

Appendix 2 City-affiliated facility kitchens design guidelines

(Included in the City of Vancouver's [Social Amenity Design Guidelines](#))

1. GENERAL

1.1 Intent

These guidelines should be used when renovating an existing kitchen or designing a new kitchen in a City-affiliated social or recreational facility.

1.2 Regulations

All new builds or renovations must comply with:

- The current edition of the Vancouver Building By-law (VBBL) and its referenced standards
- Bulletin 2007-005-BU/PL/EL/EV/AD regarding Kitchen Ventilation Systems (or the most recently updated version)
- Vancouver Coastal Health (VCH) permitting requirements
- Metro Van by-laws and permitting requirements

Your project may require City or VCH permits. Please visit the Inquiry Centre at 515 W10th Avenue or call 604 873-7611 to make an appointment to confirm what permits will be required.

2.0 PLANNING

2.1 Intended kitchen uses

Kitchens are most successful when they are built/ renovated with consideration for all of their intended uses.

Work with the operator to determine the intended end uses.

Intended kitchen uses	Examples
Food skills /educational programming AND/OR	Teaching and practicing food preparation, healthy eating and preservation skills
Meal provision / food service AND/OR	Senior's lunches, after school snacks, on-site event catering
Food rescue AND/OR	Receiving larger quantities of produce and processing it
Social ventures / small businesses AND/OR	Farmers' market vendors, small scale jam or baked goods preparation
Community celebrations and gatherings	Neighbourhood parties, holiday celebrations

Each use requires different space, equipment, and design considerations. For example, food service for larger numbers or food rescue requires industrial equipment, larger storage capacity, and loading bays, whereas educational programming requires adequate counter space and adjacent eating space. A kitchen that is not designed for its end use will limit the quality of programming, may pose safety hazards, and may limit accessibility. Kitchen design must consider future growth requirements and should be adaptable to multiple needs.

2.2 VCH Permit

A kitchen's design determines whether an appropriate VCH permit can be obtained and thus enables or limits uses.

VCH Environmental Health Officers will consider how the kitchen is proposed to be used to determine if and for what type of cooking the kitchen can be permitted. VCH will assess features such as dedicated handwashing stations, kitchen equipment, food storage, lighting, and the flow of food through the facility.

VCH Health Protection should be consulted during kitchen design and for approvals prior to construction or renovation. Contact 604-675-3800 to speak to a Senior Environmental Officer or check the kitchen plan at 604-871-6642. www.vch.ca/public-health/environmental-health-inspections

3.0 GENERAL DESIGN CONSIDERATIONS

See subappendix 2a for a summary.

i. Kitchen Access, Size, and Location

Situate the kitchen next to a space that can be used as a dining area. It should be possible to book and use the kitchen and adjacent areas separately. Access to the kitchen should be possible without passing through another program room and the public should not need to pass through the kitchen to access the seating area. Washroom access is required.

Kitchen size varies greatly with intended use.

Consider the way in which food will arrive at the facility (loading area), and how food will be distributed to eating areas. (e.g. proximity to walk in coolers, service hatches).

Design for issues including noise, cooking odours, and pests like mice. For example, appropriate location of kitchen vis-à-vis other programming spaces that may require quiet times or scent-free times; doors/hatches/ windows that can be opened / closed.

If more than one group will use the kitchen at the same time, consider impacts on work spaces and storage.

Natural light in the kitchen and/or dining areas contributes to a welcoming space.

ii. Accessible Kitchen Design

Consider incorporating accessibility features, at a minimum good lighting, non-slip flooring, wheelchair accessible entrance ways, and height adjustable, moveable tables that can better accommodate a spectrum of users. Discuss the level of accessibility required with the operator which could then indicate the need for specific equipment such as work spaces or sinks or stoves that are cut away for wheelchair users, or dishwashers that open as drawers rather than a drop down door.

iii. General: All surfaces must be constructed of smooth, durable, easily cleanable and non-slip materials. Ensure waterproof floors. Floor to wall joints must be covered. For educational programming, ensure adequate space and wide walkways for approximately 12 people. Include door sweeps to reduce pest entry.

iv. Counter space / Work stations for educational programming: Ensure adequate counter and walkway space for approximately 12 people. A central island with a stove enhances programming as the instructor can face participants. Create multiple work 'stations' to enable small groups to work together. Consider tables or islands that are flexible (such as on casters and/or height changeable) to enable a wider variety of usage by participants, such as better accommodating wheelchairs or individuals with mobility issues, seniors and children.

