

OKANAGAN COLLEGE JIM PATTISON CENTRE OF EXCELLENCE

LOCATION

Penticton, British Columbia

SIZE

6,622 m², two storeys

COMPLETION

2011

PROJECT OWNER

Okanagan College

ARCHITECT

CEI Architecture

STRUCTURAL ENGINEER

Fast + Epp

SPECIALTY ENGINEER

StructureCraft Builders Inc.

CONTRACTOR

PCL Constructors Westcoast Inc.

B.C. GOVERNMENT MINISTRY

Ministry of Advanced Education,
Innovation and Technology

PROJECT OVERVIEW

Reflecting the teaching philosophy of “show, don’t tell,” the Okanagan College wanted a new centre for sustainable building technology to be built using advanced, green construction.

The resulting Jim Pattison Centre of Excellence in Sustainable Building Technology and Renewable Energy Conservation at Okanagan College in Penticton is one of the world’s greenest buildings.

Featuring extensive use of wood products and advanced wood technologies – such as innovative composite floors and walls – the centre met LEED Platinum standards and the Living Building Challenge, a program to build the most

sustainable buildings possible using today’s design and construction technologies.

Opened in 2011, the centre has won a number of awards, including the International Architecture Awards Green GOOD DESIGN and the 2012 Canadian Green Building Award from Sustainable Architecture Building Magazine.

The centre is a true “living-learning” facility – with incubation space to nurture the growing high-tech, green-focused industry for the South Okanagan-Similkameen and to demonstrate advanced wood building technologies developed in British Columbia.



Photo courtesy of CEI Architecture

“As a ‘Living-Learning’ environment for trades students, wood material choice’s for the building’s construction was appropriate. Wood surrounds students as they learn various trade techniques for working with wood products and within wooden structures. Wood products have been used in various combinations and applications including prefabricated structural elements, various wall and ceiling finishes as well as furniture throughout the structure.”

Kathleen Lausman, Director Campus Planning & Facilities Management, Okanagan College

WOOD USE

COMPOSITE WALLS:

INNOVATION – A wood-concrete wall system of glulam frames supports an inner conduit of concrete containing heating, ventilation and electrical systems. This innovative approach – believed to be the first in North America – used less material and embedded energy than conventional construction.

COMPOSITE FLOORS:

FLEXIBILITY – Radiant heating was embedded in a concrete mixture poured on top of wood flooring in the Centre, leading to energy and embedded carbon savings.

OKANAGAN WOOD: LOCAL

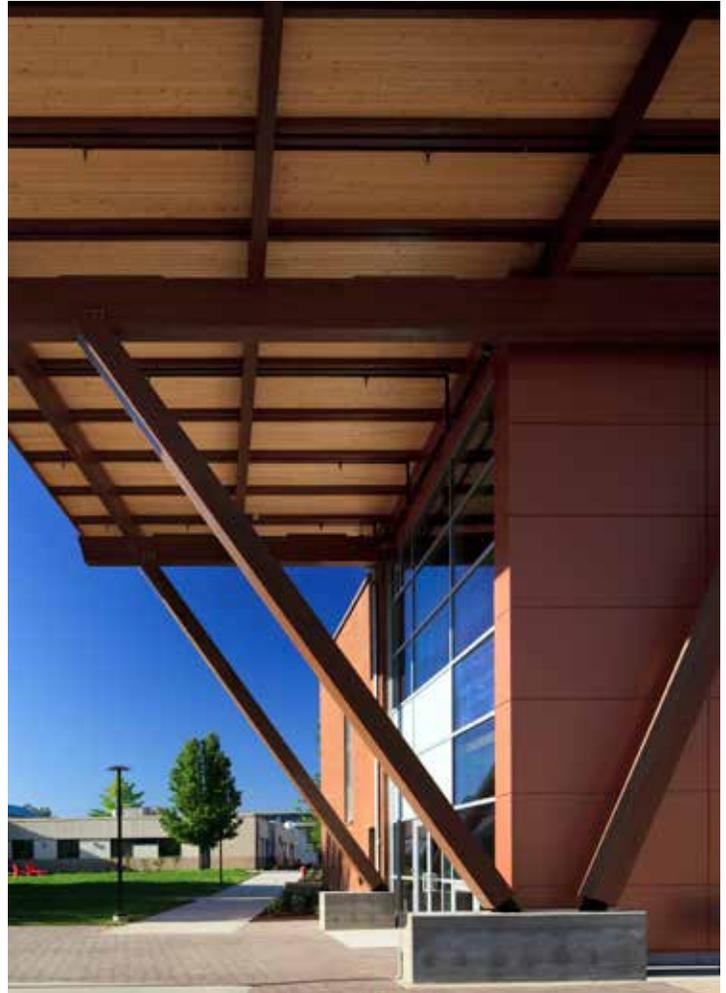
ECONOMIC BENEFITS – Except for the hardwood floor in the gym, all of the wood used in the Centre comes from B.C. forests, including pine from Interior forests that have been impacted by the mountain pine beetle outbreak. This wood is

structurally viable and using it helps mitigate the socio-economic impact of the mountain pine beetle infestation on forestry communities.

SALVAGED WOOD: ENVIRONMENTAL RESPONSIBILITY

– One of the requirements of the Living Building Challenge is the use of environmentally responsible materials. The Centre used wood from forests in B.C. affected by the mountain pine beetle, which qualifies under this high standard because it comes from third-party certified forests with chain-of-custody labeling.

Natural choice, clear benefits – Wood is a natural choice for a centre for sustainable building technology and energy conservation. Wood-based building designs have a lower energy and carbon footprint. Wood is durable, adaptable and versatile.



Top and bottom left photos courtesy of CEI Architecture
Bottom right photo courtesy of Ministry of Advanced Education, Innovation, and Technology

FOR MORE INFORMATION

This profile is published by Forestry Innovation Investment, the Government of British Columbia’s market development agency for forest products.

For more examples of innovative wood building projects throughout British Columbia, visit:

naturallywood.com