CELEBRATING EXCELLENCE IN WOOD ARCHITECTURE

2022-23 WOOD DESIGN AWARD WINNERS

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Celebrating Excellence in Wood Architecture
2022–23 Wood Design Award Winners

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Inspiring Excellence in
WOOD ARCHITECTURE

The Wood Design & Building Awards program celebrates the outstanding work of architectural professionals from North America and around the world who achieve excellence in wood design and construction.

The quality, quantity, and diversity of the project nominations received this year is inspiring. It signals the expanding architectural interest in renewable, low-carbon building materials and the increased use of wood as a versatile, sustainable, high-performance construction element that offers better outcomes for people and the environment.

The creativity and talent of these winning teams, and the beauty and diversity their wood projects, are transforming the built environment. We need more housing, more schools, more community spaces, and more infrastructure that elevates our experience of the world around us. This collection of winning projects demonstrates how it can be done.

We gratefully acknowledge and thank our esteemed jurors for their time and expertise: Brian Court, Partner at The Miller Hull Partnership, Susan Fitzgerald, Design Principal at FBM, and Stephan Langevin, Principal at STGM. They faced the formidable challenge of distilling a wealth of exceptional projects into a select few winners, carefully evaluating a vast field of exemplary entries to honor only the most outstanding entries from this year's nominees.

We also offer our deep appreciation to our sponsors—Sansin, the Sustainable Forestry Initiative, Wood Preservation Canada, and Western Red Cedar—for their support and ongoing commitment to our awards program.

Finally, on behalf of the entire team at *Wood Design & Building* magazine and the Canadian Wood Council, we extend our sincere appreciation to all participants of the 2022-23 awards program and offer our congratulations to the winners featured in this book.

Martin Richard
VP, Market Development & Communications
Canadian Wood Council

Ioana Lazea
Senior Project Manager
Wood Design & Building Awards

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Wood Design & Building Awards Program

Wood Is All Around

No matter where we live—city, country, suburbs—we can see and appreciate the aesthetic of wood in architecture. This sustainable material has found its place in industrial, commercial, and residential structures. An exposed beam here, a shingled roof there, wood adds elegance to any structure.

While the submitted projects for the 2022/23 *Wood Design & Building* Awards were all elegant in their own way, only the most striking and innovative of them are worthy of celebration in these pages. This year's diverse winners—from several corporate head offices to lofts, even a fire station—speak to creativity in wood design.

Our Canadian Wood Council bestowed six projects with the prestigious Honor award this year. Three of the projects—Churchill Meadows Community Centre, Neil Campbell Rowing Centre, and Lake Muskoka Boathouse, all in Ontario, Canada—are not simply structures designed for sports and recreation, but structures designed with airiness in mind.

The airiness continues across the pond with the Technical University of Munich Campus at Olympic Park in Germany. This pavilion-like building, comprising wood and glass, provides a clear layout of the sports, research, and training facilities it houses.

In neighboring Amsterdam, Netherlands, HAUT is a 21-story timber residential skyscraper with double-height spaces and an irregular, spacious pattern of balconies.

Finally, further afield in Seoul, South Korea, the Pavilion of Floating Lights, through the openings in between its walls, provides visitors with a quiet place to experience both natural and artificial trees, and tree shadows.

Among this year's award winners were also a few firsts. Tallwood 1, a 12-story apartment building in Langford, B.C., is being celebrated as the first tall mass timber building on Vancouver Island. The Soho Flats is one of the first five-story wood-frame apartment buildings constructed in Winnipeg, Manitoba. And Washington D.C.'s 80 M Street is the first high-rise overbuild mass timber structure in the mid-Atlantic.

But whether a first in timber or an Honor in design, every project here is special in its own way and deserving of space on these pages, and highlights the endless possibilities wood has to offer. No project is too large, too small, too complex, too hidden. After all, if we look closely, wood is all around.

Brooke Smith
Editor
Wood Design & Building

Integrated with its surrounding landscape both programmatically and formally, this community center demonstrates the beautiful and sustainable outcomes that are possible using mass timber design.

HONOR

Churchill Meadows Community Centre and Mattamy Sports Park

The Churchill Meadows Community Centre (CMCC) is situated within a rapidly growing neighborhood in Mississauga, ON. The building parti arranges interior spaces into two bars running the length of the building: the east holds the changerooms, with a teaching kitchen, and multipurpose and fitness rooms on the floor above; on the west, a wider bar houses the triple gymnasium and aquatics hall with lap and leisure pools. This design embodies the City of Mississauga's commitment to advancing the well-being of its communities, individuals, and the environment.

The center uses Canadian-made mass timber products, such as glulam columns and CLT beams, as the focal point of the design. The introduction of mass timber serves several aims. While the timber elements provide an innovative structure for the north and west elevations and the feature stair, the true purpose is to reinforce the community connection to nature and the park beyond.

The design accomplishes this by strategically placing the glulam columns to mediate the linking of inside to outside along the full length of the park side of the building. Visitors inside the building—whether in the pools, gymnasium, or lobby—are always able to look out through a forest of glulam columns to the park space. The columns also extend outward to form a generous overhang, which acts as a park shade structure adjacent to the playground and splash pad as well

as shelter for bicycle parking and promenade around the building. The shade structure, while aesthetically pleasing, also mitigates solar heat gain by filtering the sunlight entering the building like a tree canopy. This gives the community that strong visual connection to the park while passively reducing the overall mechanical loads on the building and energy consumption.

The center's simple yet dynamic forms signal its purpose as a neighborhood landmark for social gathering and healthful activity. The building is set diagonally, with its four elevations facing each cardinal direction. It acts as an orientation device, organizing the amenities within the park—playing fields and courts are aligned with the building for optimal solar orientation.

The large double-height spaces—pools, gyms, and lobby—are covered with a stretched membrane assembly that is perforated to let sound pass through to acoustic insulation. This ceiling's inverted peaks form a sculptural rhythm, diffusing natural light from a series of sawtooth skylights above. Practically, this eliminates glare and excess heat gain; the overall effect evokes the feeling of serenely lit caverns.

A feeling of openness, maintained via thoughtful visual and physical connections, also informs the approach to the design of the central lobby space, which bisects the center's plan across its length. As soon as visitors pass through the main entrance, they feel as if they have stepped into the park, with views to the outdoors framed by the rhythm of the mass timber structure. The pools and gyms face the main exterior amenity spaces and are fully glazed, as are the changeroom corridors—the internal energy of the community center is seen by those in the park and arriving at the facility.

The surrounding park provides a series of leisure and fitness spaces, including multiple soccer fields and basketball courts, spread across a landscape where gently rolling hills (made from soil reclaimed during building excavation) offer elevated seating to spectators. A measured trail loop, with fitness stations and interpretive signage emphasizing the natural heritage and settlement history of the area, runs around the perimeter of the park, loosely connecting all the park programs. This trail also ties into the fabric of the surrounding neighborhood and an existing trail network, making the park and center a vibrant new focal point of this system.

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Aquicon Construction
Brampton, ON

PHOTOGRAPHY
Scott Norsworthy
Toronto, ON

This rowing center in Ontario's Niagara region seeks to be both a beacon guiding racers and an assembly point that draws athletes and spectators alike.

HONOR

Neil Campbell Rowing Centre

The Neil Campbell Rowing Centre demonstrates how simple, elemental, and respectful design can support a broad spectrum of uses and enhance the identity of a venerable place while also achieving both net-zero energy and zero-carbon emission benchmarks.

Providing year-round fitness and rowing training for Canadian athletes, the center is the social and performative heart of St. Catharines' rowing community, supporting the continuation of Martindale Pond's history of competition that began in 1903.

Near the center of the pond sits Henley Island, a small wooded plot of land encircled by steep slopes rising to a plateau. Until the mid-1950s, the island was little more than the unofficial midpoint of the racecourse. Artificial extensions in 1965 and 1998 provided more space for parking, boat storage buildings for local academic rowing clubs, and an expansive zone that accommodates the enormous number of boats and athletes that come for regattas. Today, the island is the launch point for the St. Catharines, Ridley College, and Brock University Rowing Clubs, as well as the hub and festival grounds for annual international regattas.

The rowing center has been configured to serve three purposes: to provide a shade amenity on an otherwise open site, to define an active court with the existing storage buildings, and to make a strong connection to the water for athletes and spectators.

The structure is designed with an innovative mass timber composite roof structure, fondly referred to by the designers as the timber structural sandwich. The custom-designed stressed skin panels span predominantly in one direction with glulam acting as webs engaging the CLT panels in tension and compression. The internal glulam web lattice optimizes the use of timber. This assembly clear spans up to 12 m, with a double cantilever of 5 m in a 600 mm total structural depth. The top CLT panels are 19-m-long and span the full width of the building. These panels are the longest manufactured in Canada, and this parameter set the width of the design. The roof structure is supported on 67 mm x 67 mm slender steel columns and CLT shear walls. The entire facility rests on 15-m-long screw piles that extend down to bedrock.

