

## **Mass Timber**

Raising the bar in sustainable construction



# British Columbia is expanding the market for mass timber construction.

Governments worldwide face the challenge of housing growing populations while minimizing the carbon impact of steel and concrete — making mass timber a key solution. It offers the potential for affordable, sustainable homes, supports local industries and benefits forest economies. The United Nations Food and Agriculture Organization projects a 49 percent increase in demand for primary processed wood products by 2050, driving the need for efficient wood utilization. British Columbia (B.C.), a global leader in engineered timber, has pioneered innovative building techniques, influencing North America and exporting expertise to Europe, where several B.C. companies have established operations.

British Columbia, Canada is a North American leader in mass timber research, design and engineering, manufacturing and support services. The province now allows mass timber buildings up to 18 stories, ranging from restaurants to care facilities, and commands 15 percent of North America's mass timber manufacturing capacity. B.C.'s sector growth includes over 130 architecture firms, 40 engineering firms and 115 builders.

In the past four years, the province has funded over 40 mass timber buildings, including schools and student housing. As of January 2024, B.C. had 370 completed mass timber buildings and 50 under construction—20 times the per capita density of the rest of North America. By 2035, B.C. is projected to supply 90 percent of Western Canada's and 15 percent of the Western U.S.' mass timber.





Canada's Mass Timber Roadmap outlines an ambitious plan to grow the market to \$1.2 billion by 2030 and \$2.4 billion by 2035, in line with projected market growth in both Canada and the U.S.

# **Industry Profile**

#### **A Skilled Workforce**

British Columbia is home to some of the world's top mass timber architects and engineers, many of whom have spearheaded groundbreaking mass timber projects. Furthermore, B.C. designers and builders lead in mass timber innovation, with developers exploring new markets due to updated building codes. Existing manufacturers are expanding, and the mass timber ecosystem continues to grow and strengthen. To support this growth, B.C. is expanding education and training opportunities across the province. Leading institutions like the University of Northern B.C., the University of British Columbia, and Selkirk College are driving innovation and skill development as are B.C. companies that provide hands-on training. The province's Mass Timber Action Plan aims to meet rising demand, boost manufacturing, and build a skilled workforce to maintain B.C.'s leadership in the sector.

#### **Resource Efficiency**

B.C. has a diverse and expansive forest ecosystem that forms a strong foundation for related industries. The province's robust primary manufacturing sector, including sawmills, provides dimensional and specialty lumber needed for mass timber production. To secure the long-term future of its forestry and primary manufacturing industries, B.C. is committed to expanding the value-added processing of its lumber resources. While B.C. is a global leader in mass timber, it currently represents only a small percentage of the provincial lumber harvest, with growth plans projected to consume just 2 percent of the total harvest by 2035. This ensures that B.C. can fully benefit from mass timber construction while using only a small portion of its renewable resources—embodying the goal of creating more value from less volume.





# Advanced Opportunities with First Nations

The supply of wood and wood products is well-positioned to meet growing global demand, driven by construction needs, while supporting sustainable practices that protect forests and biodiversity. As a leading supplier, and with the worlds single highest area of certified forest management, B.C. is addressing these challenges through new partnerships with its First Nations, especially since First Nations have been stewards of the province's forests for generations. New programs and partnerships are seeing communities entering the value-added supply chain, linking it to their housing needs and helping to secure the long term health of their forests.

The province is committed to working with First Nations as partners and leaders in the mass timber sector, as part of implementing the Declaration Act and increasing investor confidence through environmental, social and governance (ESG) leadership. The Office of Mass Timber Implementation offers informational sessions for First Nations and their partners about available programs and funding to support entry into the value-added sector. This effort is part of a broader strategy to transition into a new forest economy with First Nations as partners, including collaboration with primary manufacturers through the Value-Added Accelerators. Additionally, B.C. is exploring alternative species like hemlock, alder and other hardwoods to expand viable wood options as B.C. works to increase value from forests by supporting innovative forest products, creating good local jobs and diversifying B.C.'s wood products for local and international markets

## **Mass Timber Buildings in Action**

B.C. is leading the way by requiring mass timber in publicly funded building projects, such as schools and student housing. The province also pioneered an accelerated code development process, in collaboration with Ontario and Quebec, to safely update building codes. This leadership is opening new market opportunities for mass timber across B.C. and setting a national template. Developers benefit from faster building approvals, helping to deliver homes more quickly.

## **High-quality Innovative Solutions**

B.C. is a leader in mass timber manufacturing, with more companies than any other jurisdiction in North America, producing panelized products, CLT-ready glulam and mass timber fabrication. The province is well-positioned to significantly increase production in the near future. Since introducing CLT manufacturing to North America in 2011, B.C. has remained a key innovator, housing the continent's largest mass timber manufacturer and the most advanced vertically integrated, multi-species facility. Currently, ten companies across the province produce a range of products, including CLT, glulam, North America's first all-wood dowel-laminated panels and innovative panelized solutions like wall and floor systems and volumetric modular designs.



