



HEALTH AND HUMAN SERVICES

100 Spader Way • Broomfield, CO 80020 • 720.887.2200 • www.Broomfield.org/HHS

Dear Applicant:

The Colorado Revised Statutes require a complete set of plans and specifications are submitted, reviewed and approved by the Public Health & Environment Division before the start of any construction/extensive remodeling of a **Retail Food Establishment**. This process can be expedited by observing the following procedures:

1. Complete and sign the enclosed plan review application and requirements form, including the finish schedule and equipment installation list. **Notations as "see plans" will not be accepted. Failure to provide the required information will delay the plan review process.** If plans are significantly altered after approval, additional information may be requested for submittal.
2. **Provide plans for the following:** site layout, plumbing, ventilation, electrical, equipment layout, and site finish schedule.
3. Provide cut sheets (manufacturer specification sheets) for all equipment to be used within the facility, including any proposed used equipment.
4. Plan review packets and applications may be submitted to the Public Health & Environment Division, at Spader Way, Broomfield, CO 80020 or to the Building Department at One DesCombes Dr., Broomfield, CO 80020.
5. A total of \$680.00 is **required** upon submittal of plans for Public Health & Environment Division review. This includes an application fee of \$100.00 and a plan review fee of \$580.00. Plan review activities are charged at an hourly rate of \$45.00. Any balance left of the fees collected will be refunded by mail after the opening inspection.
6. A completed Retail Food Establishment License Application and the appropriate license fee are also **required** upon submittal of the plan review packet.
7. **Note:** Make checks payable to the City and County of Broomfield.
8. Once a completed Plan Review packet is received by the Public Health & Environment Division, written notification will be sent within 14 working days of the status of your plans.
9. Two inspections are required prior to opening, a construction inspection and a pre-opening inspection. **Notify Broomfield Public Health and Environment Division at least seven (7) working days in advance for each inspection. All construction and cleaning must be completed before calling for an opening inspection.**
10. Final approval from Broomfield Public Health and Environment Division is required before you open for business, including any advance food preparations or training activities.

If you have any questions, please contact our office at 720-887-2220.

PLAN REVIEW CHECKLIST
(ALSO FOR CHANGE OF OWNERSHIP)

REQUIREMENTS: Please complete this checklist and retain for your use.

A copy of the *Colorado Retail Food Establishment Rules and Regulations* can be obtained at:
<http://www.cdphe.state.co.us/regulations/consumer/101002RetailFood.pdf>

- 1. Complete and sign the Retail Food Establishment Specification and Plan Review Form.
- 2. Are the menu and facility floor plan enclosed?
- 3. Is the Food Handling Questionnaire completed?
- 4. Is the Equipment Installation List included (Appendix A)?
- 5. Is the Ventilation Systems Schedule completed (Appendix B)?
- 6. Is the Minimum Plumbing Facilities completed (Appendix C)?
- 7. Is the Worksheet for Calculating Minimum Hot Water Requirements completed (Appendix D)?
- 8. Is the correct Public Health Division fee of \$680.00 enclosed?
- 9. Has the construction inspection been scheduled?
- 10. **Has the Colorado Retail Food Establishment License Application been completed, submitted and fee paid, prior to the opening inspection?**
- 11. Has the opening inspection been scheduled?

You must also check with the following agencies: (*forms at end of packet must be taken to agency listed for signature prior to submission to BHHS*)

- Broomfield Building Division
- Broomfield Community Development & Planning Division
- Broomfield Sales Tax Licensing Office
- North Metro Fire Rescue District
- Broomfield Wastewater Division
- Colorado Department of Labor & Employment



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RETAIL FOOD ESTABLISHMENT PLAN REVIEW APPLICATION

Name of Establishment: _____ Phone #: (____) _____

Location Address of Establishment: _____
Street City State Zip

Mailing Address of License: _____
Street/PO Box City State Zip

Name of Owner: _____ Phone # (____) _____
Email : _____
Address: _____
Street/PO Box City State Zip

Name of Contractor: _____ Phone # (____) _____
Email: _____
Address: _____
Street/PO Box City State Zip

Name of Architect: _____ Phone # (____) _____
Address: _____
Street/PO Box City State Zip

Name of Principle Contact: _____ Phone # (____) _____
Email: _____
Address: _____
Street/PO Box City State Zip

Date of planned opening: _____

Type of Establishment:

- ____ Restaurant/ Drive-In/ Deli, etc. with cocktail lounge? Yes ____ No ____
- ____ Grocery with: ____ Deli ____ Bakery ____ Seafood ____ Meat ____ Bulk foods
- ____ Bakery ____ Retail Meat ____ Retail Fish ____ Private Club/Fraternal Organization
- ____ Tavern, with: ____ On site Food Preparation ____ No On site Food Preparation
- ____ Commercial Pre-wrapped and pre-packaged foods heated and served only
- ____ Other _____

- ____ New Establishment ____ Remodel ____ Ownership Change
- ____ Other _____

Total Seating Capacity (Indoors & Outdoors): _____ Total Square footage of facility _____

Total Square footage of Food Preparation and Storage areas: _____

Maximum number of Employees per shift: _____

Will off premises catering be offered? ____ Yes ____ No

If yes, then describe operational procedures, catering locations, menu, hot and cold holding methods, and a list of equipment used for catering (See Appendix A)

Will buffet or banquet service be offered? ____ Yes ____ No

If yes, then describe the equipment to be used (See Appendix A) for hot and cold holding and operational procedures on a separate page.

