

# Building Enclosure Design Guide

## WOOD-FRAME MULTI-UNIT RESIDENTIAL BUILDINGS

- An invaluable resource for architects, designers, builders and others
- The industry's most widely accepted reference guide on building enclosures
- Provides design and construction best practices
- Explores building enclosure performance issues and solutions
- Includes five and six-storey buildings
- Covers energy provisions for the building enclosure
- Addresses maintenance and renewal planning
- Preview the Guide and order online at [www.hpo.bc.ca](http://www.hpo.bc.ca)

### ■ ABOUT THIS GUIDE

This Guide is an excellent resource for industry professionals who are involved with the design and construction of multi-unit, wood-frame residential buildings.

Organized with best practice in mind, the Guide takes the user from an understanding of the behaviour of wood to the fundamentals of heat, air and moisture control, and energy provisions for the building enclosure. It provides design guidance specific to assemblies,

details, components and materials. The final chapter covers planning for the maintenance and renewal of the building enclosure over its service life.

The discussion and details contained in the Guide are based on current building science principles and British Columbia Building Code requirements that continue to be explored by many industry groups and professionals.

A key change in the British Columbia Building Code 2006 (BCBC) and in the

2007 Vancouver Building By-Law (VBBL), has been the provision for the use of wood-frame construction in five and six-storey buildings. This Guide addresses building enclosure performance issues associated with these taller structures.

The Guide is endorsed by the Association of Professional Engineers and Geoscientists of BC (APEGBC) and the Architectural Institute of BC (AIBC).



■ **WHAT'S INSIDE THE GUIDE?**

**Behavior of Wood in Construction**

- Moisture content and shrinkage
- Moisture tolerant wood

**Moisture Control Principles**

- Water penetration control
- Condensation control
- Heating and ventilation

**Energy**

- Heat transfer and whole building enclosure assemblies
- Building Code compliance

**Assemblies**

- Critical barriers
- Above and below-grade walls
- Roofs

**Components and Materials**

- Insulation
- Sheathing membranes
- Cladding
- Windows

**Maintenance and Renewals**

- Planning
- Design considerations

■ **WHO SHOULD PURCHASE THIS GUIDE?**

The Guide is an invaluable reference for industry professionals involved in multi-unit, wood-frame residential construction in British Columbia and other jurisdictions:

- Architects and designers
- Builders
- Contractors
- Engineers
- Suppliers
- Industry educators

■ **WHO DEVELOPED THE GUIDE?**

The Guide was developed by the Province of British Columbia in partnership with the Homeowner Protection Office and industry.

■ **ORDER THE GUIDE ONLINE**

Visit the HPO's Online Store at [www.hpo.bc.ca](http://www.hpo.bc.ca) to purchase a copy of the printed *Building Enclosure Design Guide – Wood-Frame Multi-Unit Residential Buildings* from the Homeowner Protection Office. The Guide costs \$70 CAD (plus taxes and shipping).

■ **Order online at [www.hpo.bc.ca](http://www.hpo.bc.ca)**



The Homeowner Protection Office (HPO) is a branch of BC Housing, a provincial agency within the Ministry of Energy and Mines (Ministry Responsible for Housing).

The HPO's mandate is to help bring about improvements in the quality of residential construction and increase consumer protection for new home buyers.

The HPO is responsible for research and education related to residential construction and consumer information, as well as licensing residential builders in the province of British Columbia, Canada.

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