- v. Dry storage: Kitchens must have a securable area with appropriate space for dry food storage, cooking small wares, and cleaning products appropriate for the type and scale of operations. Stored food and equipment must be 6 inches above ground and vermin/ pest proof. Storage areas and shelves should be cleanable. If there are multiple users, consider including a small number of lockable drawers and cupboard doors and at least two separate lockable storage spaces.
- vi. Lighting: Kitchens must have sufficient artificial light to ensure the safe and sanitary production of food and to facilitate cleaning of the premises.
- vii. Janitorial: Kitchens must have access to a mop sink /janitor station and adequate floor drains for cleaning the floors, as well as storage space for cleaning supplies separate from food storage.
- viii. Waste management area: Kitchens must have adequate space for separated waste management streams appropriate to the scale of operations, including organics, recycling, cardboard, oil disposal (if applicable), and glassware.
- ix. Security: Consider intended uses and whether lockable drawers and doors are needed to enable different user groups to store supplies. Consider whether cable locks are needed for small appliances, or whether security cameras are needed.
- x. Grease interceptors: Ensure easy access to enable cleaning / maintenance, for example, in a parkade for larger operations.
- xi. Signage: Consider a designated area to post health and safety signage (e.g. handwashing, temperature danger zone, food storage standards).

4.0 EQUIPMENT CONSIDERATIONS

See subappendix 2a for a summary. Choose Energy Star appliances.

- i. Fridges / coolers/ freezers: Commercial fridges / freezers are preferred for most settings. If food service, food rescue, or food donations are anticipated, walk-in coolers should be considered. Intended uses and number of users dictate how many are needed and whether they need to be lockable. All should have thermometers.
- ii. Stoves: Domestic stoves work well for infrequent use or for cooking classes. Multiple stoves and /or electrical capacity for hot plates / electric woks allow for multiple work 'stations' which may be useful for cooking classes. Locating a stove on a central island assists educational programming. Consider having a commercial gas range for larger operations (i.e. regularly serving >50 people). Determine whether a 4- or 6-burner stove will best meet the intended uses.
- iii. Ovens: Domestic ovens are acceptable for infrequent use or for cooking classes. Consider commercial style convection ovens for larger operations (i.e. regularly serving >50 people).
- iv. Ventilation: The class of cooking must be determined to ensure the appropriate ventilation system is installed. See Subappendix 2b for more information. In a mixed-use building consider "exhaust scrubbing" technology to minimize potential conflicts over smell.
- v. Dishwashers / sinks: The number of sinks will depend on the complexity of food preparation and the number of users. Wherever possible, commercial dishwashers should be installed in addition to hand washing sinks and non-domestic 2 or 3 compartment sinks. Ensure sinks are deep enough to be able to wash pots appropriate for the scale of operations. *High*

heat sanitizing commercial dishwashers are recommended instead of *chemical* sanitizing commercial dishwashers as they are simpler and cost less to operate.

- vi. Handwashing station: The kitchen must have a separate handwashing sink in addition to any dishwashing or food preparation sinks. More than one station may be needed depending on the operations. The station should include hot and cold water, a mounted liquid soap dispenser, and a paper towel dispenser.
- vii. Power: Ensure adequate power supply for planned equipment. Consider other power requirements (e.g. additional 220 volt outlet for mobile heated or cooled units used in catering, power needs for multiple smaller hot plates used in community programming).
- viii. Fire suppression: Ensure adequate fire extinguishers according to VBBL.
- ix. Other elements: For educational programming, consider a laptop station with access to network lines and TV monitor as well as mobile rotating demonstration mirrors. Food warmers may be beneficial for food service.