Wrapped in triple glazing, the building inverts the opacity of the typical boat shed and places the activity within to be both on display and visually linked to the water and the land, creating continuous indoor-outdoor spaces for nourishing the personal development of the athlete as well as a place for celebration and exhibition. The biased overhanging roof, operable doors, and

steps to the watercourse further reinforce the connection to the water and create a visual identity for the facility from across Martindale Pond.

The design continues the tradition of the "glass house" reimagined as a functional social amenity and undergirded with a responsible environmental approach. The new center embodies the legacy of rowing in the Niagara region and carries it into the future. It will be the centerpiece of the 2024 World Rowing Championships and an opportunity to present design that is environmentally and socially responsible.

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PHOTOGRAPHY
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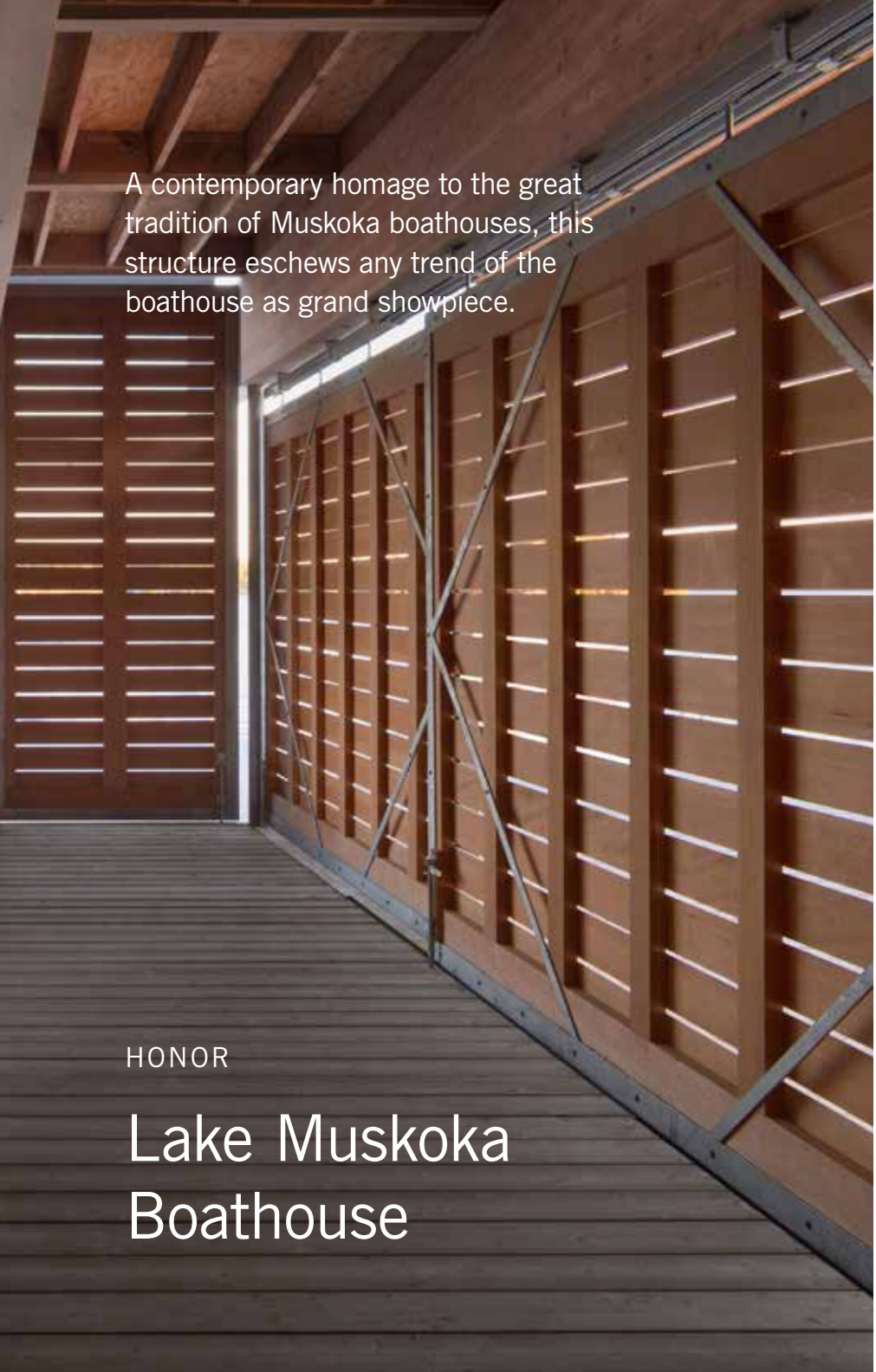

A contemporary homage to the great tradition of Muskoka boathouses, this structure eschews any trend of the boathouse as grand showpiece.

HONOR

Lake Muskoka Boathouse

The designer of Lake Muskoka Boathouse grew up on the lake, spending summers exploring its shoreline. That time spent on the water and observing the area's materials and rhythms inspired the design of the building.

Boathouses are essentially drying sheds meant to protect watercraft and equipment from the elements and facilitate their next use. On Lake Muskoka, boathouses have evolved over time to represent leisure activities and a gathering place for family and friends at the water's edge.

Lake Muskoka Boathouse is a pared-back, utilitarian structure, rendered in the simplest possible local materials: wood and only the required hardware for the building's function. All components were fabricated off-site, maximizing an already short building season to ensure the owners would not lose a summer to construction. Given the site's steepness, off-site fabrication allowed the components to be towed across the ice by snowmobile, avoiding the need for costly barging, undue site disturbance, and a lengthy winter build.

Lake Muskoka Boathouse's prefabricated structural system employs laminated exposed Douglas fir post-and-beam construction, amply sized to support the hoisted load of a boat suspended for storage, along with a substantial snow load. The cladding is a simple-spaced fir board, with edges beveled to allow water to drip off easily. The designer selected the material for its ability to age gracefully to a silver patina, along with the dock and roof deck surfaces. The open-lattice cladding allows the air movement needed for drying while subtly offering a glimpse of the posts and galvanized cross-bracing that support the building. It allows the building to glow warmly from within, presenting a welcome sight to boaters and revelers returning at dusk from the day's adventures.

In observing Muskoka boathouses over many years, the designer felt that the area's one-story boathouses often had forlorn spaces on the roofs—large flat roofs with overscaled, rather soulless roof decks. Challenging this norm, they created a more sheltered sense of place on the roof, introducing sectional variety to the building and offering more amenity at both levels. The resulting roof monitors offer privacy to the roof deck, create storage for cushions and ice chests, and contain lightwells that both brighten and offer a place for canoes to be hoisted vertically for efficient storage.

The need for drying, and the fact that the width of a dock and boathouse is strictly regulated, led the designer to use simple galvanized barn door hardware so two large door panels could slip back. This allows the boat (and its seats and sound system) to become part of the activity on the dock. More importantly, it reunites the dock space in the boathouse with the outdoor space, making for a larger shaded gathering place.

A primary concern of the designer was to control the overall height of the building while remaining comfortably below the allowable 15-ft., 6-in. height limitation. To accomplish this, the roof plane and roof deck support were combined: the roof deck joists sit on horizontal roof beams while the gently sloped roof itself sits below, suspended inside the section of the beams. As the beams reach the edge of the building, they taper to match the roof slope and allow a single thin fascia to run the length of the building. In this assembly, the deck never touches the roof membrane yet protects it from UV damage or any wind-blown boughs falling from the nearby pines.

Using local materials and precision fabrication, Lake Muskoka Boathouse restores the form to its classic simplicity while elegantly facilitating its contemporary role as a space for gathering and entertainment.

