Diverse and Innovative Wood Products

naturally:wood

British Columbia Forest Facts

MARCH 2012

Surrey City Central

QUALITY WOOD PRODUCTS MEET ANY STRUCTURAL NEED

British Columbia wood product manufacturers have an international reputation for delivering quality products to meet any structural or finishing need in any climate – from traditional wood products to the latest high-performance engineered products.

Wood is an excellent choice for any residential, commercial, industrial or public building – it has a low environmental impact, is safe, durable and attractive. Wood construction is fast and efficient, and wood-frame structures perform well under extreme conditions such as earthquakes and hurricanes.

With more than 40 native wood species, British Columbia can supply innovative structural and finishing products in a range of sizes and grades. British Columbia wood products offer added environmental benefits because they come from forests that are managed responsibly, with practices that consider environmental, social and economic values.

West Vancouver Aquatic Centre

Vancouver Convention Centre

QUALITY PRODUCTS, ADVANCED TECHNIQUES

The interior walls of the Vancouver Convention Centre contain 6,000 planks of sustainable British Columbia hemlock – just one feature of one of the greenest convention centres in the world. The one million individuals parts were assembled using specialized woodworking equipment, including a robatic arm more commonly found in auto assembly plants. Designers featured wood to reflect British Columbia's special relationship with its forests and forest industry.

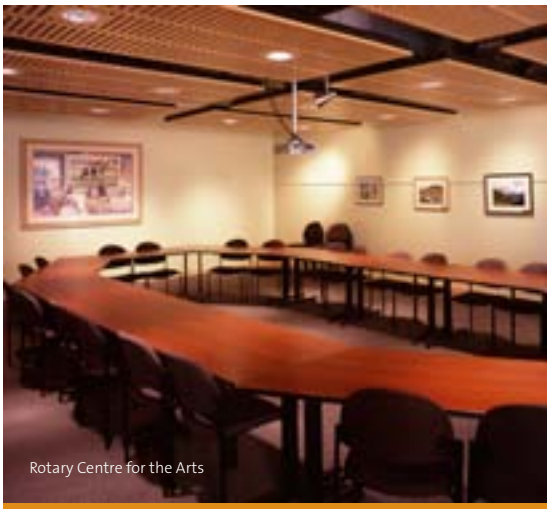
Nita Lake Lodge

WARMTH AND BEAUTY

Wood showcases the beauty of nature, radiates warmth, and adds value. The benefits go beyond the structure – exposed timber beams, wood floors, wood furniture and wood landscaping adds a luxurious touch.

Wood plays a key role in creating the interior character of the Nita Lake Lodge in the Resort Municipality of Whistler – with columns faced in Douglas-fir and doors, trim and cabinetry made with alder.

Private residence North Vancouver



Rotary Centre for the Arts

FLEXIBLE AND MODERN

The Rotary Centre for the Arts in Kelowna enhanced a warehouse with a studio, rehearsal space, a bistro and small retail spaces, retaining part of the city's industrial past in a modern, multi-purpose arts and performance centre.

IDEAL FOR ANY STRUCTURE

British Columbia wood products are ideal for wood-frame and post-and-beam construction. Wood-frame construction combines dimension lumber or engineered wood products or panels to make wall, floor and roof assemblies that can be built quickly and efficiently. Post-and-beam construction uses columns and beams to support vertical loads and, like this private residence in North Vancouver, often creates a dramatic appearance inside and out.

WOOD: A SAFE AND DURABLE CHOICE

When it comes to safety and durability, wood is a preferred choice for any private or public building project.

Fire

Usually a building's contents such as carpets, curtains and furniture are the first to burn, which means fire safety depends more on the habits of the occupants than on the structural composition. Wood-frame walls, floors, and roofs using conventional wood framing, wood trusses and I-joists can be designed to provide fire resistance ratings up to two hours, offering a level of fire safety that matches non-combustible building materials. Heavy timber resists fire far better than steel, which weakens and collapses quickly in fires; in many respects heavy timber is equivalent to reinforced concrete.

Seismic Performance

Research shows modern wood-frame structures are better able to resist seismic forces than any other form of construction. Thousands of nailed connections allow the building to flex, and there is added lateral resistance through non-structural elements such as partitions and many types of exterior cladding. These kinds of factors also help wood-frame buildings withstand the lateral wind loads produced in hurricanes, cyclones and typhoons.