Subappendix 2a – Highlight of key equipment differences between educational programming and food service

Many kitchens will be designed with both of these end uses in mind and the design and equipment will need to balance the needs of both uses.

Equipment or design feature	Food skills / Educational programming <i>Including cooking classes, group cooking</i>	Food Service <i>Including meal provision, food rescue, and social ventures</i>
Counter and kitchen space <i>Section 3.iv.</i>	A centre island that includes a stove greatly enables effective programming. Adequate counter and walking space is needed for ~12 participants. Consider moveable tables or islands, as well as areas that serve as small group work stations.	Varies according to scale of operations.
Dry storage <i>Section 3.v</i>	Kitchens must have appropriate space for dry food storage, cooking small wares, and cleaning products appropriate for the type /scale of operations. Stored food and equipment must be 6” above the ground. If there are multiple users, consider at least 2 separate lockable storage areas, as well as some lockable drawers and cupboard doors.	
Fridge / freezer / coolers <i>Section 4.i</i>	Multiple smaller commercial coolers / freezers are typically needed and may need to be lockable.	Commercial or walk in coolers and freezers. Number / size varies according to scale of operations.
Stove / Ovens <i>Section 4.ii and 4.iii</i>	A domestic stove and oven is often appropriate and less intimidating to users. Locating the main stove on a centre island enables the instructor to face participants. Multiple stoves, hot plates, and work stations can be beneficial.	Commercial 4- or 6- burner stove(s) depending on scale of operations. Consider a commercial gas range and convection ovens if regularly cooking for >50 people.
Ventilation	Varies with scale and intended use. See Subappendix 2b.	

<i>Section 4.iv & Subappendix 2b</i>		
Dishwasher / sinks <i>Section 4.v and 4.vi</i>	Commercial dishwasher appropriate for scale of operations. The number of sinks will depend on the complexity of food preparation and the number of users. At least one specific handwashing sink is always required, in addition to any food preparation and dish cleaning sinks.	
Power <i>Section 4.vii</i>	Consider power needs for multiple hot plates or other small equipment.	Consider additional power needs for any mobile heated or cooled units.
Other design elements <i>Section 3.0</i>	Consider general kitchen design elements including durability and easily cleanable and non-slip materials. Consider lighting, cleaning needs, waste management, security, grease interceptors, and signage.	
Other equipment <i>Section 4.viii.</i>	Consider the need for rotating demonstration mirrors or laptop /TV display and network access	Consider the need for food warmers

Subappendix 2b - Classes of Cooking Operations and Ventilation Requirements

Reference Bulletins:

Kitchen Ventilation Systems: <http://bulletins.vancouver.ca/2007/2007-005.pdf>

Horizontal versus Vertical shafts: <http://bylaws.vancouver.ca/bulletin/F011.pdf>

Class of cooking operations	Description	Types of uses seen in publicly accessible facilities	Example of facility	Vent hood required
1	Produce significant levels of smoke or grease-laden vapors	Daily or weekly meal programs or Frequent cooking classes	Collingwood Neighbourhood house; Roundhouse Community Centre Hastings Community Centre	Type I hood
2	Produce significant levels of steam or heat but without grease-laden vapors	Daily or weekly meal programs or frequent cooking classes using non grease-laden foods (e.g. soups, stews, sous-vide, boiling/steaming vegetables)	Killarney Community Centre; Cedar Cottage Neighbourhood house	Type II hood
3	Limited smoke and limited grease-laden vapors are produced such as in normal usage in a single family home	A weekly cooking class or A bi-annual turkey dinner	Marpole Neighbourhood house; Eastside Family Place	Domestic hood
4	Typically devices that have their own enclosed fire suppression and grease filtering systems, such as mini-donut fryer	Not generally recommended due to noise, moisture, and heat which may impact building and its system	None	Integrated into device

5	Significant steam, heat or grease-laden vapors cannot be produced, and general equipment examples are coffee makers, toasters, microwaves, etc.	Kitchens that receive / store catering Or Kitchens where coffee/ muffins are served	Coal Harbour Community Centre	No hood
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