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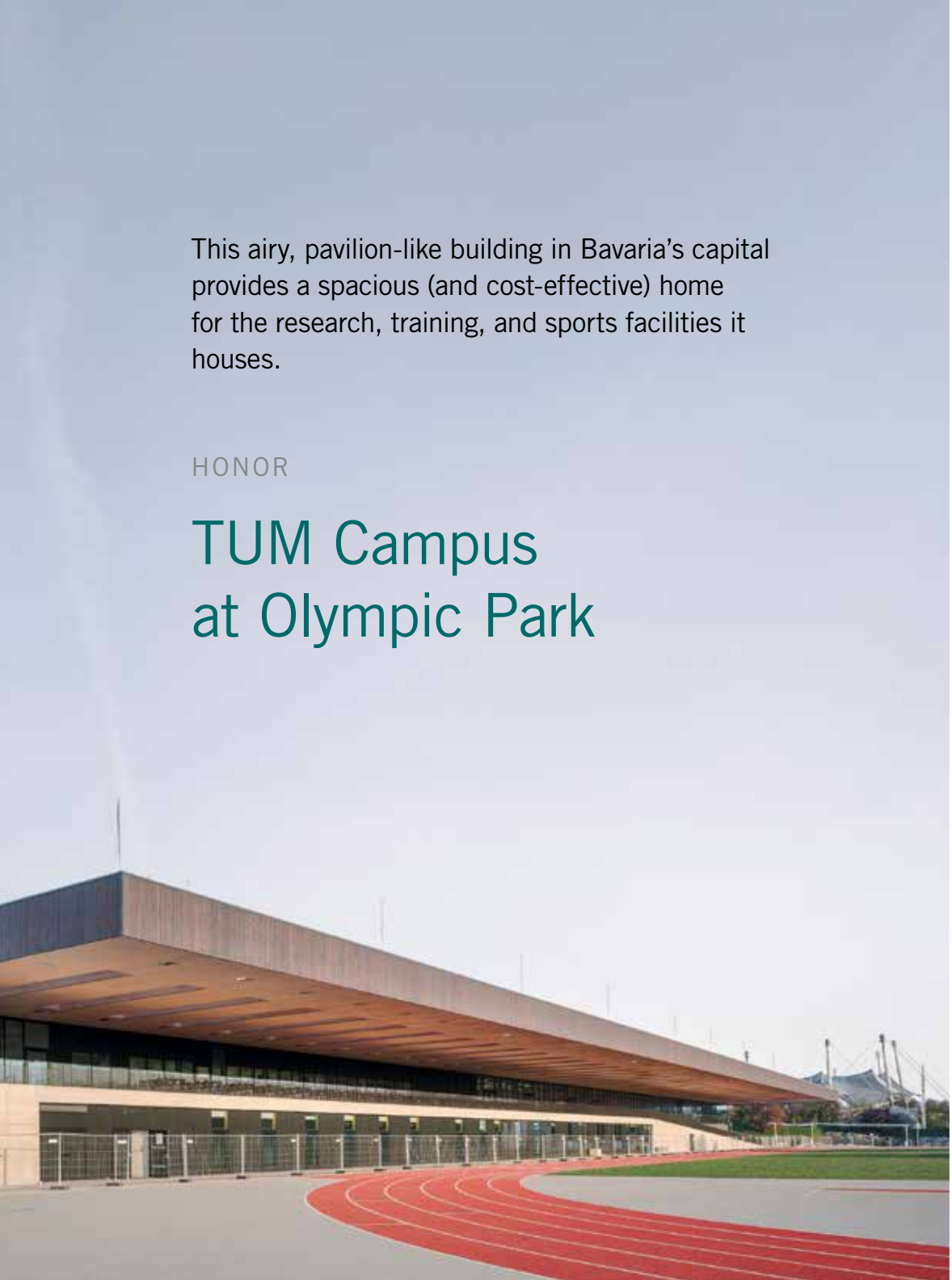
This airy, pavilion-like building in Bavaria's capital provides a spacious (and cost-effective) home for the research, training, and sports facilities it houses.

HONOR

TUM Campus at Olympic Park



Located in Munich, in a park created for the 1972 Olympic Games, this campus at the Technical University of Munich (TUM) houses the Department of Sport and Health Sciences, accommodating sports halls, lecture halls, institutes, offices, and diagnostic rooms under one roof.

The special wooden structure of the cantilever is assembled from prefabricated parts without any auxiliary scaffolding. The 36-m-long and 3 m wide elements are glued together in the workshop from commercially available veneer layer boards and glulam ribs to form high-performance wood box beams with high stiffness and minimal weight. The large cantilever was thus realized for a reasonable cost.

Sports halls, institute areas, and the complete roof structure are built in timber. Timber construction enables a high degree of prefabrication and thus short assembly times. With the appropriate logistics for planning, production, delivery, and assembly, the hall clusters were set up in just two months.

The spirit of the 1972 Games (light, freshness, generosity) is evident in all aspects of the design. The airy, pavilion-like building made of wood and glass provides a clear layout for the various research, training, and sports facilities. Its slender outline (180-m-long and 150 m wide) fits sensitively into the master plan. The 19-m cantilever canopy is a unique wooden construction made of prefabricated box girder elements that can be assembled without the need for costly auxiliary scaffolding.

In addition to wide-span glulam beams, the designers used hybrid ceilings in wood-concrete composite construction and prefabricated wooden elements for ceilings and climbing wall. The central access axis, bracing staircase cores, lecture hall, climbing hall, and basement are designed as reinforced concrete structures.

Patios punctuate the center of the building, bringing variety and directing natural light inside the compact construction. In the east, a footbridge leads from the park directly to the first floor of the building, where the main entrance is located. An impressive 18-m timber cantilever partially shelters the outside athletic tracks, enabling highly sensitive sports measurements regardless of the weather.

The landscape concept focuses on the dialogue between buildings and the green park-like sports landscape. The outdoor area with various sports fields is designed as a generously greened park area. The two street—"rue intérieure" in the building and "rue extérieure" for the outdoor facilities—are the characteristic elements for the new campus. They represent meeting places, access zones, and communication spaces.

To the west, the "rue extérieure" connects the main building to all the sports fields. Designed as a tree figure with numerous side branches, it offers attractive lounges such as the campus square with fountains and lawns, as well as various seating areas such as the stepped tribune around the beach sports facilities. The sports areas are located between the "rue extérieure" and the ramparts of the Olympic Park. The heart of the facility is the new athletic arena, located directly in front of the outdoor terrace of the main building.

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In a country with a tradition of building in concrete and steel, this timber residential tower proves to be an eye-opening exception.

HONOR

HAUT Amsterdam

A residential tower, HAUT is a prototype for building innovative and environmentally friendly high-rise timber structures. The team built an ambitious sustainable building: a timber skyscraper with 21 floors that, at 73 m, is one of the tallest timber towers in the world.

The development site of HAUT beside the Amstel River did not simply go to the highest bidder. In assessing offers, municipal officials in Amsterdam also weighed both architectural quality and sustainability. Aside from the carbon-storing properties of timber, the building is fitted with solar panels on the roof and facade, sensor-controlled thermostats that adjust low-temperature floor heating and cooling, nesting boxes for birds and bats, charging points for shared electric cars, and a rooftop garden with rainwater storage, in addition to cooling that is sourced from the ground.

The load-bearing structure of HAUT is made of CLT panels manufactured off-site, ensuring low waste production and fast, clean on-site assemblage. As there are no standard building regulations for high-rise timber construction, the design team invested considerable time and energy in technical innovation and safety. Floors and walls are constructed of timber, but a structure made completely of timber in wet and windy Amsterdam would be impossible. Consequently, the foundations, basement, and core are constructed in concrete.

A benefit of timber construction is that it offers a warm feel and allows for a high level of customization, or bespoke haute architecture. CLT panels are easily adaptable during prefabrication, offering first buyers options in the size and layout of their apartments, the number of floors, and the positioning of double-height spaces, galleries, and balconies. Unlike most timber buildings, only the inner walls of HAUT are load-bearing, allowing for floor-to-ceiling windows in the facade. The irregular pattern of balconies and the pronounced, double-height spaces facing the Amstel River make HAUT's architecture highly distinctive.

Ever since the design team started on HAUT in 2016, they advocated the use of mass timber in building design. This project helped to accelerate the shift from traditional construction in concrete and steel to timber as the more sustainable alternative. All four partners have become experts in complex timber hybrids towers and regularly share their knowledge with decision-makers, engineers, designers, builders, and students.

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PHOTOGRAPHY
Jannes Linders
Amsterdam, Netherlands

Intended as a place where visitors can experience both natural and urban environments, this structure also celebrates the co-existence of the traditional and the modern in Korean culture.

HONOR

The Pavilion of Floating Lights

The Pavilion of Floating Lights aims to reinvent East Asian timber architecture, especially -ru, the East Asian equivalence of a pavilion on a bigger scale.

Traditional assembly and structural systems such as wooden brackets are recreated in six tree-like columns of the project. These tree structures pay homage to the six pillars of the front side of Chokseok-ru, built in 1365, the most symbolic building in the city of Jinju, where the project is located.

Another nod to tradition: the project avoided using nails and adhesives to emulate traditional Korean carpentry. However, more modern methods were also employed, such as complex plywood members, fabricated by a CNC router, being assembled to form tree structures by virtue of augmented reality. This blend of traditional and modern approaches showcases the potential for forgotten craftsmanship in East Asian architecture that can be reborn with modern technology in our time.

Originally, -ru was defined as an iconic building with elevated floors to have open views for private uses or military observation. This project converts the traditional purpose of -ru into a more public role. The site faces the Namgang River, which has been a background for notable historical events in the city. The pavilion aims to be an icon alongside the river for the Floating Lights Festival, which is a well-known local event.

Before the area became urbanized, its riverside was surrounded by bamboo forests. Inspired by this, tree columns generate an interior space like a pathway between forests. Also, the glass walls of three sides blur the boundary between

inside and outside to realize the idea of openness. Its eastern wall, which is the only blocked side, is realized as an earthquake-proof construction and serves as a background symbolizing the co-existence of nature and artifact. The eastern exterior, the first appearance for the visitors, contains the shadows of trees on Mount Mangjinsan cast by morning sunlight, and the eastern inner wall contains the shadows of wooden structures cast by the evening sun.

