



BOULDER COUNTY PUBLIC HEALTH

Food Facility Plan Review Packet

Mobile Unit
Pushcart



Boulder County Public Health
Environmental Health Division
3450 Broadway

Boulder, CO 80304
phone: (303) 441-1150
fax: (303) 441-1468





**Public Health
Environmental Health Division
Food Safety Program**

Dear Applicant:

Colorado Revised Statutes require complete plans and specifications be submitted, reviewed and approved by Boulder County Public Health (BCPH) before the start of any construction of a retail food establishment in Boulder County. A plan review application fee of \$75.00 is required upon submittal of plans in addition to the \$280.00 fee for plan review activities. **A total fee of \$355.00 is due upon submittal of a plan review application and packet.** Plan review activities are charged at an hourly rate, which is subject to change on a yearly basis. Any balance left of the fees collected which are not applied to the plan review process will be refunded by mail after the opening inspection. (Unless otherwise noted all refunds will be made to the Principal Contact listed on the application page.)

BCPH's plan review team is committed to providing excellence in technical assistance and customer service. A plan review application and a plan review specification form are enclosed. *The Colorado Retail Food Establishment Rules and Regulations* and a *Food Equipment Installation Guide* should be obtained to assist you in determining the requirements for your facility. Both of these documents are available at the Boulder County Public Health office listed below. To ensure prompt service, all items must be completed in full to initiate the plan review process. **Be advised, failure to provide the required information will delay the plan review process.**

You will receive written notification within 14 working days that your plans are approved or that additional information is required. If additional information is required to complete the plan review, the applicant is responsible for the additional submittal of plans and specifications. If plans are significantly changed after receiving approval, new plans and additional fees may be required.

For your convenience, plan review packets and application fee can be submitted to Boulder County Public Health office at:

Boulder County Public Health
Environmental Health Division
3450 Broadway
Boulder, CO 80304
(303) 441-1150
fax: (303) 441-1468

MOBILE UNIT PLAN REVIEW APPLICATION

NAME OF MOBILE UNIT: _____

PLANNED LOCATION(S) FOR OPERATION: _____

SEASONAL OPERATION: YES ____ NO ____ IF YES, MONTHS OF OPERATION: _____

COMMISSARY KITCHEN: _____

ADDRESS: _____ CITY, STATE, ZIP: _____

PHONE: _____ FAX: _____

NAME UNDER WHICH MOBILE UNIT LICENSE IS TO BE ISSUED : _____

ADDRESS: _____ CITY, STATE, ZIP: _____

PHONE: _____ FAX: _____

PRINCIPLE CONTACT FOR PROJECT: _____

ADDRESS: _____ CITY, STATE, ZIP: _____

PHONE: _____ FAX: _____

ANTICIPATED OPENING DATE: _____

DAYS & HOURS OF OPERATION: M ____ T ____ W ____ T ____ F ____ S ____ S ____

Public Health Use Only

SR # _____ AR # _____ OW# _____

Date plans submitted: _____ Due Date: _____ Fee Paid: \$ _____

Mobile Unit: _____ fee(0131) _____ no fee(0132)

INV# _____ Rcpt # _____

Inspection Code = 09 Mobile Unit

MOBILE UNIT PLAN REVIEW SPECIFICATION

I. Menu And Food Handling Procedures:

- A. Submit a menu or list of foods to be served.
- B. Do you have Hazard Analysis Critical Control Point (HACCP) Plan or a Food Handling Procedure Manual that describes preparation, cooling, reheating, cooking of foods and the handling of leftovers?
___ Yes ___ No If yes, please submit with plans.
- C. List the foods and describe the methods of how hot foods will be cooled to 41°F (5°C) or below.
- D. List the foods and describe the methods of how foods will be rapidly reheated to 165°F (74°C) or above.
- E. List the foods and indicate how hot foods will be held at 140°F (60°C) or above.
- F. List the foods and indicate how cold foods will be held at 41°F (5°C) or below.
- G. How will frozen foods be thawed?
- H. Will raw meats, poultry, and seafood be stored/displayed in the same refrigerator(s) and freezer(s) with cooked, ready-to-eat foods? ___ Yes ___ No
If Yes, how will they be stored to prevent cross contamination?
- I. Will catering be conducted? ___ Yes ___ No
- J. What equipment will be provided to maintain food at proper temperatures during transport?
- K. Where will any produce be washed?