Will any foods be vacuum packaged on site? _____ Yes _____ No

Request for construction or opening inspections: (This department requests 7 working days notice.)

All construction and cleaning must be completed before an **Opening Inspection** can be done. Failure to do so will result in additional technical assistance charges of \$45.00 per hour.

Please submit with packet on separate pages the additional information:

- **A complete menu**
- **List of all food service related equipment including make and model number (See Appendix A)**

Facility Floor Plan:

The facility floor plan must be drawn to scale, including the layout of all sinks, refrigerator equipment, etc. (See attached example of a detailed floor plan drawing to use as a guide.) The floor plan must include location and identification of all equipment and areas including:

1. Sinks

- a) Lavatory(s) - Number provided, including restrooms: _____
- b) Food preparation sink(s) - Number provided: _____
- c) Mop sink(s) - Number provided: _____
- d) Dump sink(s) - Number provided: _____
- e) Ware-washing (three-compartment) sink(s) - Number provided: _____

- 2. Wait station(s) - Provided _____ Not Applicable _____
- 3. Toilet facilities - Required
- 4. Dry food storage area(s) - Required
- 5. Employee locker/storage area(s) - Required
- 6. Chemical storage area(s) - Required
- 7. Water heater - Required
- 8. Bar service area(s) Provided _____ Not Applicable _____
- 9. Indoor and outdoor seating Provided _____ Not Applicable _____
- 10. Outdoor cooking or bar area(s) Provided _____ Not Applicable _____
- 11. Laundry facilities - Provided _____ Not Applicable _____
- 12. Recycle/Damaged/Returned goods location - Provided _____ Not Applicable _____
- 13. Floor sinks and floor drains - Required
- 14. Grease interceptor or grease trap - Provided _____ Not Applicable _____
- 15. Ice bins / ice machines - Provided _____ Not Applicable _____
- 16. Dipper wells - Provided _____ Not Applicable _____
- 17. Chemical dispensing units - Provided _____ Not Applicable _____

FOOD HANDLING QUESTIONNAIRE

**An accurate, completed, detailed plan and specification document is critical for the proper review of these forms.
Please take your time and fill out the following pages.**

Please provide as much detail as possible. Answers will determine if your food handling techniques are consistent with proper food safety and public health protection. It has been shown that the majority of foodborne illness outbreaks are contributed to errors in food handling (e.g., improper cooling, reheating, etc.). Consequently, it is important that proper procedures be employed by the establishment from the start of operation.

Potentially Hazardous Foods (PHF's) are defined as those foods which will support the growth of foodborne illness causing bacteria, have a high moisture and protein content, and a low amount of acidity. PHF's that have been frequently identified as vehicles of a foodborne illness, include meat, poultry, seafood, dairy products, cooked rice/potatoes/beans, soups and gravies, potato and other combination salads. The definition does not include commercial hard cheeses, commercially prepared mayonnaise or salad dressings, raw vegetables or fruits (except cut melons and sprouts).

1. Cooling of Potentially Hazardous Foods
Will any potentially hazardous food be cooled? Yes ____ No ____
If yes, explain in detail how you are cooling foods:

A. Technique: _____

B. Time, if any foods are allowed to pre-cool at room temperature: _____

C. List types of containers used, and the level of food placed in these containers to cool:

D. Are foods covered during the cooling process? Yes _____ No _____

E. How will the process be monitored?

F. If using an ice bath, at what temperature are the foods placed in the refrigerator? How often are foods being stirred; what level is the ice in relation to the food; how often is the food monitored for temperature?

2. Reheating Potentially Hazardous Foods (Complete this area if you answered "Yes" to 1 above.)

If you are going to reheat PHF's, please describe the process and include:

A. Equipment used for reheating (stove, convection oven, etc.): _____

B. Total amount of time taken to reheat before service or hot holding: _____

C. Temperature food will be reheated to: _____

D. How will the process be monitored? _____

3. Hot and Cold Holding of PHF's

If you are going to be holding hot or cold PHF's, describe:

A. The temperature of PHFs before they are placed into hot holding units (steam tables, hot cases, etc.) or cold holding units other than refrigerators (salad bars, cold wells, ice storage, refrigerated drawers, etc.)

B. What will the internal temperature of PHFs in hot or cold holding units to be maintained throughout the day?

C. How will the process be monitored?

D. Will catering be conducted? Yes ____ No ____ If yes, what equipment will be provided to maintain food at proper temperatures during transport? _____

E. Will food be transported or delivered to another location? ____ Yes ____ No
If yes, what equipment will be provided to maintain food at proper temperatures during transport? _____

F. Will vacuum packaging be conducted in the establishment? ____ Yes ____ No
If yes, please provide the required HACCP Plan for each category of food to be vacuum packaged:

4. Personnel Hygiene

Describe how the hygiene of personnel will be addressed in your establishment and include:

A. Policy on where and when hand washing occurs, including after handling raw meats and/or seafood.

B. Policy for ill food service workers:

C. How will employees limit the amount of direct hand contact with food?

5. Cooking Temperatures

Rare Beef _____ Casseroles _____ Poultry _____
Pork _____ Fish/Shellfish _____ Ground Beef _____

How will the cooking temperatures of these and other foods be monitored?