Through the openings between the walls, visitors can experience three different kinds of trees at the same time: natural trees, artificial trees, and tree shadows. This co-existence of nature and artifact, along with the co-existence of the traditional and the modern, is the ultimate message conveyed by this project.

Although the motif was taken from traditional architecture, the method proposed in design and implemented in construction could only be possible using the latest technology. In this way, the Pavilion of Floating Lights shows the possibility that traditional wooden structures can be reborn with modern engineered wood and digital fabrication. The building is a hybrid construction, drawing on the past and the present in terms of its reinterpretation and implementation of traditional methods and its active use of modern technology.

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STRUCTURAL ENGINEER
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Seoul, South Korea

GENERAL CONTRACTOR
Dae Jo Construction
Seoul, South Korea

PHOTOGRAPHY
Rohspace
Seoul, South Korea


PRINCE GEORGE FIRE

The wood surfaces throughout this fire hall provide a calm and simple backdrop for all the critical life safety activities that take place within its (fire-safe) walls.

MERIT

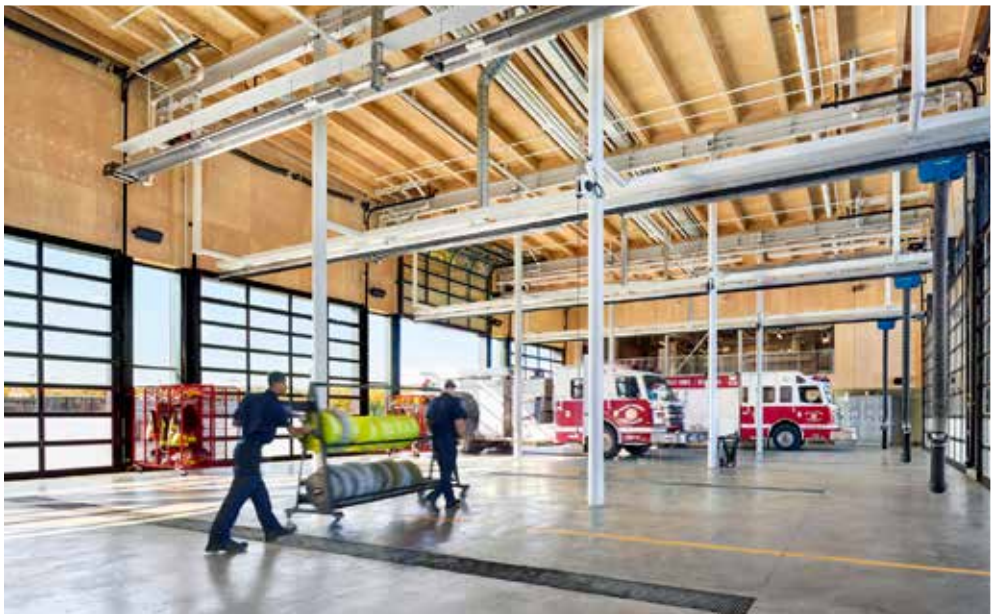
Prince George Fire Hall No. 1

The Prince George Fire Hall No. 1 is a state-of-the-art facility built to post-disaster standards. Its hybrid wood, steel, and concrete structure accommodates five drive-through truck bays and the latest in modern firefighting equipment, along with an emergency operations center, dispatch, and administrative offices. Its simple yet striking design celebrates the local timber industry with a monolithic form that rises in a gesture of resilience, comfort, and community.

Since the early-20th century, Prince George, BC, and its surrounding areas have been an epicenter for forestry and associated industries. This history has been a significant factor in the development, identity, and collective memory of this region. The region continues to be a center for the advancement of wood building technology and innovative applications of forestry products in a continued effort to reduce the carbon footprint of the building industry.

The importance of wood in the region and its culture became clear to the design team early on and influenced their strategy to deliberately use the material to showcase this history. Several key elements within the new facility were conceptualized as being wood, used both as a structural material and as a means of expression. These were consciously placed adjacent to major glazed elements, making them visible from the surrounding public spaces. The rich wood finishes provide a warm contrast to both the simple black cladding and harsh exterior conditions that are often encountered in Prince George.

The front-entrance feature stairwell makes a bold impression, its NLT construction wrapping occupants from



floor to ceiling with the warmth of wood. The NLT was site-fabricated in place with a fully randomized pattern of boards. Crews used more than 100,000 fasteners and 3,000 pieces of lumber to construct this component of the facility.

LVL and plywood decking for the roof of the facility's large expansive truck bays. Wood is used throughout the interior as a finishing material as well. Aesthetically pleasing, the overall use of wood offers visual warmth, complementing the building's dark exterior cladding.

This use of timber not only pays an homage to the importance of forest products to the local culture and economy, but also demonstrates that wood products are a trusted, fire-safe, and durable material well suited to this building type. Mass timber products, such as NLT and LVL, are fire-safe, and the materials char if exposed to flame, forming a protective layer. Along with these features, the use of exposed wood offers employees added biophilic benefits, supporting staff health and wellness in the facility.

Overall, the new facility with its prominent location and iconic form presents a warm and reassuring face to the community, and announces that it will be there for their safety and protection.

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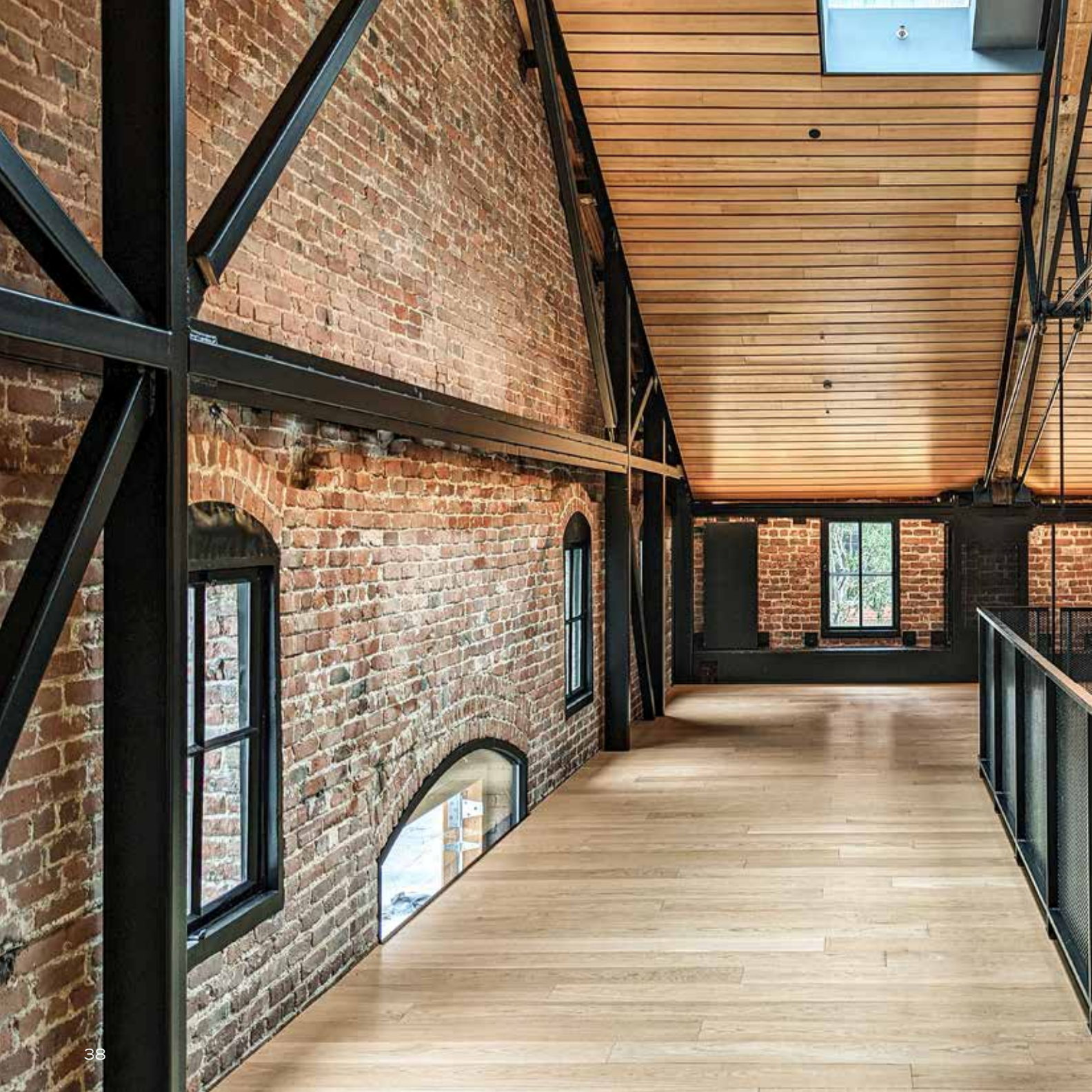
Fast + Epp
Vancouver, BC

GENERAL CONTRACTOR
IDL Projects
Prince George, BC

PHOTOGRAPHY
Ed White Photographics
Vancouver, BC



The rejuvenation of this San Franciscan gem accentuates the symmetric geometry of its historically industrial heritage.