II. Water Supply and Wastewater Disposal Systems:

A. Water Supply:

1. Community/Public (name of district):
2. Non-Community/Private: _____ PWSID #:
Well: _____ Spring: _____ Other (Specify):
Method of Disinfection:
3. Storage tank capacity:
4. Location of water inlet:

B. Sewage Disposal:

1. Municipal/Public: _____ Individual Sewage Disposal System (ISDS): _____
2. Wastewater retention tank capacity: _____
3. Location of waste water connection: _____

III. Floor Plan:

- A. Submit the floor plan drawn to scale. The floor plan must include location and identification of **all equipment** and areas including: See Appendix A for example floor plan.

1. Sinks -

- a) Lavatory(s) - Number provided: _____ Not Applicable: _____
- b) Food Preparation Sink - Provided: _____ Commissary: _____ Not Applicable: _____
- c) Utility/Mop Sink - Provided: _____ Commissary: _____
- d) Warewashing (three-compartment) Sink - Provided: _____ Commissary: _____

2. Dry Food Storage Area - Required
3. Refrigerated Food Storage - Required if potential hazardous foods are present
4. Storage for employee personal items - Required
5. Chemical Storage Area - Required
6. Water Heater Location - Required
7. Location of water supply tank and waste water retention tank.
8. Ice Bins / Ice Machines - Provided _____ Not Applicable _____

B. Submit equipment specification sheets, including make and model numbers of the equipment. If the specification sheet lists more than one piece of equipment, identify the specific equipment to be used. If there is no specification sheet available, the equipment will only be accepted upon a field inspection to determine if it meets commercial design criteria.

C. Submit shop drawings of all ventilation hoods drawn to scale.

D. Submit shop drawings of all custom fabricated equipment and cabinetry drawn to scale.

E. Submit the following warewashing information:

1. MANUAL - Include the following for all warewashing sinks: (Kitchen, Dishroom, Bar, etc.)

a) Size of each sink compartment in inches:

Length:_____ Width:_____ Depth:_____

Length:_____ Width:_____ Depth:_____

Length:_____ Width:_____ Depth:_____

b) Size of all soiled and clean drainboard(s)/drying racks in inches:

Length:_____ Width:_____

Length:_____ Width: _____

Length:_____ Width: _____

c) Pre-Rinse / Spray Hose Provided:_____ Yes _____ No

G. Submit the following water heater information:

1. Make:_____ Model Number:

2. Energy input rating:_____ BTU or _____ Kilowatts

3. Recovery Rate in gallons per hour, 100 °F rise, at sea level:

Note: See Appendix D for worksheet to calculate minimum hot water requirements.

H. Refrigeration/Freezer Capacities - Complete the following table:

| TYPE OF UNIT | # OF UNITS PROVIDED | TOTAL CUBIC FEET |
|------------------------|---------------------|------------------|
| Reach-in Refrigeration | | |
| Reach-in Freezer | | |
| Retail Display | | |

I. Displayed Food Items:

Food Shields - Submit the type and location (If custom design, please submit shop drawings):

I. Interior Finishes:

A. Submit room finish specifications. Indicate the page in the plans with the finish schedule or use the following chart. Make additional pages if necessary.

Please see Room Finish Schedule located on page _____ of plans.

ROOM FINISH SCHEDULE:

| Room Name and Mark | Floors | | | Walls (Material and Finish) | | | | Ceilings | |
|-------------------------|-------------|----------------|----------------|-----------------------------|---------------|-------------------|-------------------|--------------------------|--------|
| | material | finish | base | North | South | East | West | material | finish |
| example: Kitchen 101 | quarry tile | smooth, sealed | 6" quarry tile | FRP smooth | FRP smooth | painted smooth | painted smooth | Vinyl acoustical tile | smooth |
| | | | | | | | | | |
| | | | | | | | | | |
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VI. Mechanical and Electrical Schedules:

A. Mechanical:

- 1.** Submit a ventilation schedule including exhaust capacities (cubic feet per minute (CFM) ratings) for all hoods, if cooking equipment is included in plan.
- 2.** If the ventilation hoods are UL listed for lower air flows, submit the information located on the manufacturer's UL listing card.

B. Electrical:

- 1.** Submit the location and type of light fixtures.
- 2.** Submit the type of bulbs and/or shielding for each type of light fixture, where required.

