

Commercial Cooking Equipment NFPA 96 - VENTILATION AND FIRE PROTECTION

What is NFPA 96?

NFPA 96 is a standard that was created by the National Fire Protection Association (NFPA) to provide preventive and operative fire safety requirements intended to reduce the potential fire hazards of commercial cooking operations.

As per Article 6.3.1.6. of the National Building Code of Canada, NFPA 96 is required to provide guidance on the design, installation, operation, inspection and maintenance of commercial cooking ventilation equipment.

Dwelling units, including Alternative Family Care Homes, do not require ventilation in conformance to NFPA 96.

The *Installation of Commercial Cooking and Ventilation Equipment* form requires a mechanical engineer to confirm the design of new and altered systems, along with their installation, meet the requirements of NFPA 96. The involvement of a design professional with expertise in these mechanical systems helps to ensure life safety requirements will be met.

When do I require a building and development permit application for commercial cooking equipment?

A development permit may be required; always check with your municipality. A building permit application is required for the following circumstances where cooking operations create smoke or grease laden vapours:

- New cooking equipment and ventilation systems in a new or existing building, or
- Alterations to an existing cooking equipment and ventilation systems that involve new exhaust hood, makeup air unit or new cooking equipment that does not fit under the footprint of the existing exhaust hood.
- Assembly occupancies with 50 or more occupants as defined by NFPA 96 (see below)

***Note** – residential cooktops and ovens used in a commercial application shall conform to NFPA 96 and be addressed under this form.

Do I have to upgrade my existing system now?

The new procedure will only apply when existing systems are being altered. A building and development permit application is not required for changing equipment or altering equipment layout. Existing systems may be assessed for compliance by the authority having jurisdiction, or local fire inspectors; upgrade measures may be required.

When will the new application process be implemented?

The new NFPA 96 building and development permit application process will apply to permit applications submitted after January 1, 2018.

What important changes were made to the building permit application process for commercial ventilation equipment?

The *Installation of Commercial Cooking and Ventilation Equipment* form and sealed mechanical drawings are required to be submitted prior to building and development permit approval for all commercial cooking equipment ventilation systems that comply with NFPA 96.

The involvement of a design professional with expertise in mechanical systems helps to ensure life safety requirements are met and limit future issues that are often noted during fire inspections.

What documentation is required for a new building permit that includes an existing NFPA 96 ventilation system that was constructed without a permit?

A submitted letter that confirms the existing ventilation system has been designed and installed in conformance to NFPA 96 is required from a mechanical engineer licensed to practice in the province of Saskatchewan. If substantial modifications are required, the *Installation of Commercial Cooking and Ventilation Equipment* form, along with its referenced documentation, shall be completed and submitted for review.

Do I need to complete the form and submit signed and sealed mechanical drawings for the following scope of work?

If I am relocating a deep fryer, oven, range, etc. from its current position?

No, provided the appliance is still located under the existing exhaust hood and in the same location.

If I am replacing my existing deep fryer and installing a new larger deep fryer?

Yes. The existing system may not have been designed to adequately ventilate the larger equipment.

Note: If a letter from a mechanical engineer is provided that states that mechanical upgrades are not required to properly ventilate the new equipment, mechanical drawings will not be required for review.

If I am installing a pizza oven?

Yes. Although dough and some pre-cooked meats may not produce significant grease laden vapours, the potential to cook other meat products and foods with significant grease laden vapours is considered likely enough to require an appropriate ventilation and fire protection system.

**The above examples are used for a guide only. Additional requirements such as steam and heat removal may be required by the equipment manufacturer.*

Do all cooking operations require NFPA 96 ventilation systems?

