



SPECIAL 8-PAGE SUPPLEMENT

FIRST NATIONS

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MUCKLESHOOT SMOKEHOUSE
PHOTO CREDIT: BENJAMIN BENSCHNEIDER

The Wood Industry – How our Yesterday Shapes our Today

There is a long and rich history of wood use for architectural and artistic projects within First Nations communities in Canada. From beautifully sculpted totem poles that capture ancestral memories, to lodging that offers a functional and aesthetically welcoming environment; wood has, and continues to play a role within this community.

As the first inhabitants of Canada, First Nations had many uses for wood and wood products such as shelter, warmth and medicinal applications. Respect for the forest was commonly practiced, ensuring all parts of the tree were utilized. Wood use for lodging offered a harmonious blend between the surrounding forests and private living spaces.

As you read the pages of this magazine insert, you will catch glimpses of history – with traditional wood applications that have been adapted to meet modern design and construction requirements. Much like the vibrant colors that still adorn modern totem poles, preserving these architectural wood traditions and applications are important to First Nations communities. Finnish architect and designer Alvar Aalto once said, “Architecture belongs to culture, not to civilization.”

With new advancements in wood/wood product technology and research, it’s exciting to look ahead and to imagine what the future holds for our industry. But it is also always important to remember where we started and to respect the strides that we’ve made throughout the years. Wood has an intrinsic connection to Canadian history, and our industry is working hard to preserve this story and build upon it for generations to come.

Etienne Lalonde
National Director
Wood WORKS!

Mark your CALENDARS 2016 EVENTS

MAY

Prairie Wood Design Awards Gala
<http://wood-works.ca/alberta>

NOVEMBER

Nov. 15

Wood WORKS! Ontario
Awards Night

Toronto, ON

<http://wood-works.ca/ontario>

Nov. 17

Wood Solutions Fair

Toronto, ON

<http://wood-works.ca/ontario>

Nov. 21

Wood Design & Building
Awards Entry Deadline

www.wooddesignawards.com

DECEMBER

Prairie Wood Solutions Fair
<http://wood-works.ca/alberta>

Interested in attending a Wood WORKS! educational opportunity in your region? Check out the events listed in this insert and get involved with your regional Wood WORKS! today.

This Wood WORKS! magazine insert was created to help inspire design professionals throughout Canada. Do you have a project that features wood as a primary building material? Take advantage of our Wood WORKS! magazine insert and get featured today! Contact Natalie Tarini at ntarini@cwcc.ca, and share your story.



BRITISH COLUMBIA

PHOTO CREDIT: PETER SPERLICH. COURTESY OF WOOD DESIGN & BUILDING AWARDS

Quilakwa Center

Enderby, BC

The Quilakwa Center, in Enderby in the southern interior of BC, is home to the Splat-sin First Nation boardroom and development corporation offices, an arts shop, gas bar, convenience store, and a Tim Hortons restaurant and drive-thru.

The 13,520-sq.ft, two-story structure was designed to replace the original gas bar/convenience store built about 30 years earlier from locally sourced Douglas fir logs in a handcrafted scribed fit traditional log fashion. A log post-and-beam structure, combined with a structural insulated panel (SIP) roof and walls, were determined to be a fitting and updated replacement.

The building is a legacy for future generations to admire as it preserves, in their natural form, some of the finest specimens of local log species grown in the area.

The project salvaged some of the logs from the original building, which now comprise the structural rafters for two shed roofs, on the drive-thru and the mechanical area.

Splat-sin members harvested some of wood from their own lands to provide key character logs not typically used by the forest industry, as the crook and character of these logs makes them nearly impossible to process into any other finished product.

The entire structural frame of the



building was engineered in massive (solid) wood components. The log posts and beams, up to 40 inches in diameter, carry all the loads, from the SIP walls and roof panels through to the foundation. Emphasis was placed on structural wood joinery and minimizing the metal fasteners required.

The log components were dried in a vacuum kiln to 16 per cent moisture content to ensure the best possible performance of the wood in both strength and stability.

The building truly exemplifies modern

sustainability and environmental accountability using the original natural style of handcrafted log construction to highlight local wood species and embrace and showcase the local culture.

Using wood in innovative and beautiful ways to bring new life to a BC community hub earned KH Designs an award from the Sustainable Forestry Initiative (SFI). The award is part of the 2015/16 North American Wood Design Awards program, and was presented at the annual Wood WORKS! British Columbia Wood Design Awards event on February 29 in Vancouver.

“When comparing the impacts of wall materials, there really is no other material that comes close to wood as a green building material. When we consider energy efficiency during use and the ability of log walls to store carbon, the environmental advantages are quite significant.”