APPENDIX B

VENTILATION SYSTEMS

The kitchen exhaust hood must be National Sanitation Foundation (NSF) approved or its equivalent. Airflow must be calculated, and hoods must be designed according to the 1988 Uniform Mechanical Code, section 508. Hoods must overhang all equipment that produce grease vapors, steam, fumes, smoke and excessive heat not less than six 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 should be filtered and tempered during winter months (when exhaust exceeds 2500 cfm). 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 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

WORKSHEET FOR CALCULATING MINIMUM HOT WATER REQUIREMENTS

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:

1. Measure dimensions of each compartment, if compartments are not the same dimensions see note below.

Length = _____ Width = _____ Depth = _____

2. Insert measurements into equation

$$\left(\frac{\text{Length}}{\text{Length}} \times \frac{\text{Width}}{\text{Width}} \times \frac{\text{Depth}}{\text{Depth}} \times 3 \times .5 \right) \div 231 = \frac{\text{Water Usage}}{\text{Water Usage}}$$

Note: If all the 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.

Enter number into attached Table to Calculate Total Water Required By All Fixtures.

B. Utensil soak sink

1. Measure dimensions of sink

Length = _____ Width = _____ Depth = _____

2. Insert measurements into equation

$$\left(\frac{\text{Length}}{\text{Length}} \times \frac{\text{Width}}{\text{Width}} \times \frac{\text{Depth}}{\text{Depth}} \times .5 \right) \div 231 = \frac{\text{Water Usage}}{\text{Water Usage}}$$

Enter number into attached Table to Calculate Total Water Required By All Fixtures.

C. Use the gallon per hour rating for each type of fixture found in the Table to Calculate Total Water Required By All Fixtures and the number of fixtures in the operation to determine maximum hourly usage for each type of fixture in the operation. Add the maximum hourly usage for each type of fixture to calculate:

Total water (gph) required by all fixtures: _____

2. MAXIMUM CALCULATE HOURLY HOT WATER USAGE

If gas water heater is used go to Step A; if electric, Step B.

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:

$$(.04 \times \frac{\text{elevation of facility}}{1000} + 1) = \text{adjustment factor}$$

$$\frac{\text{adjustment factor}}{\text{total water required by all fixtures}} = \text{maximum hourly hot water usage}$$

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.

Use this value in the equation to calculate the minimum BTU rating of the water heater.

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.

Use this value in the equation to calculate the minimum Kilowatt rating of the water heater.

C. Insert the value determined in step A or B above on Page 6 of the Plan Review Specification Form. This value is the minimum recovery rate of the water heater which should be provided for the facility.

3. Calculate the minimum BTU or Kilowatt rating of water heater:

A. For gas water heater, calculate the minimum BTU rating:

$$\left(\frac{\text{maximum hourly usage as calculated above}}{\text{maximum hourly usage as calculated above}} \times 100 \times 8.33 \right) \div .75 = \frac{\text{minimum BTU rating}}{\text{minimum BTU rating}}$$

B. For electric water heater, calculate the minimum Kilowatt rating :

$$\left(\frac{\text{maximum hourly usage as calculated above}}{\text{maximum hourly usage as calculated above}} \times 100 \times 8.33 \right) \div 3412 = \frac{\text{minimum Kilowatt rating}}{\text{minimum Kilowatt rating}}$$

C. Select water heater based upon BTU or Kilowatt rating.

Make: _____ **Model:** _____

BTU or Kilowatt Rating: _____

Recovery Rate: _____ gallons per hour at 100° rise at sea level

Table to Calculate Total Water Required By All Fixtures.

| Plumbing Fixture | Water Usage (gallons per hour) | Number of fixtures | Maximum hourly water usage per type of fixture (gallons per hour) |
|---------------------------------------------------|-----------------------------------|-----------------------|-------------------------------------------------------------------------|
| example: dishmachine | 50 | 1 | 50 |
| example: handsinks | 5 | 4 | $(5 \times 4) = 20$ |
| | | | |
| 3-compartment sink | | | |
| 3-compartment sink (bar) | | | |
| utensils soak sink | | | |
| dishmachine | | | |
| dishmachine conveyor pre-rinse | | | |
| clothes washer | | | |
| hand operated pre-rinse sprayer | 32 | | |
| handsinks (including restrooms) | 5 | | |
| mop sink | 7 | | |
| garbage can washer | 35 | | |
| employee showers | 14 | | |
| hose bib used for cleaning | 35 | | |
| Total water (gph) required by all fixtures | | | |