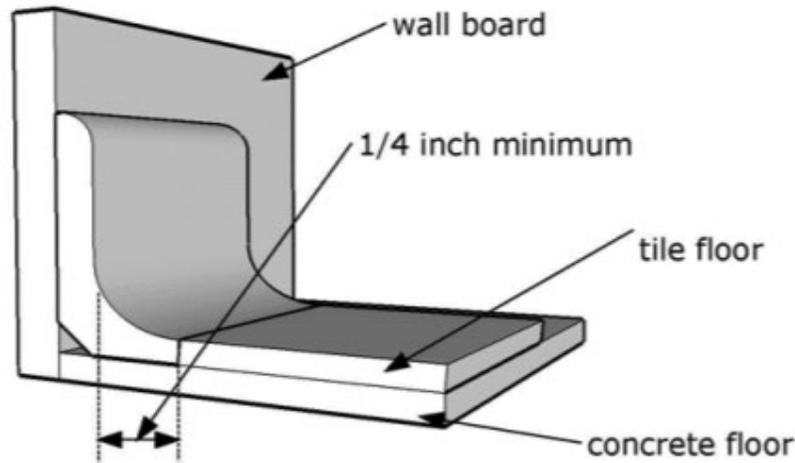
Upon 100% completion of the construction and all corrections as applicable, you must contact our department to schedule an inspection. Minimum 2-week advance notice required.

**Important Note:** *Plan Check approval of the final construction is not an approval to open for business or to operate.* The Health Permit to Operate must be approved by your district inspector to open for business and operate.

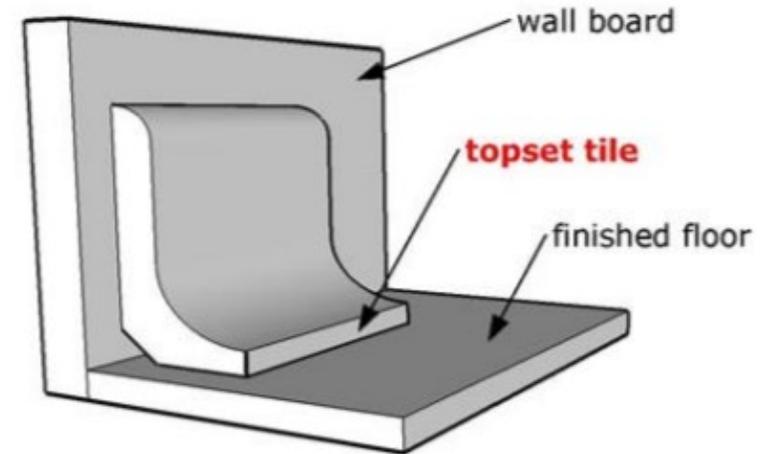


# Floors

- Floors in food establishments (except in sales and dining areas) shall be smooth and of durable construction and nonabsorbent that is easily cleanable in all areas where food is prepared, packaged, or stored, where any utensil is washed, where refuse or garbage is stored, where janitorial facilities are located, in all toilets and hand washing areas, shall be an approved type.
  - It is recommended that the floor finish is light-colored.
- 
- Examples of approved floors include quarry tile, commercial grade sheet vinyl and/or seamless epoxy floors.
  - Floor surfaces shall be coved at the juncture of the floor and wall with a 3/8" minimum radius coving and shall extend up the wall and toe-kicks of floor-mounted counters/cabinets at least 4" (except in areas where food is stored only in unopened bottles, cans, cartons, sacks, or other original shipping containers).
  - Topset rubber base is not approved except in customer areas.
  - Submit physical finish samples for review and approval.



Correct cove base installation



Incorrect cove base installation

# Walls and Ceilings

- Walls and ceilings of all rooms, (except bars, dining areas, and rooms where food is stored in unopened bottles, cans, cartons, sacks, or other original shipping containers), shall be of a **durable, smooth, nonabsorbent, and easily cleanable surface**. It is recommended that the walls and ceilings in food preparation and dishwashing areas, and in walk in refrigeration units also be light colored.
- Overhead pipes, conduits, ducts, beams, and other structures must be concealed above the finished ceiling. Brick, concrete block, open beams, rafter ceilings, rough plaster or textured gypsum board is not acceptable.
- No exposed sewer lines shall be installed above food or beverage areas.
- Paint used on gypsum board or similar surfaces shall be gloss or semi-gloss enamel, epoxy paint, or equivalent.
- **At the cookline:** Provide a durable, smooth and easily cleanable, noncorrosive and nonflammable material (i.e., stainless steel, ceramic tile) on wall surfaces behind the cookline, extending between the floor base and the bottom of the hood.
- **In the dishwashing area:** the walls shall be finished with fiberglass reinforced plastic (FRP), stainless steel, ceramic tile, or equivalent, 8' above finished floor (AFF).
- **Submit physical finish samples for review and approval.**