6. Cleaning and Sanitization Procedures

A. Describe the type and concentration of sanitizer used:

B. How will the meat-slicer, cutting boards and other in-use utensils be cleaned and sanitized after becoming contaminated? How often?

7. Additional Food Handling Information:

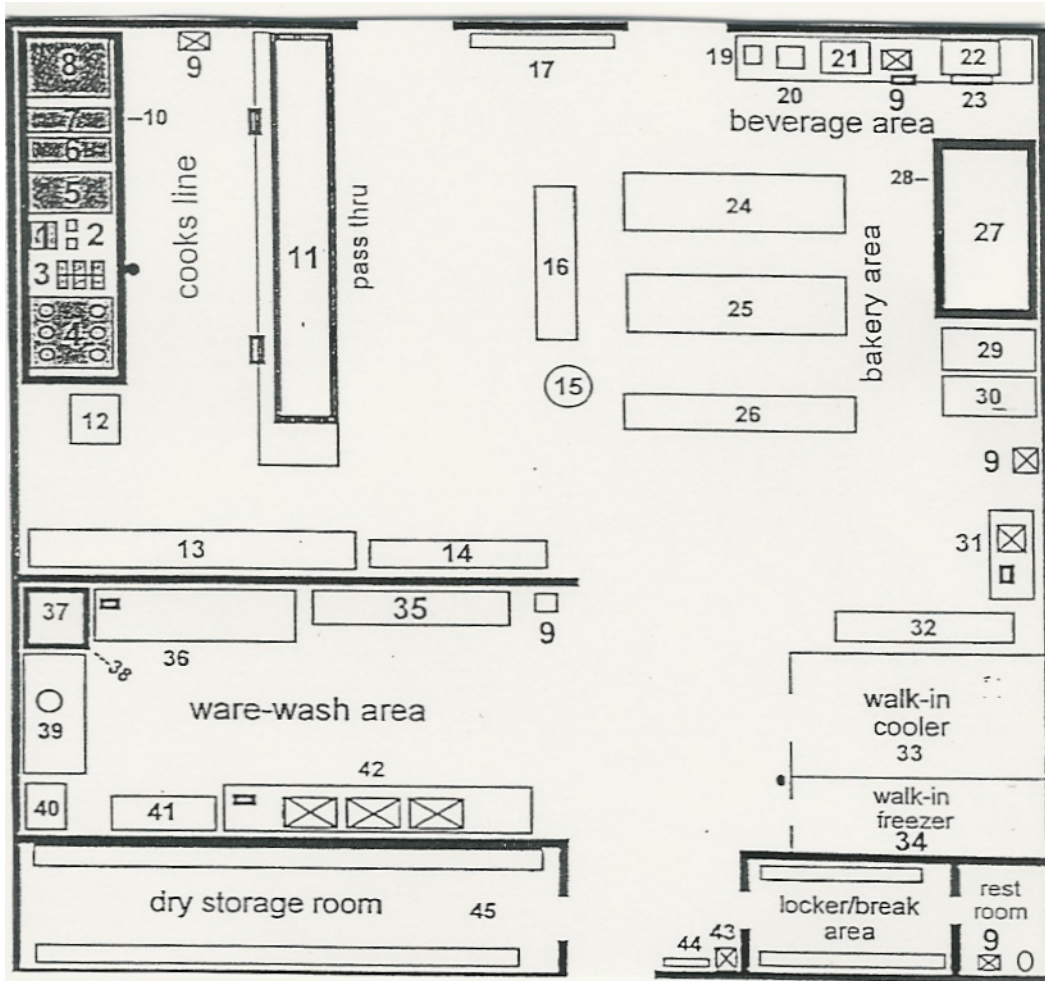
A. How will frozen foods be thawed?

B. Will raw meats, poultry, and seafood be stored/displayed in the same refrigerator with cooked, ready-to-eat foods?
___ Yes ___ No If yes, how will they be store to prevent cross contamination?

C. Where will produce be washed?

EXAMPLE Facility Floor Plan

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Equipment

1. Cheese melter
2. Microwaves
3. Steam table
4. Stove
5. Griddle
6. Fryer
7. Fryer
8. Charbroiler
9. Handsink
10. Hood, Type I
11. Refrigerator/freezer Maketable unit with pass-thru and shelf
12. Stainless steel table
13. Sliding 3-door refrigeration unit
14. Shelving unit
15. Mixer
16. Shelving unit
17. Bread shelving racks
18. Dining area
19. Coffee maker
20. Tea maker
21. Soda machine
22. Espresso machine
23. Under counter refirg. unit
24. Bakers' table
25. Bakers' table
26. Shelving unit
27. Bake oven

28. Hood, type II
29. Proof cabinet
30. Proof Cabinet
31. Vegetable prep sink & 18" drainboard
32. Stainless prep table
33. Walk-in cooler
34. Walk-in freezer
35. Drying shelf
36. Clean drainboard
37. Dishmachine
38. Hood, type II
39. Dirty drainboard w/ spray hose & garbage disposal
40. Dirty dish rack
41. Drying shelf
42. 3-compartmentsink w/ 36" drainboards
43. Mop sink
44. Chemical storage shelf
45. Shelving

! = Floor sink

□ = Floor drain

RETAIL FOOD ESTABLISHMENT FINISH REQUIREMENTS FORM

Finish Requirements: Complete this chart. Include all rooms or areas used for food preparation and food storage. Include restrooms. Example: kitchen, bar, dishwashing area, etc.