# Workforce Development Programs

- British Columbia Institute of Technology (BCIT) www.bcit.ca
  - Introductory Studies in Mass Timber Construction (Micro-credential)
  - Construction of Mass Timber Structures
     (Associate Certificate)
  - Whole-Building Life Cycle Assessment Professional (Micro-credential)
- University of British Columbia (UBC) www.ubc.ca
  - **Tall Wood Structures** (Online micro-certificate)
  - Fire Safety for Timber Buildings (Online micro-certificate)
  - Hybrid Timber Construction (Online micro-certificate)
  - Engineered Bamboo for Sustainable Construction (Online micro-certificate)
- University of Northern British Columbia (UNBC) www.unbc.ca
  - Mass Timber Development (Micro-credential)
- Selkirk College www.selkirk.ca
  - Mass Timber Fabrication, Design & CNC (Micro-credential)
- Canadian Wood Council www.cwc.ca
  - woodSMART (www.woodsmart.ca) provides up-to-date knowledge and skillsets in the design, manufacture, and assembly of advanced wood buildings.



British Columbia is ideally situated, as Canada's westerly province, to connect mass timber products to international markets, with its proximity to Pacific shipping routes.

# **Industry Partners**

#### **Associations:**

Architectural Institute of BC	Regulates the profession of architecture in British Columbia in the interest of the public.
BC Wood	A not-for-profit trade association that epresents B.C.'s value-added wood products industry.
Canadian Wood Council	Represents the Canadian wood products industry through a national federation of associations.
BC Council of Forest Industries	Represents the majority of lumber, pulp and paper, and manufactured wood producers across the province.
Independent Wood Processors Association	Represents British Columbia's higher value wood manufacturers that maximize the use of every stick of wood harvested.
Engineers and Geoscientists British Columbia	Protects the public interest by setting and maintaining high academic, experience and professional practice standards for over 40,000 registrants.
Forestry Innovation Investment (FII)	FII is B.C.'s Crown agency for forest product market development, that supports the diversification of markets for B.C. forest products and ensures the forest sector remains a key contributor to the provincial economy.
Interior Lumber Manufacturers' Association	Represents independent and family-owned mills across the Southern interior of B.C., that work together to provide the best wood products and resource management possible.



As part of the StrongerBC Plan, in 2023 the government of B.C. provided British Columbia Institute of Technology with **\$3.3 million** to create a **Mass Timber Training Hub** to expand opportunities for people to gain new skills in the sector.







#### **Research Centres:**

The Centre for Advanced Wood Processing	Located on the University of British Columbia (UBC) campus, is Canada's national centre for education, training and technical assistance for the wood products manufacturing industry.
The Wood Innovation Research Lab	A state-of-the-art University of Northern British Columbia (UNBC) wood science and engineering research facility in downtown Prince George.
<b>FPInnovations</b>	A private not-for-profit R&D organization that specializes in the creation of solutions that accelerate the growth of the Canadian forest sector and its affiliated industries to enhance their global competitiveness.

#### Others:

Office of Mass Timber Implementation	B.C. has established the Office of Mass Timber Implementation (OMTI) to drive and coordinate mass timber-related initiatives across government.
Naturally:wood	Developed by <u>Forestry Innovation Investment</u> , is a comprehensive information resource promoting B.C. as a global supplier of quality, environmentally responsible forest products from sustainably-managed forests.



Since July 2023, the B.C. Manufacturing Jobs Fund has **committed \$32.2 million** in funding to 5 mass timber specific projects, catalyzing **\$217 million in total capital investment**, and creating **219** forest sector jobs and protecting **548** more.

# **Supportive Government**

Through its investment in mass timber construction and research, B.C. is showcasing its leadership and expertise on the global stage, while providing the industry with the experience and skills necessary to capitalize on the growing demand for mass timber.

# Mass Timber Demonstration Program (MTDP)

Provides funding for incremental costs in the design and construction of buildings that demonstrate emerging or new mass timber or mass timber hybrid building systems and construction processes. Since 2020, the province has committed over \$10.5 million, funding 19 buildings and 8 research projects.

## **Forestry Innovation Investment**

Delivers the MTDP, as well as supports the B.C. forestry and value-added wood products (including mass timber) sectors in international markets via in-market representatives and offers funding programs (e.g., Wood First Program and Market Initiatives Program).

- The Wood First program focuses on advancing wood use and innovative wood construction technologies in B.C. and establishing the province as a showcase for wood products in construction, interior design and daily living.
- Market Initiatives program encourages the development of export markets and new market segments for B.C. forest products.

## **BC Manufacturing Jobs Fund (BCMJF)**

Supports for-profit organizations to plan and launch highvalue industrial and manufacturing projects since mid-2023. This includes \$63.6 million that has been committed to 44 projects in the value-added wood sector, which includes mass timber.





# British Columbia's Competitive Advantages



- High quality innovative solutions
- Skilled workforce
- Industry funding and support
- Opportunities for research and development
- Partnerships and inter-industry connections



# Build up alongside B.C.'s notable industry players:

- Aspect Structural Engineers
- Equilibrium Consulting Inc.
- Fast + Epp
- FraserWood Industries
- Kalesnikoff Lumber
- Kinsol Timber Systems
- Mercer Mass Timber
- Seagate Mass Timber
- Spearhead
- StructureCraft

# British Columbia, Naturally.