– Kevin Halchuk, President, KH Designs

“We are pleased to be recognized with this award from SFI and the Wood Design Awards program. The Quilakwa Center is the cornerstone of Splat-sin, as well as the community of Enderby. It embodies the original natural style of handcrafted log construction and also embraces and showcases our local culture.”

– Wayne Christian,
Chief, Splat-sin First Nation

OWNER
Splat-sin First Nation

ARCHITECT
KH Designs Inc.

STRUCTURAL ENGINEER
Omega & Associates
Engineering

TIMBER SUPPLIERS
Sperlch Log Construction/
Canadian Pride Log &
Timber Products



ALBERTA



PHOTO CREDITS: ALVIN REINHARD FRITZ ARCHITECT INC.

Chiniki Travel Centre

By Alvin Reinhard Fritz Architect Inc

Morley, AB

On August 21, 2012, long-time patrons to the Chief Chiniki Restaurant were saddened to hear that their well-loved restaurant had been consumed by fire. It had been a popular stop between Calgary and Banff, beckoning to hungry travelers from its vantage point overlooking the Trans-Canada Highway. The Stoney Nakoda First Nation – owners of the property – sought to redevelop with the intent of enhancing the property's service offerings while maintaining the character of this iconic landmark.

The vision for the property saw an amalgamation of services previously housed in separate buildings. Completed in 2015 and renamed the Chiniki Travel Centre, the new facility features a gift shop, grocery store, gas bar administration and a restaurant, all under one roof. This dramatic roofline shelters 5,000 square-feet of business space within the octagonally shaped structure. A spacious dining room crowns the building, offering patrons a 360-degree view of the foothills and the majestic Rocky Mountains.



Visitors will note how the conical shape of the building resembles a traditional teepee, and they will admire the lavish use of natural wood and stone. Representatives of the Stoney Nakoda First Nation envisioned a building that reflected nature, as well as the history of the area and its people. To this end they worked closely with the design and construction teams to select all the colors, finishes and materials for the project. For example, the color of the wood – somewhere between cadmium orange and ruddy ochre – was selected to express intellect and determination.

The wooden elements were of paramount concern, both symbolically – strength and longevity of forests and trees – as well as aesthetically and

structurally. The robust log columns harvested from the Canadian Rockies provide an excellent solution for vertical supports. Wood shrinks only in its circumference and not in its length, leading the designers and builders to be confident that shrinkage would not lead to frame shortening and associated complications. Canadian vernacular forms such as gable trusses were adapted to express expert craftsmanship and woodworking skills in keeping with Stoney values.

Today, the peeled log columns, beams and boards, all stand beautifully juxtaposed against the rugged beauty of the natural stone provided by a nearby quarry. The result is a modern commercial facility with a fresh, contemporary feel, but also rich in the natural beauty of local materials.

CLIENT
Stoney Nakoda
First Nation

ARCHITECT
Alvin Reinhard Fritz
Architect Inc.

STRUCTURAL ENGINEER
TRL & Associates Ltd.

GENERAL CONTRACTOR
Timko Developments Ltd.

TIMBER SUPPLIER
Schuler
Timberworks Inc.



Five Nations Energy New Office Building

Timmins, ON



Five Nations Energy Inc. (FNEI) is a non-profit organization that distributes electrical power to remote communities along the west coast of James Bay. FNEI is one of just five licensed electricity transmitters in Ontario and is the only First

Nations-owned electricity transmission company in Canada.

FNEI's mission is to support the Cree communities of Attawapiskat, Fort Albany and Kashechewan by meeting their energy requirements in a safe, environmentally responsible and culturally respectful manner. FNEI's goal for its new office building was to embody these values in principle and practice. Lead architect, Georges Quirion from J.L. Richards & Associates Ltd., welcomed the challenge this project presented. "FNEI is a very successful business model," he says. "The client wanted to capture that in a sustainable design that demonstrated the inherent respect for the natural environment that is at the heart of First Nations culture."

The one-story, 7,755-sq.ft., wood-frame building has office space, a maintenance facility, and boasts numerous energy-saving sustainable design elements including a geothermal heating and cooling system, high-efficiency windows, and a high-performance building envelope. Provisions were also made to install a solar panel system in the future. The building's environmental impact was further reduced by strategically orienting the facility so that natural lighting and

ventilation could be taken advantage of to the greatest degree possible.

The building was constructed with a wide array of locally sourced wood products, a decision which had the double benefit of stimulating the local economy and minimizing the carbon footprint of the building by significantly reducing the resources required to bring materials to the site.

The frame is primarily comprised of standard wood stud walls and pre-engineered roof trusses though there is laminated timber and heavy timber throughout the facility. The roof structure in the shop area required bracing to offset the load of an overhead crane so plywood sheathing across the bottom chord of the roof trusses was installed to act as a diaphragm.

