

Bulletin

Heat Pumps for Ground-Oriented Dwellings

Effective November 27, 2018

Last amended July 31, 2020

Authority: Director of Planning

Background and Context

The purpose of this bulletin is to provide clarification regarding the process and submission requirements for installing heat pumps in existing ground-oriented dwellings.

It is the responsibility of the owner and installing technician to ensure the heat pump is sited to minimize noise and other impacts on neighbouring properties as required by the City of Vancouver Noise By-Law 6555. For units located on balconies in multi-family buildings, please refer to the “Air Conditioning Units and/or Heat Pumps on Balconies” Bulletin on the City of Vancouver’s website.

2 Ground-Mounted Air Source Heat Pump Applications

Air source heat pumps will be considered as outright development in all residential district schedules provided that the installation of the heat pump meets the following conditions (see Appendix B):

- (a) The outdoor mechanical unit must be (1) electric-based (2) ground-mounted and (3) an inverter variable speed model with a maximum heating noise output of 55 dB(a);
- (b) The mechanical unit is located in the permitted FRONT or REAR yard, and fully backing against the building (see Appendix A: Sample Site Plan for Siting Heat Pump) in a location that is least visible/audible to neighbours;
- (c) A maximum of one exterior unit per yard is permitted. Stacked units (multiple fans) are permitted in the rear yard only.

If the above conditions are met:

- (d) Apply online for an electrical permit.
- (e) Apply online for a gas and/or plumbing permit if altering, adding or decommissioning gas or plumbing appliances within the scope of work.

Include with the permit application:

- (f) a site plan indicating the proposed location of the outdoor mechanical unit.
- (g) (if the applicant resides in a strata-titled building) an Acceptance/Clearance Letter from Strata Council or the other unit owner(s)

Upon installation:

- (h) Ensure that the mechanical unit is installed and maintained as per the manufacturer’s instructions by a qualified mechanical technician.
- (i) Comply with the manufacturer’s required air clearance (i.e. not located closely behind a deck, fence or structure such that would impede clear air flow)
- (j) For homes with a 125 amp electrical panel or smaller, it is recommended the technician complete a load calculation to ensure sufficient service capacity

If you are installing a system that cannot meet above conditions, please contact the Development and Building Services Centre for assistance and review.

3 Wall-Mounted Air Source Heat Pump Applications

Most wall-mounted applications will require a review of site location and potential structural impact on the building. A combined Development and Building Permit from the Development and Building Services Centre may be required in addition to the electrical permit.

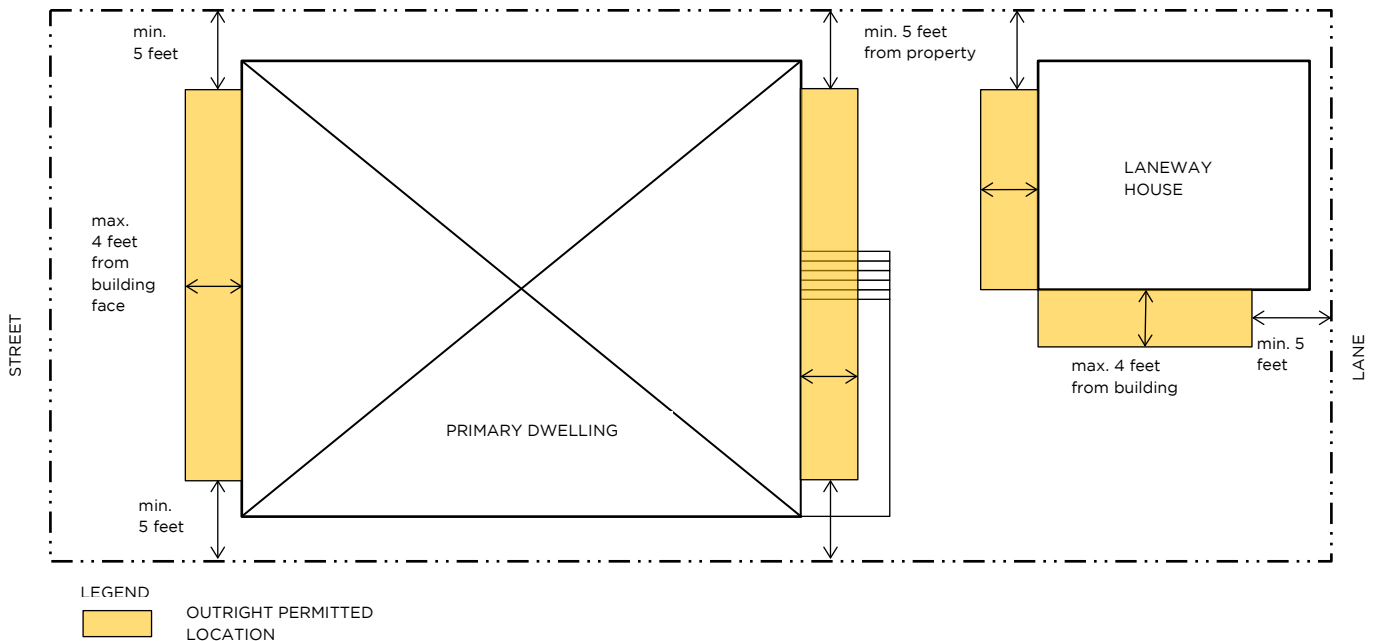
4 Ground and Water-Source Heat Pump Applications

Heat pump technology can also extract heat from water (water-source heat pump) or from underground (ground-source heat pump). These systems require additional review – please contact the Development and Building Services Centre to determine the permit requirements.

Appendix A: Sample Heat Pump Siting plan

The permitted site locations for a heap pump on a residential lot are shown in the yellow boxes in Table A. If you are installing the heat pump outside these permitted locations, please contact the Development and Building Services Centre for further review.

Table A: Sample Heat Pump Site Plan



SITE PLAN - ADDITIONAL NOTES

- Indicate any trees, landscaping, patios or noise barriers in the yard space
- The exterior unit must not: 1) interfere with laneway house parking access 2) project into the side-yard beyond the edge of the building, or 3) block suite access;
- Condensation outlets should not be located on or drain onto pathways

Appendix B: Air-Source Heat Pump Permitting Process

