THE CITY OF
Port Alberni

Checklist for Ventilation, Hot Water and Heating in Residential Buildings

Compliance to **9.32 – VENTILATION** - can be achieved via **one** of the following 4 methods. Please **select one only** indicating which ventilation system will be used and installed in your building. Diagrams of the allowable ventilation systems are available.

HOW WILL YOU VENTILATE (Select ONE only)

Project Address:

(civic address)

1.)	**Heat Recovery Ventilator System (HRV)**	☐

HRV installations will need to conform to the CSA-F326-M91 standard and/or to the referenced guidelines in the 2012 BC Building Code. HRV's can be used independently or in conjunction with a forced air system.

2.)	**Passive System**	☐

Passive systems are permitted when buildings are less than 168 m^2 (1,800 ft^2) and non-forced air heat is being used throughout. Passive inlets are required in all bedrooms and one in a common living area. These inlets must be a minimum of 1.8 m (6') above the floor and have an unobstructed vent area of 100 mm^2 (4 in^2). A 75 CFM principal exhaust fan will work for up to 5 bedrooms and must run continuously at a maximum 1.0 sone rating. No supply air fan required. This system can also be used in secondary suites where the recirculation of air is not permitted between dwelling units.

3.)	**Central Recirculation Ventilator System**	☐

4" ducting would be provided to all bedrooms and an inline "Y" is installed to pull in outside air. Air can either be supplied or exhausted to / from the bedrooms. If supplied to the bedrooms, the inline supply fan must also pull air from the outside and a common living area. If exhausted from the bedrooms, the inline fan must pull in outside air and exhaust into a common living area. The inline fan must have at least the same CFM rating as the principal exhaust fan. A 75 CFM principal exhaust fan will work for up to 5 bedrooms (up to 3,000 ft^2 of living space) and must run continuously at a maximum 1.0 sone rating.

4.)	**Forced Air Heating**	☐

The furnace/air handler fan must run continuously. If the fan has variable speeds, it can be set no lower than the required CFM rating of the principal exhaust fan. A 75 CFM principal exhaust fan will work for up to 5 bedrooms (up to 3,000 ft^2 of living space) and must run continuously at a maximum 1.0 sone rating.

***Please note: where an HRV is used in combination with a forced air system, both the HRV and the furnace fan must run continuously.**

NAFFVA (Naturally Aspirating Fuel-Fired Vented Appliance - Woodstove) **YES** ☐ **NO** ☐

What type of **wood stove** will be installed? Make_____Model _____

To start compliance to section **9.36 – ENERGY EFFICIENCY** regarding Space and Service Water Heating Equipment, the following table provides guidance on what is required regarding the performance rating of the appliances installed at your project. Please check all boxes applicable to your project.

Minimum Performance Requirements for Appliances Installed in Residential Buildings

	Equipment Type	Size	Performance Requirement
HEATING SOURCE (Select /circle one only)	**Space Heating Equipment**		
	☐ Gas-fired furnace	Less than 220,000 TU/Hr (66 kW)	Annual Fuel Use Efficiency (AFUE) must be greater than or equal to **92%**
	☐ Gas-fired boiler	Less than or equal to 300,000 TU/Hr (88 kW)	Annual Fuel Use Efficiency (AFUE) must be greater than or equal to **90%**
	☐ Air-cooled unitary air conditioner and heat pump split system	Less than or equal to 65,000 TU/Hr (19 kW)	Seasonal Energy Efficiency Rating (SEER) of 14.5 or Energy Efficiency Rating (EER) of **11.5**
	☐ Gas-fired tank less	Less than or equal to 250,000 BTU/Hr (73.2kW)	Energy Factor (EF) must be greater than or equal to **0.8**
	☐ Electric Baseboard Electric Furnace	Sized by heat loss calculations	As per heat loss calculations
HOT WATER TYPE (Select/circle one only)	**Service Water Heating Equipment**		
	☐ Electric storage	13-71 Gal (50 to 270 L)	Standby loss less than or equal to 25+ 0.20V (top inlet) 40+0.20V (bottom inlet) Where V = the tank volume (in litres)
	☐ Gas-fired storage	Less than 75,000 BTU/Hr (22 kW)	Energy Factor (EF) must be greater than or equal to 0.67-0.0005V Where V = the tank volume (in litres)
	☐ Gas-fired tankless	Less than or equal to 250,000 BTU/Hr (73.2 kW)	Energy Factor must be greater than or equal to **0.8**

The checked boxes above will be used to assist in your building permit being *issued.* Then, **prior to insulation inspection** the owner will need to provide heat loss calculations to validate that the systems chosen are sized properly. Your *heating contractor/installer has already completed these calculations to determine what type and size system would be required and installed in your house in any case. Simply ask for a copy of them.*

I acknowledge that my project will not receive insulation inspection without the heat loss calculations.

Signature_____ Print Name_____

ENERGY EFFICIENCY OPTIONS: Achieving compliance to BCBC section 9.36.1.3.1 – Compliance and Application, you have a choice of **three** options comply. They are:

1 - Prescriptive or trade off requirements in Subsections 9.36.2 to 9.36.4. **2** - The performance requirements in Subsection 9.36.5., or **3** - The NECB. Where **"3"** is chosen, a Certified Energy Advisor is involved and required.