The office space has wood partitions that flatten the acoustics of the space, muffling excess noise to create a positive workplace in which a sense of quiet and calm plays a key role. Other interior finishes include red cedar boards, wooden doors and extensive millwork. The wood products used in the building enhance the space and create a progressive, sustainable work environment with an inviting ambience the occupants enjoy.

OWNER

Five Nations Energy Inc.

ARCHITECT

J.L. Richards & Associates Ltd.

STRUCTURAL ENGINEER

J.L. Richards & Associates Ltd.

GENERAL CONTRACTOR

Cy Rheault Construction Ltd.



PHOTO CREDIT: MICHEL BRUNELLE



Rottiwennakehte School

Kanesatake, QC

Located in an ancestral pine forest in Kanesatake, near Oka, Rottiwennakehte School is steeped in Mohawk culture and values. Its dual function as a school and as a community center makes it a space where this culture is fully transmitted, learned and lived.

As a material that is intimately linked to the Canadian native way of life, wood is central to this project. Used for the main structure of the entire building, with the exception of the gymnasium, the use of this material addressed many of the client's concerns, environmentally, structurally and aesthetically. The ecological aspect of this new school was a particularly important component of the project, which tipped the balance in favor of wood. From the outset, the Kanesatake Band Council indicated its desire to do everything possible in order to reduce the new building's environmental footprint. In fact, the school was only built following a comprehensive survey of the existing trees: it was therefore possible to situate the 16,146-sq-ft. building, the access road, a parking area, and a playground while only felling 10 trees on the site.

Left exposed, the glulam structure contributes to the building's decorative richness. Furthermore, the wood decking is composed of 2.5-inch solid timber. Formed with a slight inward curve, the beams mirror the shape of the building. All the beams are of different lengths as they have to adjoin a volume featuring a circular shape and because the central corridor follows a curved trajectory. In order to accomplish this, the beams were sized and machined one-by-one in a Quebec workshop.

Opting for a wooden structure for school buildings is not only popular in First Nations communities; architects and clients are becoming increasingly interested in using wood elements in this type of building because of its benefits in regards to the health and quality of life of the users. Several Canadian and international studies¹ suggest the presence of wood elements in a classroom may decrease stress levels,



reduce heart rates, and help to boost creativity and improve concentration. Moreover, Cecobois has developed a model plan that helps building professionals design schools built with wood.

¹ D. Fell and S. Augustin. 2015. "Wood as a Restorative Material in Healthcare Environments." FPIInnovations.

ARCHITECT
EKM architectes

STRUCTURAL ENGINEER
Joe Deom Associates

GENERAL CONTRACTOR
Espace construction Inc.

TIMBER SUPPLIER
Goodfellow



Nunatsiavut Assembly Building

Hopedale, NL

The Nunatsiavut Assembly Building is situated in a remote community in northern Labrador. The goal when envisioning and constructing the new legislative building was to symbolize the newly formed Nunatsiavut government and the culture of the place. The community was consulted to determine the appropriate symbolism to design an iconic building within the built and natural landscape.

The project commenced with a meeting of stakeholders of the project in the community of Hopedale. At that gathering, the architect and designer, Ron Fougere, was presented with a drawing from a young Hopedale elementary student. The drawing showed a domed “snow house” with the Moravian Mission buildings in the background. The young student’s sketch became the inspiration for the new legislative building for the Nunatsiavut government. This was a true reflection of the cultural expectations and the type of symbolism for the building, as it was manifested through the mind and heart of a young local child.

The dome of the “snow house” form became the feature, marking and expressing the gathering of people below the dome. It also commemorated the

entry and the collection of people in the “public space”. The dome is supported by large, curved glue-laminated timber crucks arranged radially around a central point. The crucks are left exposed to the interior to express natural materials within the culturally significant building.

Wood forms an important part of the building’s symbolism. Exposed wood gives warmth and familiarity to the building as the visible grain resonates closely with the history and values of the indigenous Labrador population. Historically, wood was a common material used by the people of Hopedale for everyday life and their fundamental existence. It was also used as the main and secondary structural components by the Moravians in the construction of the historic Hopedale Mission buildings. Wood was used in the Mission buildings as a structural element resisting both tension and compression forces, very true in concept to the glue-laminated structure used in the Nunatsiavut Assembly Building.

The images borrowed from the cultural history of the region are combined into one architectural expression signifying a special building, facilitating a very special function, on the landscape of Hopedale.



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Fougere Menchenton
Architecture

STRUCTURAL ENGINEER
CBCL Ltd.

GENERAL CONTRACTOR
Colby Management Inc.

NATIONAL PARTNERS

Canadian Wood Council
Conseil canadien du bois



Natural Resources Canada
Ressources naturelles Canada

BSLC
Bioscience Resource Project

CertainTeed
SAINT-GOBAIN



StructureCraft

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structurlam.com

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Weyerhaeuser



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