

## Design Considerations

Now you know the criteria for the building you can decide what you want to build. Pick a house design that suits your needs for size, height, style, number of bedrooms, one-storey or two-storey, construction type, and other features.

### Certified Energy Advisor

Once you have a design picked out and know what you would like to use for construction type, stud spacing, insulation, air barrier system and location, heating, cooling, ventilation (HRV), hot water system, windows, doors, and any other features, this would be a good point to engage a Certified Energy Advisor (CEA) to help you with your design so that you will meet the requirement for

**Energy Step Code 3 in Zone 5** (3300 Degree days below 18°C).

### Mechanical Contractor

A mechanical contractor should be contacted early on to help with the design of the heating and ventilation systems for your building to maximize energy savings and costs to the final design.

**Link:** [Guide to working with an energy advisor](#)

### ENERGY STEP CODE LINKS:

1. [Energy Step Code](#)
2. [Download the checklist \(BCBC 2018 Rev. 5\) \(XLSM\) for Part 9 buildings such as houses](#)
3. [Download the new Part 3 Design Checklist \(Excel\)](#) (updated August 2023) for large or complex buildings
4. [List of Energy Advisors](#)

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## A roadmap for new construction

### Model Your Home

An Energy Advisor (CEA) models your home to show that it is compliant with the current metrics for your region and climate zone. Provide your permit plans to the CEA noting the type of mechanical systems, window and door packages, and building assemblies that will be used in the building of the home.

### Optimization

A CEA views your home as a system as opposed to its individual parts and can compare and contrast how each upgrade will change the performance of your home. This information allows balancing options and designing to your context.

### Mid Construction Verification

A mid-construction air leakage test determines air tightness of a home while the air barrier is exposed. It highlights any issues while still easily accessed and corrected. Ideally, the air barrier is complete, and windows and doors installed, at time of testing. Subtrades can still be on site working either inside or outside of the home while the mid-construction air tightness test is conducted.

### Final Site Inspection

Completion of a final site inspection including a final air leakage test. All of the windows, doors and mechanical systems must be installed for verification.

### Reporting & Rebates

A CEA provides final reporting and any required labeling in order to meet local requirements and apply for applicable rebates.

Source: [Guide to working with an energy advisor](#)

## Modelling Information Requirements

### Plans Must Show Scale

Ideally, plans must show the same scale on every page to avoid delay, extra expense, and errors. Window sizes and window operation. All vaults. Ideally with a cross section for each vault. All building assemblies with correct insulation values that you are planning to actually build.

Permit offices reject plans that do not match CEA reports. "2.5 inch rigid" is not sufficient information, you must note expected R-value from that insulation. Direction the home faces.

### Windows

Type of windows, e.g., casement or sliders. U value and/or other performance ratings of the windows.

**Tip:** window quotes typically show the performance data needed. If unknown, CEA can assign assumptions.

### Heating And Cooling

System type, e.g., heat pump, electric, gas forced air, or boiler. Performance data for those systems.

**Tip:** mechanical quotes typically show the performance data needed. If unknown, a CEA can assign assumptions.

### Ventilation:

Type of system, e.g., HRV. If unknown, CEA can assign assumptions. A HRV will allow you to install lesser insulation RSI values.

### Need Help?

Contact the Lytton Building Department for help during business hours by email [building@lytton.ca](mailto:building@lytton.ca) and we will get back to you as soon as possible.