

The New 5- and 6-Storey Wood Mid-Rise Building Opportunity

SAFE, STRONG, SOPHISTICATED

In 2009, British Columbia modified its building code to become the first province in Canada to allow five- and six-storey “mid-rise” buildings to be made from wood. Today, more than 250 such buildings are now completed, under construction or in the design stage. In 2013, Québec followed suit, permitting wood mid-rise construction under a provincial “Charte du Bois”. After years of study by technical experts, including building material specialists – and with input from research organizations such as the National Research Council and FPInnovations – changes to the 2015 National Building Code of Canada (NBCC) have been recommended, offering wood mid-rise construction as an option in all Canadian jurisdictions.

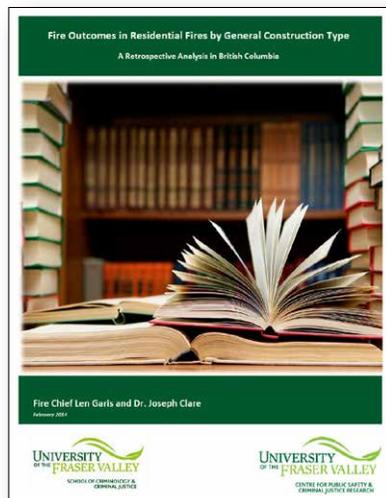
Wood construction is safe

Recommended changes to the 2015 NBCC reflect new advances in wood science, engineering and building technology. Requirements around fire, structural strength, and resistance to earthquakes and wind have all been addressed by expert committees of the Canadian Commission on Building and Fire Codes.

Additional changes also call for increased safety measures, including sprinkler protection for concealed spaces and balconies; greater water supply for fire protection; restrictions on types of exterior building cladding used; and increased consideration for access by firefighters. New studies show that once occupied, wood mid-rise buildings are as safe as buildings of any other type of

construction material, from the perspective of health, safety and accessibility.

Through a comprehensive survey and analysis of almost 12,000 fires, the Garis and Clare study concluded there is little difference with respect to fire spread, death, and injury rates as a function of building general construction type.



The NBCC requires all building systems to perform to the same level of safety, regardless of the material used in construction. Whether it's wood, concrete, or steel or a combination of materials, if a building doesn't meet code, it simply doesn't get built.

More developers adopting wood mid-rise option

The option to use wood in mid-rise construction provides builders and architects with expanded choice when it comes to materials and building systems. Highly sophisticated engineered wood products, for example, have enabled longer spans for floors and roofs. The result is increased design flexibility that makes wood suitable for a wide range of building types and applications, both structural and aesthetic.



Stade TELUS-Université Laval, Québec
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Wood mid-rise construction creates a new opportunity for builders and architects to deliver projects at heights that best fit their overall vision and design. Building with wood is also fast and efficient – construction can happen year-round – which can often lower the overall expense for builders across the country. That’s good news for many Canadian communities, where land can be expensive. Developers note that construction costs can be reduced by 10 to 15% – savings which can lead to increased affordability for home buyers and renters.

Wood is renewable and a good environmental choice

Wood is the only major building material that grows naturally and is renewable within a human lifespan. And Canada’s forest sector knows how to take care of this valuable resource. We are world leaders in the implementation of progressive forestry practices, wildlife conservation and efficient utilization of resources and raw materials – and the sector is committed to continual improvement. Additionally, tough laws and enforcement, backed by more third party forest certification than any other country, ensure Canada’s forest products are crafted from legal and sustainably harvested wood.

Numerous studies worldwide have shown that wood product-based building systems yield environmental advantages over other building materials at every stage. Wood buildings can offer lower greenhouse gas emissions, less air pollution, lower volumes of solid waste – all of this from a renewable resource. Using wood can also reduce the impact of climate change since trees absorb carbon dioxide as they grow, and products made from trees continue to store this carbon. In North America, a typical wood-frame home stores 29 tonnes of carbon – this represents approximately the same amount of carbon dioxide emitted by running a family car for five years.

Many examples of safe, strong and sophisticated institutional, commercial and residential buildings built with wood can be found across North America. Visit the Canadian Wood Council’s (CWC) website at www.cwc.ca to view a wide range of case studies, and CWC’s Wood Awards book, which annually highlights some of the best examples of wood design and construction.



Parc Riviera, Richmond, B.C. Photo used by permission of naturally:wood

The **Canadian Wood Council (CWC)** is the national association representing manufacturers of Canadian wood products used in construction. CWC is a strong advocate for the use of Life Cycle Assessment and communication about environmental attributes through the use of Environmental Product Declarations. Visit us at www.cwc.ca.

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