MERIT

MacLac Building D– Rebirth of a Historic Paint Factory

Maclac Building D is the adaptive reuse of a 1906 factory building in San Francisco's historic warehouse district. It had long been home to the McGlennon Company, which manufactured lacquer (hence "maclac"), and it is representative of San Francisco's reindustrialization after its famous 1906 earthquake. Thanks to new wood finishes, an upgrade to existing timber structural elements, and the refurbishment of its historic wood windows, the interior is transformed from a cold and industrial shell to a seismically upgraded and inviting space.

The project includes a ground floor and a mezzanine floor intended for business or mixed-use purposes. The objective was to simultaneously achieve numerous technical goals of energy efficiency, state-of-the-art seismic resistance, environmental sustainability, and ADA compliance while creating an uplifting atmosphere through historically responsible improvements.

Wood was used for aesthetic, historic, environmental, and structural reasons. A century-plus accretion of ad hoc partitions, random levels, and obsolete industrial equipment installations was razed, exposing the structure's magnificent volume and structural bones. Repair of the original materials (including the timber structure) required engineering with 21st-century seismic safety elements with wood playing a major role. In addition, introduced wood is the predominant finish material, its beauty highlighted by abundant natural light from a new ridge skylight.

Within the existing historic envelope, a unique hybrid structural system was developed. The bottom cords of the original historic heavy timber wood trusses were too low and had to be removed. These heavy timber top cords were retained and reinforced with steel to support a CLT floor structure suspended from the trusses above. This not only achieved a column-free first level, but the thin 5.5-in. CLT second-floor structure provided ample head height on both levels. This thin profile allowed the installation of a second floor while maintaining the historic roofline. The roof was reframed above the reconfigured trusses with light wood framing, which allowed the installation of a continuous ridge skylight with integrated plywood shear panels.

The seismic resisting system includes a crucial seismic diaphragm constructed of CLT floor slabs (typically of species such as spruce, fir, or other timbers). The wood diaphragm provides a highly desirable floor area in the form of a bonus mezzanine, adding 2,555 sq.ft. to the ground level of 3,784 sq.ft. (for a total interior area of 6,339 sq.ft.). CLT slabs, designed for 100 psf assembly loading on the

mezzanine, are suspended by hanger rods and dropped down from the roof trusses, resulting in a column-free lower level with an open center area that allows light from the new skylight to reach the entire lower level.

This project benefits from both the salvaging of historic wood and the introduction of new wood products. It illustrates how existing historic wood can be repurposed for economic, architectural, and environmental benefits—making wood a key component in the project's success connecting people with place.

ARCHITECTS
Marcy Wong Donn Logan Architects
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PLAD Peter Logan
Architecture and Design
Brooklyn, NY

STRUCTURAL ENGINEER
GPLA Inc.
Santa Clara, CA

GENERAL CONTRACTOR
Rod Heisler Construction
Oakland, CA

PHOTOGRAPHY
Billy Hustace Photography
Oakland, CA

A place of private study and refuge, this home straddles the threshold between looking inward to the mind and out toward the world.

MERIT

Historians' library and residence

Muffled sounds from the neighborhood drift into a garden hidden by wooden fences and the dense tree canopy of surrounding yards. In winter, the view opens to snow-covered rooftops through a screen of birch and maple branches. A residence in the south half of a frame and stucco duplex is wrapped with a cedar and oak-clad addition, connecting an existing kitchen and new sitting area to the garden through a wall of full height glazing. Natural light from above defines the more contained new spaces of washroom, mudroom, and oak stairway.

A cedar walkway nudges past a board-formed concrete garden wall, descending a few steps at each change in direction as it passes covered alcoves lined in weathering oak planks that shelter thresholds to the residence. Exterior spaces begin to unfold as the path

shifts to the smooth form-ply faces of concrete steps, porch, and walls embedded into the hillside, providing the base for a light wood structure embraced and sheltered by the downturned "U" of the projecting roof. Nested within, a library for two historians to research, write, and plan exhibitions is lined in unfinished Douglas fir bookcases, the slow patina of inside use contrasting with the exterior weathering of oak and cedar.

Operable wood windows provide cross-ventilation, grouped with high fixed glazing to allow long views and spatially extend the east/west axis. Early morning and late afternoon sun briefly sneaks beneath the large overhangs to mark the passing of days and seasons. Along the north wall are tucked a small closet and washroom, with low niches for a sofa and long black walnut desk, separated by a second board-formed concrete wall. Horizontal windows shift the view across the garden to a panorama of the neighborhood beyond, and insulated wood vent doors connect to breezes, smells, and sounds. A sense of refuge and prospect is focused here, the threshold between looking inward to the life of the mind and out to the world. Overhead and sliding interior shutters of lightweight plywood cover lower-level windows for privacy as darkness falls.

A more generous east porch provides a sheltered place to enjoy morning sun and a loftier lookout to the city below,

stepping down to an existing wooden deck hovering just above grade at the bottom of the yard, looking back across the garden.

Suspended from roof beams, framing over the long library windows is tied near midpoint with a plywood gusset, and deep lintels resist wind loading. Interior beams span between four parallel shear walls to support upper bookcases and suspended steel shelves for ongoing research documents. Salvaged western red cedar from the existing residence is milled and reintegrated, and Passive House principles inspired details that incorporate high insulation levels, minimal thermal bridging, and careful attention to air tightness.

Constructed by the architects with undergraduate architecture students, this project—with its concrete formwork, light frame construction, casework, and open-joint cladding—allowed firsthand experience for young designers, giving them the chance to modify and develop details as the project evolved.

ARCHITECT
Dowling Architects
Paris, ON

STRUCTURAL ENGINEER
Blackwell Structural Engineers
Waterloo, ON

GENERAL CONTRACTOR
BUILD
Paris, ON

PHOTOGRAPHY
Henry Dowling
Waterdown, ON

Paul Dowling
Paris, ON

This retrofit project breathes new life into a historic industrial building in Madrid, creating a sustainable exemplar of building reuse.

MERIT

Ombú

This office building for the Spanish sustainable infrastructure and energy company ACCIONA is situated within a unique historic industrial building in Madrid built in 1905. The project capitalizes on the existing load-bearing structure that supports the pitched steel trusses. The historic building envelope has been retained to conserve over 10,000 tons of original brick and mitigate the environmental impact of construction.

The lightweight structure inserted inside the space is made from sustainably sourced timber from local forests and allows for spatial flexibility while also integrating lighting, ventilation, and other services. The choice of natural and recycled materials not only is sustainable but also contributes to a biophilic environment that improves well-being and productivity.

A central skylight brings natural light to the interior, reducing the need for artificial lighting while the glazing incorporates photovoltaic technologies that generate electricity.

Two new timber-based materials were selected. Thick CLT of Alpine region spruce is ribbed with Spanish chestnut glulam beams. CLT has gained popularity over the last century. Hardwood glulam, as a standard industrial factory-controlled structural component, is a material from the late 1980s.

The high compressive strength of chestnut is used to create relatively slender columns supporting a 60-minute fire rate. The slenderness of the columns and beams contributes to the joints' extremely high degree of rotational restraint. Beams behave as continuous elements and columns have hinged-fixed bars. This is achieved without joints in the span through a complex node. A high-strength concrete core is connected with fully threaded screws that are axially inserted into glued steel plates in the beams.

High-strength fully threaded screws, which range in length from 0.2 to 3.0 m, have become an everyday resource. For this project, they allowed the design team to reach a composite action between beam and slab, and to generate complex composed transversal sections to solve cantilevered areas. Lateral stability is achieved by combining the stiffness of the joint with the vertical nucleus in CLT.

Taking advantage of Madrid's temperate climate, a new courtyard offers the option to comfortably work outdoors. The courtyard connects to a large 12,000-sq.m park with 300 trees, featuring outdoor working spaces and areas for informal meetings sheltered by a green canopy of trees. The new public space connects the building with the surrounding community and generates a positive social impact. Located in the lively Arganzuela district, Ombú also benefits from direct access to rail and bus networks, encouraging employees to travel by public transport.

The project was presented at COP26 as a sustainable case study for the World Green Building Council as its environmental impact is compatible with the original 2 °C aim of the Paris Agreement. Its carbon footprint has been carefully measured and controlled, reducing embodied carbon by 25% when compared to a new build over the whole life of the project, while making allowances for future refurbishment. The operational energy is calculated to be 35% below normal expectations.