No, only cooking operations that produce smoke or grease laden vapours are required to comply with NFPA 96. Operations that may not require an NFPA 96 system include:

- Reheating of previously prepared food (soup, stews, etc.)
- Boiling water (pasta, rice, etc.),
- Melting Chocolate,
- Self-contained cooking systems, or
- Portable appliances used on a temporary basis, that are not hardwired or connected directly to the building services, such as panini grills, slow cookers, toaster ovens, hot plates, etc.
- directly to the building services, such as slow cookers, toaster ovens, etc.
- Written confirmation from a mechanical engineer which confirms the equipment and its specified use to do not create smoke or grease laden vapours. (must be acceptable to the Building Official)

* Residential cooktops used in a commercial application shall conform to NFPA 96.

* Where a building has a fire alarm system installed, the cooking system must be designed and installed in conformance with NFPA 96.

This standard does not apply to facilities where all of the following are met:

- Only residential equipment is used.
- Fire extinguishers are located in all kitchen areas in accordance with NFPA 10.
- The facility is not an assembly occupancy.
- The authority having jurisdiction has approved the installation.

* Assembly Occupancy:

An occupancy (1) used for a gathering of 50 or more persons for deliberation, worship, entertainment, eating, drinking, amusement, awaiting transportation, or similar uses; or (2) used as a special amusement building, regardless of occupant load.

How is the installed system inspected?

The mechanical engineer shall provide a *Letter of Assurance* which confirms the system has been installed in conformance to their design and to NFPA 96. Ventilation test must be completed and form submitted for review prior to use. The municipal building official will review on site during a site visit.

Installation of Commercial Cooking and Ventilation Equipment SUBMISSION REQUIREMENTS

Application Details

Project Information

Building Address

Municipality

Design Professional Information

Mechanical Engineer

Company Name

NFPA 96 Mechanical Design Information

The following mechanical design information shall be completed by the mechanical engineer identified in above.

NFPA 96 revision date (year) used for this design: _____

Design scope:

Hood type and model:

Equipment type and model covered by the hood:

New makeup air or rooftop units are required (check one)

YES NO

* Sealed structural drawings and a commitment letter for field review OR written confirmation from structural engineer confirming that the additional load of the mechanical unit does not adversely affect the roof design shall be submitted.

Fire alarm system installed (check one)

YES NO

*If there is a fire alarm system, the activation of the automatic fire-extinguishing system shall activate the fire alarm signaling system in accordance to NFPA 96 [10.6.2]. If there is no fire alarm system, upon activation of an automatic fire-extinguishing system, an audible alarm or visual indicator shall be provided to show that the system has activated in accordance to NFPA 96 [10.6.1].

Please confirm that **ALL** items in the below table have been addressed as part of the mechanical design for the above referenced design scope by initialing beside each item.

Item	NFPA 96 Code Reference	Initials
1	All cooking equipment producing smoke or grease-laden vapours is under a hood complying with NFPA 96.	_____
2	Any used equipment has been restored to function according to its original condition. Restorative work shall be certified by the agency responsible for the work.	_____
3	All equipment clearances to combustible, limited combustible and non- combustible materials have been addressed and comply with NFPA 96 [4.2]	_____
4	All access panels have been designed in accordance to NFPA 96 and shall be accessible [7.3, 7.4].	_____
5	The fire suppression system shall comply with NFPA 96, the manufacturer's specifications, and one of the following: UL300 or ULC/ORD 1254.6 or UL197.	_____
6	Upon activation of any fire-extinguishing system, all sources of fuel and electrical power used for the production of heat to all equipment located under the exhaust hood(s) shall automatically shut off in accordance with NFPA 96 [10.4].	_____

Signing Below Is Agreeance to the Following:

I certify that I have read and agree to abide by the conditions above, and all information contained within this application is correct.

Signature of Mechanical Engineer

Date (DD/MM/YY)

System Maintenance

- All cooking ventilation systems shall be maintained in conformance with NFPA 96.
- Portable appliances used frequently in cooking processes that produce grease-laden vapours and constitute a fire hazard may require NFPA 96 ventilation.
- The owner or user of the facility is responsible for the care and maintenance of all existing systems and any alterations or modifications that do not require a building permit application.