Floors, walls, and ceilings must be smooth, impervious, non-absorbent, and easily cleanable. Coved floor-wall junctures must be provided. Walls and ceilings must be light in color. In all food prep/kitchen and dishwashing areas, bars, and wait stations, acoustical tile is **NOT** acceptable. Inside of bar area must be smooth, non-absorbent and easily cleanable. Four-inch minimum required for baseboard coving.

<i>Room or Food Area</i>	Floors: Finish/Material	Coving	Walls: Color and Finish/Material	Ceilings: Color and Finish/Material
EXAMPLE: Restrooms	Ceramic Tile	Rubber Base 4"	White Fiberglass Reinforced Panels (FRP)	White Vinyl Clad Ceiling Tile
Kitchen/Food Preparation				
Restrooms				
Dry Storage				
Dishwashing Areas				
Waitress Station or Service Counter Area				
Walk-in Cooler/Freezer				
Other: Bar, meat cutting, or bakery area, etc. Please specify.				

RETAIL FOOD ESTABLISHMENT FACILITY REQUIREMENTS FORM

Facility Requirements

Instructions: Following is a list of facility requirements for opening a retail food establishment. Read each requirement and, in OWNER USE column, initial if in compliance or mark NA if not applicable. Please make sure that you understand and satisfy all applicable requirements for your retail food establishment. An inspector will verify each requirement using the left column (marked EHS USE) during the opening inspection. Failure to meet these requirements upon the opening inspection may delay opening of your establishment. Please call if you have any questions. Incomplete applications will be returned.

EHS USE		OWNER USE
UTILITY INSTALLATION		
	1. All plumbing and electrical conduit are to be installed within and behind walls and ceilings or below floors. Exposed water pipes, sewer lines, and/or electrical conduit running along walls, ceilings, or floors are not approvable (for new and remodeled retail food establishments).	
DOORS AND WINDOWS		
	2. All outside openings must be tight fitting to exclude the entrance of insects and rodents. One of the following must be provided:	
	3. Opening windows: Screens <input type="checkbox"/> Air Curtain <input type="checkbox"/> Self-closing <input type="checkbox"/> Other <input type="checkbox"/>	
	4. Outside doors: Screens <input type="checkbox"/> Air Curtain <input type="checkbox"/> Self-closing <input type="checkbox"/> Other <input type="checkbox"/>	
LIGHTING REQUIREMENTS		
	5. 50 foot-candles of light on all working surfaces and equipment in food preparation and utensil washing area including equipment located under vent hoods. 20 foot-candles of light at a distance of 30 inches from the floor in utensil and equipment storage areas and in lavatory and toilet areas. 10 foot-candles of light in walk-in refrigeration and freezer units, dry food storage areas and in all other areas, including dining during operations. (Please Note: The standard light fixtures with most walk-in refrigeration units do not provide the 10 foot-candles power of light required.)	
	6. Protective shielding for all light fixtures in food preparation, utensil and equipment washing, and other areas where food is stored or displayed (shatter proof bulbs may be substituted).	
	7. Protective shielding or shatterproof bulbs provided for inside of all refrigerators, freezers, and walk-in coolers and freezers.	
	8. Overhead lighting provided in walk-in coolers and freezers.	
OUTSIDE TRASH STORAGE FACILITIES		
	9. Constructed of smooth, non-absorbent, and easily cleanable surfaces (concrete or rolled asphalt).	
	10. Durable outdoor containers with tight fitting lids required.	
	11. Pick up schedule must be frequent enough to prevent garbage overflow.	
VENTILATION		
	12. All ventilation installed according to the 1997 Uniform Building and Mechanical Codes as adopted. (See Appendix B)	
	13. Ventilation must be adequate so that all areas including restrooms are kept free from excessive heat, steam, condensation, vapors, fumes, or objectionable odors.	
	14. Ventilation hoods and devices must be designed to prevent grease or condensation from dripping out of the hood or device.	
	15. Ventilation system filters must be readily removable for cleaning.	
	16. Ensure design, installation, and maintenance of ventilation systems is in accordance with	

		applicable, state and local fire codes.	
17.		All ventilation systems must be exhausted to the outside air. Restroom must be mechanically vented to outside air (outside of the building).	
18.		Details (shop drawings) indicating size (length and width) and type of all exhaust hoods must be provided.	
19.		Locations of all make-up air registers along with CFM ratings (of outside air).	
20.		Intake air ducts must be designed and located to prevent the entrance of dust, dirt, insects, exhausted air, etc.	
21.		Fire prevention or extinguishing equipment must be installed so that it does not create a cleaning problem or compromise the integrity of original design of hood. All lines within hood canopy must be chrome.	
		* Please Note: The kitchen exhaust hood must be NSF approved or its equivalent; must overhang all equipment which produce grease vapors, steam, smoke and excessive heat not less than 6 inches beyond the edge of the cooking surface on all open sides; or be of other approved engineered design. Make-up air must be mechanically introduced into the establishment at a volume equal to or greater than what is being exhausted. The kitchen should be under a slight negative pressure so that make-up air can be exhausted through the kitchen exhaust system after it moves from the dining area into the kitchen. Make-up air must be distributed through several registers to establish necessary air patterns and so as not to short-circuit the exhaust system(s). Exhaust hood switch(es) must be interlocked with the make-up air systems(s).	