ARCHITECT
Foster + Partners
London, UK

STRUCTURAL ENGINEER/
GENERAL CONTRACTOR
ACCIONA
Alcobendas, Spain

PHOTOGRAPHY
Nigel Young
London, UK

Rubén Pérez Bescos
Barcelona, Spain

The power of flooring mats used in traditional Japanese tea ceremony rooms helped inspire the balanced and centred orientation of this urban oasis.

MERIT

Wooden Annex

The Wooden Annex is a single-story, fully timber extension to a 1950s end-of-terrace house in South London. The addition of the annex accompanied a complete refurbishment of the existing house, creating increased and improved open living space for the homeowners.

The large garden has nine different adjacent landowners and three beloved mature trees, all of which influenced the proposed design. The tree root protection zones on the site determined the use of screw piles and the consequent idea of an entirely timber building, including its foundations. The annex was built using a flat pack

of over a thousand digitally fabricated pieces, all assembled on-site. This customized construction process was developed by the design team to optimize the use of timber and minimize site waste, producing an impressive, environmentally low-impact building. Relying on a close and integrated relationship between the architect, client, and main contractor, the Wooden Annex demonstrates the potential of incorporating digital fabrication within domestic-scale timber projects.

An important consideration for the architects was that the client wanted the space to allow for social interaction between the kitchen, living, and dining areas. To enable this within the constrained space, an L-shape was given, opening a new kitchen from the side of the house to a dining area that extended out into the garden. This eating area became an important space—the starting point for the whole design. Hoping to create a balanced and centered orientation, the architects looked to the 4.5 tatami layout, a modular arrangement of flooring mats used in traditional Japanese tea ceremony rooms. From this formation, the structural grid for the roof was developed. The interior fixtures and fittings then followed the geometry of the exposed ceiling structure, creating fluency throughout the space. A repeating window-door arrangement was made on the three walls surrounding the dining area to create a sense that each direction was as important as the others.

During construction, more than

1,200 individual pieces were produced this way for the building's structure and envelope. The components were then assembled on-site by the main contractor using traditional carpenter's skills. Simple assembly manuals, like those that come with IKEA furniture, were provided to the carpenters, who were able to complete the installation with efficiency. The uniformity of materials and predetermined construction sequence reduced the need for specialist tradesmen on-site, reducing costs, disruption, and build time. The roofing waffle slab was fabricated from ply sheets that span in two directions and reduce at least 30% of the timber volume compared to traditional timber joists or CLT slabs. This customized prefabricated approach brings together design, engineering, and construction, allowing the architect to be involved throughout the whole of the project.

ARCHITECTS
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Hayden Allen
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STRUCTURAL ENGINEER
Karsten Weise
London, UK

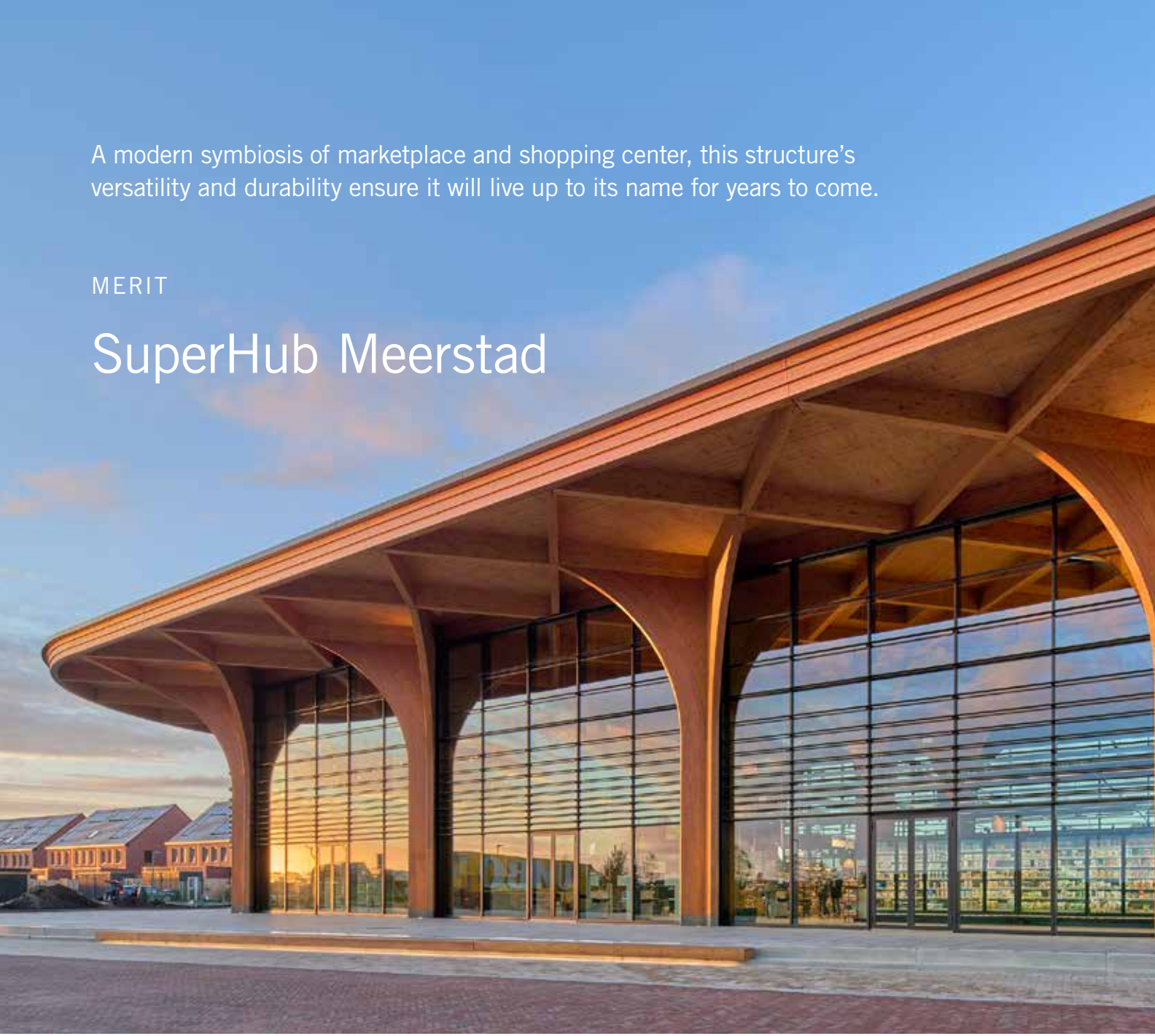
GENERAL CONTRACTOR
JK London Construction Ltd.
London, UK

PHOTOGRAPHY
Tim Crocker
London, UK

A modern symbiosis of marketplace and shopping center, this structure's versatility and durability ensure it will live up to its name for years to come.

MERIT

SuperHub Meerstad



SuperHub Meerstad was inspired by the mission to better connect the burgeoning Groningen district and to transform it into an interactive social space. An up-and-coming part of Groningen, Meerstad is popular for its open space, greenery, and the Woldmeer recreational lake, around which a neighborhood with 5,000 new homes will be built in the coming decades. With this future expansion in mind, it was important for the neighborhood to contain an inviting community center that can serve as a place for residents to shop, meet, and eat.

SuperHub represents a revitalized circular version of the traditional market hall design. It is expansive and transparent, with a supporting structure made entirely of cross-shaped laminated wooden columns

and beams, giving the building a cathedral-like appearance. The large span and 9-m ceiling height create an exceptionally luminous space and offer the opportunity for flexible layout and usage adaptations in the future. The large canopy provides sun protection and pulls the structure into its green surroundings with the use of elegant columns and net-like wooden trusses. Additionally, the cross forms provide the building with stability so that no additional wind bracing infrastructure is required. The wooden construction also ensures a positive climate impact, and the roof has been reserved for the placement of solar panels and plants for bees and insects. The built-in air treatment installation, as well as the heat and cold ground storage, ensures an optimal and energy-efficient indoor climate.

SuperHub currently includes a supermarket and a café, and it offers the Meerstad neighborhood an opportunity for varied functionality. The open and spacious building functions as a meeting place for residents in addition to its function of providing food. The design team's aim was to make the shopping experience personal and social again, and to offer residents a refreshing alternative to the increasingly popular express delivery services. The impressive spatial qualities of the structure are essential here to fulfil its purpose as an attractive and multifunctional community center. This way, the supermarket becomes a place for everyday groceries as well as a way for meeting one another, thereby contributing to the social sustainability of the Meerstad neighborhood.

SuperHub represents the modern symbiosis of marketplace and shopping center, where visitors can do their shopping and visit a trendy café. Additionally, the structure was built to last, and its flexible, open layout allows for its functions to be reinvented along with the changing needs of the community, meaning that it will never become outdated or be demolished in the future. The building could accommodate a community center, a museum, or even homes in 20 years' time. In this way, SuperHub manifests itself as a future-proof community hub that will grow along with the development of Meerstad.