Moisture

Unlike other building materials, wood has the ability to release or absorb moisture. Its moisture content always matches that of the air, which results in natural regulation and stabilization of humidity. Properly designed wood-frame structures can deliver excellent performance even in the wettest climates.

Brentwood Town Centre Skytrain Station

Photo courtesy of the Western Red Cedar Lumber Association

IDEAL FOR EXTERIOR USES

Western red cedar and yellow cedar are ideal for outdoor applications because they are naturally resistant to water, sunlight, rot and termites.

SAFE CHOICE FOR PUBLIC STRUCTURES

Economics, safety and versatility make wood an excellent choice for any public building – from recreation centres and music halls to schools and transit stations. When designers of an extension to Metropolitan Vancouver's light rapid transit system found they could meet safety standards with heavy timber, several architects incorporated wood into their stations – a first in North America. The Brentwood station has structural ribs made with glue-laminated (glulam) timber, and the roof decking is softwood lumber. Award-winning Nicola Valley Institute of Technology in Merritt, B.C., an Aboriginal post-secondary institute, offers a friendly, cultural learning environment through the use of locally sourced wood products.

Nicola Valley Institute of Technology

BRITISH COLUMBIA WOOD PRODUCTS

British Columbia suppliers export dimensional lumber and solid timber that can be used for any type of residential, commercial, industrial or public works structure. The province is a leader in producing innovative and high-quality engineered wood products and a wide range of value-added wood products, such as furniture, doors, window frames, architectural millwork, mouldings/trim, cabinetry and shelving, and log homes.

British Columbia is the world's largest supplier of softwood lumber, shipping to markets around the world. In 2008, about half of the 61 million cubic metres harvested in British Columbia was converted into softwood lumber and commodity wood products, and the rest was used for value-added products, and pulp and paper production.

Richmond Olympic Oval

STUNNING AND INNOVATIVE

Engineered wood products offer greater structural strength than typical wood building materials, and can be used in place of steel in building joists, beams, studs, window and door frames. The Richmond Olympic Oval showcases the ingenuity and innovation of British Columbia wood products with a massive wood wave roof encompassing 6.5 acres. It features one of the longest clear spans in North America – using glue-laminated (glulam) beam arches, which are stronger than steel so they can span long distances with minimal need for intermediate supports.

Surrey City Central

MAJESTIC STRUCTURES

The Surrey City Central development includes a vaulted Galleria, 27-storey office building and a large public connecting space, known as the Atrium. The Atrium roof is made primarily from Douglas-fir peeler cores, a byproduct of the plywood industry, fitted with a special timber connection.

Whistler Public Library

NATURAL BEAUTY

The Whistler Public Library features an innovative, solid wood roof system comprising prefabricated panels made of solid hemlock spanning distances up to 13.5 metres (45 feet).

The roof panel system represents a precedent-setting value-added application of hemlock, an abundant species in British Columbia's coastal forests.

STRONG AND EFFICIENT

Wood roof trusses are structural frames that rely on a triangular arrangement of webs and chords to transfer loads to reaction points. This gives them high strength-to-weight ratios, which permit longer spans than conventional framing and offers greater flexibility in floor plan layouts. Wood trusses provide a strong and efficient structural wood system specifically engineered for each application. They use wood efficiently, and are economical because the system can be installed in as little as half the time of conventional wood framing.

CASE STUDIES

Find case studies of innovative wood building on the Resource page at www.naturallywood.com — including the Vancouver Convention Centre, Nita Lake Lodge, Richmond Olympic Oval and the Whistler Public Library.

FOR MORE INFORMATION

Visit www.naturallywood.com to learn more about British Columbia's diverse forests and how they are managed, and the wide range of quality products. Search for products made with British Columbia wood at: www.naturallywood.com/supplierdirectory/default.aspx.

About 50% of wood products exported from Canada come from the Province of British Columbia's sustainably-managed forests. This publication is part of the 'Forest Facts' series, published by Forestry Innovation Investment. Visit www.naturallywood.com for details.

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British Columbia wood. Sustainable by nature. Innovative by design.