TOILET FACILITIES

22.		Facilities must be available to patrons without passing through the food preparation, utensil washing, and storage areas.	
23.		Must be located within 200 feet by normal pedestrian route if food facility is located in multi-purpose building. (See Appendix C) Number of water closets: For women _____ For men _____ Number of laboratories: For women _____ For men _____ Number of urinals: _____	
24.		Toilet facilities must be accessible at all times when establishment is open.	

EMPLOYEE AND PERSONAL BELONGINGS

25.		Where will storage facilities for employees' clothing and other personal items be located if dressing rooms are not provided?	

WATER

26.		If on a private well, a plot plan is required which shows the well, septic system (if applicable) and the building. Also, please provide the depth and method of water treatment.	
27.		Water source _____	
28.		Hot and cold water under pressure must be supplied to all fixtures and equipment requiring water.	

HAND WASHING FACILITIES

29.		Hand washing facilities must be readily accessible in all food preparation areas, equipment & ware washing areas, and restrooms. A separate sink installed and used for hand washing only is required. All hand washing facilities must be provided with hot and cold water under pressure.	
30.		Each hand washing facility is provided with mounted soap and sanitary toweling or hand drying device. Self-dispensing, spring-loaded, or metering faucets must provide a flow of water for at least 15 seconds without the need to reactivate.	

SEWAGE DISPOSAL

31.	If an onsite septic system is used, it must be an approved system. Permit # _____	
32.	Provided by: City Sewer _____ (name)	

DESIGN, CONSTRUCTION, AND INSTALLATION OF EQUIPMENT

33.	All equipment and utensils meet American National Standards Institute accredited certification program or equivalent. Domestic type refrigerators, freezers, stoves, crock-pots, sinks, etc. are not acceptable. Submit the make and model numbers of all equipment (See Appendix A). Drop-in cold plates in ice machine or jockey boxes are not acceptable.	
34.	A food preparation (vegetable) sink with an 18-inch self-draining drainboard must be provided if vegetables and salads are a standard menu item or if food is processed in a manner that requires placement in a sink. Vegetable prep sinks must be provided with hot & cold running water under pressure and provided with an indirect waste line.	
35.	Running water dipper wells are needed for the storage of frozen dessert utensils and must be provided with an indirect waste line.	
36.	Ice storage bins. Protected with splash shields (protective covers).	
37.	Proper installations of mix and liquor guns (indirect waste).	
38.	Equipment used for food preparation or storage installed so as to facilitate cleaning around and beneath each unit. A. Equipment that is placed on tables or counters readily movable, sealed thereto or mounted on legs or feet at least 4 inches high to facilitate easy cleaning. B. Floor mounted equipment, unless readily movable (on castors), sealed to floor, or installed on raised platforms of concrete or masonry, or elevated at least 6 inches above floor. C. All floor mounted equipment and the space between adjoining units, and between a unit and an adjacent wall, must be either closed or sealed if exposed to seepage, or have sufficient space to facilitate easy cleaning between, behind, and beside equipment. D. Space Requirements: i. If equipment is less than 24 inches wide, the space between equipment and wall must be at least 6 inches. ii. If equipment is more than 24 inches but less than 72 inches wide, the space between equipment and wall must be at least 12 inches. iii. If equipment is more than 72 inches wide, the space between equipment and wall must be at least 18 inches. iv. If equipment is installed on castors with flex fuel lines or quick disconnects, the space requirements listed above are not applicable. Flex lines must be long enough to allow the equipment to be pulled away from the wall to permit easy cleaning.	

EQUIPMENT PLACEMENT

39.	Equipment used for food preparation or storage installed so as to facilitate cleaning around and beneath each unit.	
40.	Equipment that is placed on tables or counters must be readily movable, sealed to or mounted on legs or feet at least 4 inches high to facilitate easy cleaning.	
41.	Floor mounted equipment, unless readily movable (on castors), sealed to floor, installed on raised platforms of concrete or masonry or elevated at least 6 inches above floor.	

CLEANING/SANITIZING OF EQUIPMENT AND UTENSILS

Manual Requirements:

42.	A three-compartment sink must be provided. Sink compartments must be large enough to accommodate the largest piece of equipment or utensil used. Size of each compartment (length x height x width) = _____	
43.	Drainboards are to be as wide as adjoining sink compartments. Double 24 inch drainboards are required in establishments using single service utensils. Double 36 inch drainboards are required in establishments using multi-use utensils.	