ARCHITECT
De Zwarte Hond
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STRUCTURAL ENGINEER
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GENERAL CONTRACTOR
Brands Bouw B.V.
Groningen, Netherlands

PHOTOGRAPHY
Ronald Tilleman
Rotterdam, Netherlands

Ronald Zijlstra
Groningen, Netherlands


3.50
0.99

Wood plays a vital role in the sound and feel of this concert hall, a visually (and aurally) stunning example of a space designed to allow the exploration of new forms of performance.

CITATION

Wu Tsai Theater, David Geffen Hall at Lincoln Center

Home to New York's Philharmonic, David Geffen Hall at Lincoln Center is more than a music hall; it's a cultural landmark. Originally designed by Max Abramovitz in 1962, the hall has undergone multiple renovations over the decades attempting to address its ongoing acoustical challenges. With a new concert hall as the building's centerpiece, this reimagination project reconceives the entire facility within its existing historic shell to create a more welcoming and intimate audience experience.

The design transforms the existing concert hall from a cavernous rectilinear shoebox into a curvilinear unified room with flawless acoustics and optimized sight lines that foster an intimate connection between the audience and performers. By relocating the stage forward by 25 ft. and eliminating the proscenium, the seating wraps around the stage and brings the entire audience closer to the performers.

Wood paneling lines the interior of the concert hall and surrounds the stage. The finish unites both the musicians and the audience in one space. Because wood is a material used in so many different instruments, the musicians felt that it was the right choice of finish.

The design inflects and changes as it wraps the room. The motif of waves varies as the panels clad different parts of the room. The walls, balconies, and organ loft all have different requirements, and the design changes to perform different acoustical functions. Horizontal flutes that vary in height are carved into the balcony fronts to diffuse sound. Vertical waves emerge out of flat panels on the walls to reflect and spread sound. Finally, the panels appear to twist apart at the organ loft to let sound emerge from the New York Philharmonic's brand-new electronic instrument.

To finalize the design, there was a long period of design assist between the architects and the woodworkers, which involved refining and detailing the design and selecting a species. The design team wanted a light to medium color and a grain appearance that looked natural and refined. The sculpting was inspired by sound waves, similar to ripples on a pond. For the species, European beech was chosen mainly for the relative calmness of its grain, which the sculpting would exaggerate, and its stability over time and temperature fluctuations.

The floors and seats in the concert hall are also wood. Walnut was chosen for the seats as its darker color allows for the enjoyment of more animated grains from your seat while not overwhelming the beech walls. Oak is used for the floors as that species is proven for long-term durability in high-traffic areas; it's stained darker in the audience and lighter on stage to help with proper light control and distribution. The end panels of the seats are also carved in wave forms that cascade down toward the stage.

ARCHITECT
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STRUCTURAL ENGINEER
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GENERAL CONTRACTOR
Turner Construction
Toronto, ON

PHOTOGRAPHY
Michael Moran
Brooklyn, NY

Richard Barnes
New York, NY

This home on a lake in Ontario's cottage country demonstrates how aesthetic and environmental performance can be inextricably bound within a single category.

CITATION

Angle of Repose

The client, a professor of art history who is supportive of contemporary architecture, wanted a beautiful and inscrutable house with the highest level of ambition for sustainability. The eloquence of the sculptural form of the house, conceived as an object nestled in the woods surrounding Northern Ontario's Hindon Lake, was paramount.

The solution was a simple trapezoidal volume lofted between two gable elevations and unified by singular cladding applied to the entire surface of the structure. The apparent simplicity of the volume is belied by the hyperbolic paraboloid roof, a form that results from the simultaneous lowering of the roof peak and widening of the plan from east to west. The house appears entirely straightforward and complex, both at rest and in motion at the same time.

Achieving the highest level of sustainability possible for year-round comfort meant pursuit of Passive House certification (which is extremely challenging for a small house) to ensure a very high level of operational performance; no fossil fuels combusted on-site, only electricity; and minimizing embodied carbon to the greatest extent possible.

The dual goals of the project—high design values and sustainability—resulted in a dynamic design process with the architects working closely with the structural engineer, the timber engineers, and the Passive House consultant in a collaborative manner to accomplish the twin objectives. In this way, the architecture of the building is the performance of the building: the orientation on-site is aligned for optimal passive performance, the fenestration of the building is highly biased to the south and west facades for the same reason, and envelope assemblies calibrated for optimal thermal continuity provide depth and respite for the building's occupants.

A mass timber structure was selected as the optimal solution to support the project's architectural and sustainability goals, and to provide a beautiful and welcoming interior. A digitally fabricated mass timber structure allowed the team a high degree of control over the building geometry, which was seen as critical to the architectural success of the project. Moreover, the timber structure was a critical part of the strategy for ensuring a high degree of airtightness (essential for achieving Passive House levels of performance). The mass timber elements were CNC-milled with a five-axis robot in Germany and shipped to the site, where they were craned in place by the construction team.

Much of the interior finish in the house is exposed mass timber structure. Additional finishes (non-bearing

partitions, ceilings in the L1 rooms, millwork) were selected from complementary wood species to create the highly homogenous interior experience specified by the client.

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Aspect Structural Engineers
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GENERAL CONTRACTOR
TJS Construction
Huntsville, ON

PHOTOGRAPHY
Jeremie Warshafsky
Toronto, ON

A new air terminal honors the mineral and timber industries of northern Québec's Abitibi-Témiscamingue region, a land "between fault and forest."

CITATION

Rouyn-Noranda Air Terminal

The Cadillac-Larder Lake Fault is a major geologic feature that cuts across Québec's Abitibi-Témiscamingue region and into Northern Ontario. It is the source of the region's abundant mineral resources, and several major settlements were established along its length to engage in mining and forestry. One such place is the city of Rouyn-Noranda, established in 1926 and occupying a space "between fault and forest," to borrow a phrase from a historical guide of the city's rural quarters.

Rouyn-Noranda's geography and local economy made wood a natural choice in the materials palette for the city's new air terminal building. Designers made a point of emphasizing wood's unique properties by using it in all the terminal's public spaces.

The Rouyn-Noranda Air Terminal is a single-volume, two-story building supported by a hybrid wood and steel structure. The public spaces are notable for their glulam timber beams and CLT slab. CLT's bidirectional bearing capacities were deployed to great effect for the structure's cantilevered portions. The beams and slab continue from the interior to the exterior, directing views and strengthening the clarity of the composition. The whole is topped by a copper-colored metal roof that


T RÉGIONAL DE ROUYN-NORANDA

folds over to function as a solar protection screen along the facades, on both the city and air sides of the building. During the day, the perforated screen filters sunlight, preventing overheating and animating the interior spaces; at night, the perforated screen illuminated from the inside takes on the properties of a giant lantern.

The wooden structure—both the columns and beams, as well as the CLT slab on the ceiling—is left visible inside. Since wood is not very conductive, the structure can continue uninterrupted from the inside to the outside, directing views toward the tarmac and supporting interior-exterior fluidity. From the entrance forecourt, passengers are greeted by imposing glulam timber columns, which, at their tops, become beams, topped with an exposed CLT slab, all extending through the public space toward the tarmac.

The terminal building is transparent and offers views of the tarmac from all public spaces. Two double-height halls bathed in natural light house passenger services, offering comfortable waiting areas for both arrivals and departures. The second story includes a restaurant area with tables and lounge areas, all benefiting from unobstructed views on the exterior air side, and down onto the main public hall. A generous forecourt on the city side welcomes and shelters passengers at the drop-off area.

The terminal is supported by a hybrid structure, combining wood for the full-height roof above the public areas, and steel for the other elements, specifically the operations areas' structure distributed on two floors. This steel-wood combination frees up floor space, opens views along the curtain walls and highlights the roof's imposing wooden structure. The choice of a hybrid structure optimizes the project's regulatory, budgetary, and design requirements, with steel to comply with regulatory requirements for the portions over two floors, and exposed wood to confer a unique grandeur and warmth to the public spaces.

ARCHITECT
EVOQ + ARTCAD
Montréal,/Rouyn-Noranda, QC

STRUCTURAL ENGINEER
DWB Consultants
Boisbriand, QC

GENERAL CONTRACTOR
Hardy Construction
Amos, QC

PHOTOGRAPHY
Maxime Brouillet
Montréal, QC

EVOQ + ARTCAD
Montréal,/Rouyn-Noranda, QC

A unique co-operative in Madrid uses wood to create connection between residents, increasing their awareness of one another and the sustainable world in which they live.

CITATION

Our-Shelves-Houses

Located in Madrid, Spain, Our-Shelves-Houses is a unique concept for a co-operative, consisting of a block with eight duplex apartments with three bedrooms apiece sharing a common access area and two vertical communication cores. All dwellings have private outdoor spaces, with a garden for the lower dwellings and a large terrace in the upper dwellings. In addition, the project offers unique features that allow each co-operative member to customize and make their own home.