# Hot Water and Sinks

- Hot water shall be supplied at a minimum temperature of at least 120F measured from the faucet.
- A food facility may provide only warm water if the water supply is used only for handwashing.
- The water supply shall be from a water system approved by the health officer or the local enforcement agency.
- All Plumbing and plumbing fixtures shall be installed in compliance with applicable local plumbing ordinances.
- Your facility's hot water demand will be calculated as part of the plan review as needed, to determine the sizing requirements for water heaters.

## Hourly Hot Water Demand Table

- Utensil Sinks

Compartment Size	Gallons Per Compartment	Compartment Size	Gallons Per Compartment
16" X 20" →	14	18" X 30" →	23
18" X 18" →	14	20" X 28" →	24
18" X 24" →	19	24" X 24" →	25
18" X 26" →	20	24" X 30" →	31

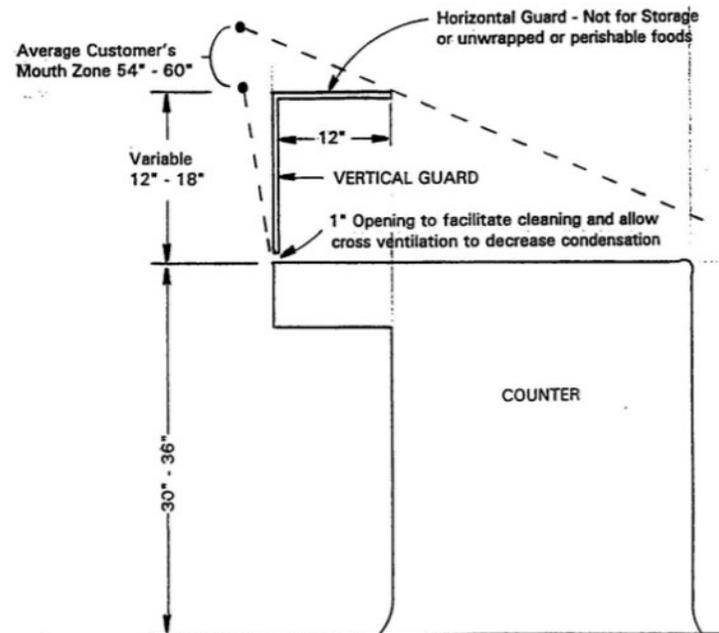
- Dishmachines/Glasswashers: Refer to manufacture specs for GPH and minimum water temperature inputs
- Bar Sink (12" X 12"): 6 gallons per compartment
- Food Prep Sink: 5 gallons per compartment
- Janitorial Sink: 15 gallons per sink
- Garbage Can Wash Facility: 15 gallons per facility
- Hand sink(s): 5 gallons per sink
- Pre-Rinse Hand Spray: 45 gallons (if other type, refer to manufacture specifications)



# Sneeze Guard Protection

Service of unpackaged foods directly to or by the customer

- With the exception of produce displays in retail grocery stores, unpackaged foods shall be shielded so as to intercept a direct line between the customer's mouth and the food being displayed, or shall be dispensed from approved self-service containers
- Food preparation surfaces and food preparation equipment which are located adjacent to customer accessible areas, must be protected by approved sneeze guards.



# Floor Sinks and Floor Drains

## FLOOR SINKS

- a) All installations must comply with the local building and/or plumbing codes
- b) All steam tables, ice machines and bins, food preparation sinks, display cases, and other similar equipment that discharge liquid waste must be drained by means of indirect waste pipes, through an air gap into an open floor sink or other approved type of receptor that is properly connected to the drainage system.
- c) All installations must be done in a manner to allow complete accessibility for cleaning and must not create a tripping hazard.