44.	A four compartment sink is required for a bar, tavern, or lounge.	
Mechanical Dishwashing Requirements:		
45.	Dish machines without pre-wash capabilities must have manual pre-wash spray hose and pre-wash sink.	
46.	Dish machines must be NSF approved. Please indicate: Make _____ Model #: _____	
47.	A two-compartment sink is required in the dishwashing area in addition to the mechanical dishwasher. A three-compartment sink is required when utensils cannot be cleaned and sanitized in the mechanical dishwasher due to size or configuration.	
48.	Drainboards are to be provided at the dish machine.	
49.	Is dish machine a chemical or heat-sanitizing machine? Chemical <input type="checkbox"/> Heat <input type="checkbox"/> Booster Heater (if using a high temperature dish machine): Make _____ Model #: _____ Heats _____ gallons of water per hour at _____ °F rise.	
50.	Booster heater must be within 5 pipe feet of dish machine or be fitted with an approved recirculating pump.	

HOT WATER SUPPLY

51.	Water Heater Make: _____ Model #: _____ Recovery Rate: _____ gallons per hour at _____ degrees °F rise at sea level BTU/KW rating _____ Storage Tank Capacity _____ gallons	
52.	Hot water requirement of establishment is _____ gallons per hour based on usage requirement of all fixtures. (See Appendix D)	

STORAGE AND HANDLING OF EQUIPMENT AND UTENSILS

53.	All utensils and equipment must be stored at least 6 inches off the floor; clean, dry, and protected from splash and dust.	
54.	No storage under exposed water or sewer lines.	

HOT AND COLD FOOD STORAGE

55.	Hot and/or cold food storage units must be provided which are large enough to accommodate maximum food storage or holding during peak periods.	
56.	Refrigeration equipment must be provided for the rapid cooling of cooked food products.	

Walk-in Refrigerator and Freezer Units:

57.	Walk-ins must be constructed to ANSI Standards or equivalent. Wooden shelves, pallets, or any wooden interior finishes are not permitted.	
58.	Interior finishes must be smooth, non-absorbent, light in color, and cleanable.	
59.	Metal shelving must be of an approved metal wire construction. Solid metal shelving in walk-ins are not approved.	
60.	Size of walk-in(s). Specify whether cooler or freezer. #1 Cooler <input type="checkbox"/> Freezer <input type="checkbox"/> Size (length x height x width) _____ #2 Cooler <input type="checkbox"/> Freezer <input type="checkbox"/> Size (length x height x width) _____ #3 Cooler <input type="checkbox"/> Freezer <input type="checkbox"/> Size (length x height x width) _____	

61.	The space between the top of the walk-in and the ceiling must be at least 24 inches, or the unit must be sealed to the ceiling.	
Reach-in Refrigerator and Freezer Units:		
62.	Domestic (household) type units are not acceptable	
63.	Refrigerator units: Number _____ Approximate cubic feet total _____	
64.	Freezer units: Number _____ Approximate cubic feet total _____	
Hot Food Holding Units:		
65.	Hot holding units must be capable of holding the internal temperature of potentially hazardous foods at 140°F or hotter.	
66.	List number and type of hot holding units: _____ _____ _____ _____	
67.	All hot and cold holding and/or storage units must be provided with accurate, numerically scaled thermometers.	
68.	When unwrapped food is placed on display (smorgasbord, salad bars, buffet, etc.), it will be protected against contamination from customers by easily cleanable sneeze guards, cabinets, display cases or other effective protective equipment. Sufficient mechanical hot or cold food facilities shall be available to maintain the required temperature of potentially hazardous food on display.	
	Please Note: Refrigeration equipment when installed in conjunction with heat producing cooking equipment must be designed and installed so refrigeration equipment can maintain foods below 41°F.	
69.	If food is transported to another location, food must be protected from contamination and held at proper holding temperature. If applicable, describe how this will be accomplished: _____ _____ _____ _____	
DRY STORAGE FOR FOOD AND FOOD PRODUCTS		
70.	Food and food products must be stored at least 6 inches off the floor, dry, splash free, and not exposed to water or sewer lines. Please Note: If storage is found to be inadequate at the time of operation inspection, additional storage will be required.	
CHEMICAL STORAGE		
71.	All toxic poisonous material, including cleaning chemicals and sanitizers, must be stored physically separate from food and utensils.	
CLEANING EQUIPMENT		
72.	Janitor (mop) sink is provided. Location: _____	
73.	Cleaning equipment, mops, brooms, buckets, etc. shall be stored in an area completely separate from food storage, food preparation, utensil washing and storage areas.	
74.	Approved can washing facilities must be provided.	

PLUMBING		
75.	All plumbing must be installed according to the 1997 UPC Table 4-1 as adopted and approved by the Broomfield City-County Building Department.	
76.	Vacuum breakers must be provided for submerged/enclosed outlets, hose connections, dish machine, rinse lines, etc. Vacuum breakers must be located a minimum of 6 inches above the overflow rim and after the last valve on equipment.	
77.	Approved backflow prevention device will be required on all continuous pressure lines except hoses which are permanently mounted to hang a minimum of 2 inches above the overflow rim at rest.	
78.	All enclosed equipment in which food or portable equipment or utensils are placed shall not be directly connected to the drainage system (sewer line).	
79.	All equipment requiring indirect waste lines properly drain into floor drains or sinks (i.e. ice machines, ice bins).	
80.	Floor drains or sinks are accessible for cleaning and maintenance.	
81.	Retail food establishment owners have installed a properly vented dual check valve device or an approved pressure backflow assembly between copper pipe or tubing and carbonated beverage dispensing machines.	