## FLOOR DRAINS

- a) Floor drains must be provided in floors that are water-flushed for cleaning or where pressure spray methods for cleaning equipment are used.
- b) A positive slope of 1:50 must be provided in floors that are provided with floor drains. This slope must be measured from wall to wall within the food preparation or utensil wash area. Sloping the floor immediately adjacent to the floor drain, e.g., a three to four diameter depression, is not acceptable.



# Dry Food Storage

- a) Adequate space must be provided and designated on the plans for dry food storage:
- The floor space required for backup dry food storage must be a space equal to 25% of all kitchen area or a minimum of 100 square feet of floor space, whichever is greater.
  - $\geq 96$  linear ft of approved shelving dispersed throughout the kitchen area.
- b) Shelving must be a minimum of 18 inches in depth and must be at least three (3) tiers high.
- c) The shelving material must be smooth, easily cleanable, nonabsorbent, and vermin proof.
- d) The lowest shelf must be at least six (6) inches above the floor.



# Adequate Refrigeration

As needed for food storage, cooling, and thawing



## Trash, Compost, and Recycle Container Storage Area

- On the floor plan, show the path-of-travel to the area provided for the storage and cleaning of trash, compost, and recycle containers.
- If located within the food facility, a storage area and cleaning area shall meet the requirements for floors, walls, ceilings, and vermin exclusion. The room shall be well ventilated.
- If located outside the food facility, the storage area or enclosure shall be constructed of nonabsorbent material such as concrete or asphalt and shall be easily cleanable, durable, and sloped to drain.
- The storage area shall be located so that it is separate from food and food-related items and a public health hazard or nuisance is not created.



# Mechanical Ventilation

- Mechanical exhaust ventilation equipment shall be provided over all cooking equipment as required to effectively remove cooking odors, smoke, steam, grease, heat, and vapors.
- Shall be installed and maintained in accordance with the California Mechanical Code.
- A building permit with a floor plan and specification sheets shall be submitted for review and approval by all applicable city agencies including the Department of Building Inspection-Mechanical and the Health Department.

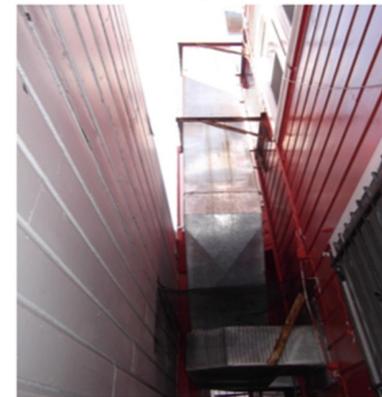


# Noise

- All newly installed mechanical, ventilation, and/or refrigeration equipment or systems shall not generate more than 8-decibels above the ambient sound level, at the nearest property plane, at all hours of operation.
- Project owner/permit applicant, and/or contractor shall make arrangements for safe DPH inspector access (per CAL-OSHA standards) to conduct noise measurements as soon as possible, but no later than two weeks before DPH final inspection.
- If safe access cannot be provided for DPH to conduct a valid sound measurement, the project owner/permit applicant, and/or contractor shall hire a Licensed Acoustical Engineer to provide an acoustical report to verify all equipment complies with the SF Noise Ordinance Article 29 and the San Francisco Police Code- Regulation of Noise, at all hours of operation, for DPH final approval.

## **Noise Reduction Techniques:**

- a) Install machine on resilient mounting apparatus or vibration isolators to dampen noise and vibration to residential units.
- b) Apply sound absorbing materials (e.g. acoustical foam, noise blanket, baffles, noise absorbing duct liner).
- c) Direct and install equipment output away from sensitive receivers.
- d) Install an acoustically engineered sound barrier or enclosure (obtain necessary Building Permits).
- e) Hire an acoustical engineer to study and apply these and more techniques.



Avoid installing exhaust ducts along residential windows



Avoid installing motors directly next to a residential window.

# Pass-Through Windows

- a) Passthrough window service openings shall be limited to 216 square inches each.
- b) The service openings shall not be closer together than 18 inches.
- c) Each opening shall be provided with a solid or screened window, equipped with a self-closing device.
- d) Screening shall be at least 16 mesh per square inch.
- e) Passthrough windows of up to 432 square inches are approved in equipped with an air curtain device.
- f) The counter surface of the service openings shall be smooth and easily cleanable.