REQUEST FOR INSPECTIONS – Two inspections are required prior to opening:

1. A construction inspection is done when interior finishes are completed, but prior to the installation of equipment.
2. An opening inspection will be conducted when all remodeling or construction is complete, the facility has been cleaned and is ready to operate. All equipment must be installed with refrigeration and hot-holding units operating at their proper temperatures.

This review is valid for a period of 120 days from the date shown below. If construction/remodeling is not started within this time period, it will be necessary to resubmit plans for a new review. Regulations are subject to change. Any changes to the approved plans must have prior approval by the Public Health Division of BHHS. Notify the Environmental Health Office at least seven (7) working days in advance for each inspection (Construction and Opening). All construction and cleaning must be completed before calling for the opening inspection. The Retail Food Establishment license fee is due prior to the opening inspection.

Authorized Signature_____

Date_____

**APPLICATION WILL NOT BE PROCESSED WITHOUT
“AUTHORIZED SIGNATURE”**

Appendix A Equipment Installation List EXAMPLE		Installation Methods								
		At Floor		At Wall			Adjacent Equipment			
		Masonry Islands	Approved Legs	Casters	Attached	Separation	Attached	Separation	Portable	
Make and Model #	Item	Identification Code on Plan (by description)								
	Reach-in refrigerator	1		X		6"		36"		
	Salad and sandwich table	2		X		6"		36"		
	Work table S/S top	3				X		X		
	Steam table (portable cutting board)	4				X		X	6"	
	Steam cooker	5		X			6"		6"	
	Reach-in refrigerator	6		X		X			6"	
	Heavy duty range	7	X			X		X		
	Heavy duty range	8	X			X		X		
	Deep fat fryer	9	X			X		X		
	Work table S/S top	10								
	Dishwashing machine	11		X		X		X		
	Pot sink	12		X		X				
	Work table	13								18"
	Bake oven	14								6"
	Proofing cabinet	15			X					6"
	Vertical mixer	16								6"
	Baker's table	17		X		X				
	Freezer	18		X		X				
	Vegetable preparation sink	19		X		X				6"
	Vegetable peeler	20								6"
	Drain boards	21		X		X		X		
	Hood	22								

APPENDIX B

VENTILATION SYSTEMS

The kitchen exhaust hood must be American National Standards Institute certified approved or its equivalent. Air flow must be calculated, and hoods must be designed according to the 1997 Uniform Mechanical Code, section 508.

Hoods must overhang all equipment that produce grease vapors, steam, fumes, smoke and excessive heat not less than 6 inches beyond the edge of the cooking surface on all open sides; or be of other approved engineered design. Riveted or painted hoods are not approved. Make-up air must be mechanically introduced in the establishment at a volume equal to or greater than what is being exhausted. The kitchen should be under a slight negative pressure so that make-up air must be mechanically introduced into the establishment at a negative pressure so that make-up air can be exhausted through the kitchen exhaust system after it moves from the dining area into the kitchen. Make-up air must be distributed through several registers to establish necessary air pattern in order to not short circuit the exhaust system. Windows and doors shall not be used for the purpose of providing make-up air. The exhaust hood switch(s) must be interlocked with the make-up air system(s).

A Type I Hood is a kitchen hood designed to collect and remove grease and smoke.

A Type II Hood is a kitchen hood for collecting and removing steam, vapor, heat, or odors.

Use the following table to list all necessary ventilation equipment. If hoods are UL or NSF listed, submit listing data.

VENTILATION SCHEDULE

Source	Length	Width	CFM Exhaust	CFM Supply
Example: RTU – 1				1600
Example: hood #1	6'-6"	5'-0"	1500	500

APPENDIX C

MINIMUM PLUMBING FACILITIES

Restaurants, Pubs, Lounges
Fixtures per person

Total Seating Capacity: _____ Total Employees Per Shift: _____
(This includes both indoor and outdoor seating.)

1. Establishments with a total seating capacity of 15 or less – May have a unisex restroom with minimum fixture requirement: 1 toilet and 1 hand sink.
2. Establishments with a total seating capacity and employees per shift of greater than 15 – Minimum requirement: 2 restrooms. To find minimum fixture requirements, find male: female ratio = total seating capacity divided by 2.
Example: Total seating capacity is 100. 100 divided by 2 = 50; male: female ratio is 50:50. Therefore, establishment must meet the fixture requirements for 50 males and 50 females. Required fixtures are 1 toilet and 1 hand sink in each restroom, and 1 urinal in men's restroom.

3. Restroom Requirements *

Toilet

Men's

1 toilet per 1 – 50 men

2 toilets per 51 – 150 men

3 toilets per 151 – 300 men

Women

2 toilets per 1 – 50 women

3 toilets per 51 – 150 women

5 toilets per 151 – 300 women

Male Urinal

1 urinal per 1 – 150 men

Over 150, add 1 urinal for each additional 150 men

Hand sink

Men's

1 sink per 1 – 150 men

2 sinks per 151 – 200 men

3 sinks per 151 – 300 men

Women

1 sink per 1 – 150 women

2 sinks per 151 – 200 women

3 sinks per 151 – 300 women

* Establishments may vary in fixture requirements. Refer to 1997 Uniform Plumbing Code

Table 4-1 or the 1997 Uniform Building Code Table A-29-A as adopted by the City and County of Broomfield Building Department.

APPENDIX D

WORKSHEET FOR CALCULATING MINIMUM HOT WATER REQUIREMENT

The following worksheet is provided to assist operators in calculating hot water usage and sizing of the water heater required for the operation.

1. CALCULATE TOTAL WATER REQUIRED BY ALL FIXTURES

a. Three compartment sink calculation of water usage:

- i. Measure dimensions of each compartment. If compartments are not the same dimensions, see note below.

Length = _____ Width = _____ Depth = _____

- ii. Insert measurements into equation and calculate.

(Length x _____ Width x _____ Depth x _____ x 3 x 0.5) / 231 = _____)

Water Usage / GPH

Note: If all compartment sizes of the sink are not the same, then 3 is taken out of the equation and the above calculation is done for each compartment. The volumes are added to obtain the total gallons per hour of hot water used in the sink.

- iii. Enter **Water Usage** number into the “Table to Calculate Total Water Required by all Fixtures.”

b. Utensil Soak Sink

- i. Measure dimensions of sink.

Length = _____ Width = _____ Depth = _____

- ii. Insert measurements into equation and calculate.

(Length x _____ Width x _____ Depth x _____ x 0.5) / 231 = _____)

Water Usage / GPH

- iii. Enter **Water Usage** number into the “Table to Calculate Total Water Required by all Fixtures.”

c. Dish machine and Conveyor Pre-rinse Water Usage

- i. Use manufacturer’s rating, in gallons per hour.

- ii. Enter **Water Usage** number into attached “Table to Calculate Total Water Required by all Fixtures.”

d. Clothes Washer Water Usage

- i. Use manufacturer’s rating, or 32 GPH for 9 to 12 pound washer or 42 GPH for 16-pound washer.

- ii. Enter **Water Usage** number into the “Table to Calculate Total Water Required by all Fixtures.”

Determine the total water GPH required by all fixtures by completing the “Table to Calculate Total Water Required by all Fixtures.”

Plumbing Fixture	Water Usage / GPH (gallons per hour)	Number of Fixtures	Maximum hourly water usage per type of fixture (GPH) – water usage X # of fixtures
<i>Example: Dish machine</i>	50	1	50
<i>Example: Hand sinks</i>	5	4	20
3 compartment sink			
3 compartment sink (bar)			
Utensils soak sink			
Dish machine			
Dish machine conveyor pre-rinse			
Clothes washer			
Hand operated pre-rinse sprayer	32		
Hand sinks (including restrooms)	5		
Mop sink	7		
Garbage can washer	35		
Employee showers	14		
Hose bib used for cleaning	35		
TOTAL WATER (gallons per hour) REQUIRED BY ALL FIXTURES			

2. CALCULATE MAXIMUM HOURLY HOT WATER USAGE

a. Gas Water Heater

If a gas water heater is to be used, calculate the maximum hourly hot water usage for the facility by adjusting the total water required by all fixtures for altitude. The altitude adjustment is 4% per 1000 feet of elevation, or 20% at 5000 feet.

Use the following equations to determine the maximum hourly hot water usage when a gas powered water heater is to be used:

$$\begin{array}{c}
 (0.04 \times \text{Elevation of facility} / 1000) + 1 = \text{Adjustment factor} \\
 \text{Adjustment factor} \times \text{Total water required by all fixtures} = \text{Maximum hourly hot water usage}
 \end{array}$$

For example, if the total gallon per hour usage for an establishment at an elevation of 5000 feet is 100 GPH, the adjustment factor is 1.2. Therefore, a water heater with 120 GPH recovery rate would be required.

- iii. Enter the **Maximum Hourly Usage** number into the “Table to Calculate the Minimum BTU or Kilowatt Rating of Water Heaters.”
- iv. Insert this value into the Plan Review Specification Form on Page 6. This value is the minimum recovery rate of the water heater, which should be provided for the facility.

b. Electric Water Heater

If an electric water heater is to be used, the maximum hourly usage for the operation is the same as the total water required by all fixtures.

- i. Enter the **Maximum Hourly Usage** number into the “Table to Calculate the Minimum BTU or Kilowatt Rating of Water Heaters.”
- ii. Insert this value into the Plan Review Specification Form on Page 6. This value is the minimum recovery rate of the water heater, which should be provided for the facility.

	Maximum hourly usage as calculated above	Multiply by	Divide by	Minimum BTU Rating ¹
Gas Water Heater		X 100 X 8.33	0.75	
	Maximum hourly usage as calculated above	Multiply by	Divide by	Minimum Kilowatt Rating
Electric Water Heater		X 100 X 8.33	3412	

¹ **Note:** If 400,000 BTU or more, check with the City and County of Broomfield Building Department for additional requirements.