The houses are treated as suites tailored to the needs of each family. The wooden structure is "socialized" by becoming elements of sun protection, view and privacy control, and integrated furniture. The staggering of the floors improves communication between rooms and visual connections with terraces and gardens—making the houses a reflection of the families' awareness of the sustainable world in which they live.

The structural system of this five-story building is composed of CLT panels and laminated wood elements. The CLT panels form the floor slabs and also appear on the facade combined with some glulam beams, forming ribs that generate the building envelope. The first floor is formed by a concrete slab reinforced by its contact with the ground with steel struts at the corners to support the overhangs.

The building envelope reflects both the load-bearing structure and the interior configuration. It is a customizable matrix where the depth of the horizontal planes forms shelves that allow for control of privacy and lighting in each room. In addition, these shelves can be

used as storage spaces thanks to their setback, which can accommodate large wardrobes for clothes and personal items, desks, surfaces for beds and sofas, bookshelves, kitchen counters, and sinks. The dense wooden structure offers advantages in terms of hygrothermal properties and ease of assembly.

Sustainability is a key aspect of the design. The building's installations are resolved by means of an aerothermal system with heat exchange that ensures hygrothermal comfort and ventilation of the dwellings with maximum efficiency. In addition, a rainwater collection system is used for irrigation and toilets, and solar thermal panels support the aerothermal machines, covering 72% of the building's demand. Finally, the houses have mechanical ventilation with heat recovery that ensure the correct ventilation of each of the rooms without the need to open the windows, which would affect the thermal comfort of the house.

Aside from its sustainability, the CLT structure of spruce and Scots pine and GL24h class CLT slabs on ceilings offer easy assembly advantages. Frequently, CLT panels are assembled and cut during production, as well as manufactured with the joints and openings specific to the design. It is therefore a type of prefabricated construction. The use of CLT as a load-bearing material allows it to be the finishing material, which reduces the labor and execution time of the project. Being prefabricated and easy to assemble, the construction of projects of this type is a fast job with a very low waste generation.

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STRUCTURAL ENGINEER
Miguel Nevado
Madrid, Spain

GENERAL CONTRACTOR
FTC Obras y Energía
Madrid, Spain

PHOTOGRAPHY
Jesús Granada
Baeza, Spain

The natural beauty of rural Scotland is enhanced by this infrastructure project that aims to bridge the gap between sustainability and inspiration.

CITATION

Doune Castle: Ardoch Burn Crossing

Administered by VisitScotland, the Rural Tourism Infrastructure Fund (RTIF) supports sustainable, inspiring, and collaborative infrastructure projects that focus on improving the visitor experience and support the enjoyment of Scotland's rural communities.

The dramatic increase in visitor numbers at Doune Castle—due to its popularity as a filming location (it's been featured in *Monty Python and the Holy Grail, Game of Thrones,* and *Outlander*)—has resulted in a number of significant challenges alongside the opportunities that this increased profile presents. For instance, up to now there have been no obvious routes between Doune Castle and Doune Village, meaning that most visitors to Doune Castle are not exposed to the other attractions in Doune.

The most significant RTIF project at Doune is a new pedestrian bridge crossing the Ardoch Burn. This new route leading from the Castle to the Mill of Doune and Castle Farm along the Ardoch Burn allows these important cultural and natural assets to be enjoyed by both visitors and locals.

The configuration for the bridge is a double arch, a 20-m span to clear the Ardoch Burn and a 10-m span across the area of flood plain connecting the high points on either side of the crossing. This arch arrangement is ideally suited to an innovative bridge structure made from short lengths of timber that are CNC-cut from a digital model. These laminates are generally 1,500 to 2,000 mm long with depths up to 250 mm and always 50 mm wide; the construction is a "glue-and-screw"method whereby the timbers are vertically laminated using glue and screws between each row of laminates to create what is effectively a single solid mass of timber.

This innovative method allows arches with a flatter profile to be constructed, giving the bridge a low visual impact in the natural setting. The bridge is then installed in two completed arch sections without the need for scaffolding in the sensitive watercourse and forms a durable structure that requires very limited maintenance during its lifespan.

The primary timber for the bridge

is homegrown Scottish larch, sourced locally from the woods to the north-east of Doune. The use of a laminated solution is particularly suited to using local larch, as this approach greatly improves the structural performance of the material that otherwise would not be appropriate for bridge construction.

During the prefabrication works, the riverbank abutments and intermediate pier were completed with the latter clad in stone by the in-house Historic Environment Scotland apprenticeship team. New paths then completed the connection from the Castle to the riverside and further on to connect with the village.

Along with the other RTIF projects, this new infrastructure has delivered important links between Doune Castle and the local community, promoting the many natural assets and attractions that Doune has to offer.

ARCHITECT
Historic Environment Scotland (HES)
Edinburgh, SCOTLAND

STRUCTURAL ENGINEER
Fairhurst
Edinburgh, SCOTLAND

GENERAL CONTRACTOR
Beaver Bridges
Shrewsbury, ENGLAND

PHOTOGRAPHY
Historic Environment Scotland
Edinburgh, SCOTLAND

An innovative timber-based curtain wall system developed by Czech researchers is the centerpiece of this secondary school's revitalization into a sustainability showcase.

CITATION

Českobrodská School in Prague 9

A 21st-century school building designed and functioning as a living laboratory is smart, convenient, carbon-positive, and comfortable. Everything in this school is set up so that the students are not too hot or cold, the sun does not shine on them too much, and they have a supply of fresh air.

A dream school for students? No, this is the reality of the building of the secondary school on Prague's Českobrodská Street, where, after extensive renovations, only the original supporting structure remains. Both school and municipal officials hope the building will show the way to a new standard in construction and a renewed impetus for vocational education in the Czech Republic.

The main goal of the project was to rebuild the original 1970s-era building into a space that was smart, safe, and sustainable. From the point of view of climate change, the building was adapted for long-term droughts and torrential rainfall thanks to green roofs, green areas, and a rainwater accumulation and retention tank. Passive building and smart technologies, in turn, protect classrooms from overheating and reduce cooling requirements. The school is now energy- and carbon-positive, as it produces more energy than it consumes thanks to heat pumps and a photovoltaic plant.

Heating, cooling, and hot water are provided by two ground-to-water heat pumps, whereby up to 70% of the cooling can be provided passively. The classrooms are heated and cooled by fan coil convectors, and there are also radiators in other rooms. The building also has mechanical ventilation with heat recovery. The system is controlled

by sensors and time programs and is also coordinated with the school schedule.

The revitalization of the school succeeded in creating a building that meets the requirements and recommended values for passive buildings. Much of the credit for that goes to Envilop, a lightweight panel-type exterior cladding solution based on wood that was developed and created by researchers at the Czech Technical University in Prague. In many Central European countries, there is a stock of existing buildings built from the 1950s to 1980s featuring original panel curtain walls. These envelope structures are now at the end of their service lives and replacement solutions are needed, but alternatives such as aluminium, steel, or steel-plastic panels have typically high amounts of embodied energy and large carbon footprints. Within national research project Intelligent Buildings, Czech Technical University in Prague has developed an innovative timber-based curtain wall system that was used for the first time in the revitalization of this school building.

One of the challenges of this project (aside from the discovery of asbestos that had to be removed before renovations could begin) was incorporating Envilop into the project—apart from a few pilot panels, it had not yet been used anywhere else, and so the contractor had to find a manufacturer that could produce them. It is hoped that the success of this project will encourage further use of Envilop and other innovative solutions in Central Europe and beyond.

CLIENT
Centrum odborné prípravy
Technickohospodárské (COPTH)

ARCHITECT
ECOTEN
Prague, CZECH REPUBLIC

STRUCTURAL ENGINEER
University Centre for
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Buštehrad, CZECH REPUBLIC

GENERAL CONTRACTOR
Subterra
Prague, CZECH REPUBLIC

PHOTOGRAPHY
ECOTEN
Prague, CZECH REPUBLIC

An exploration of responsible construction methods, this robotically designed structure demonstrates minimal waste for maximum benefit.

JURY'S CHOICE

Robotically Fabricated Structure (RFS)

RFS is a robotically fabricated timber pavilion that explores responsible and precise methods contributing to sustainable and low-carbon construction outlooks. This structure is designed with the help of custom algorithms developed specifically for this project and built through state-of-the-art human/robot collaborative construction. RFS employs bespoke prefabricated timber sub-assemblies manufactured from regionally sourced short 2×4 dimensional lumber and utilizes industrial robotic arms to process and assemble elements into intricately layered modules. After fabrication, modules are transported to the site, where human workers move each sub-assembly into place and attach them together to form the pavilion. The coupling of custom algorithms and robotic fabrication enables the feasible realization of bespoke building components that are otherwise difficult or costly to achieve through conventional means and methods, with minimal construction waste. Moreover, short elements enable the use of indigenous trees that cannot easily produce full-length building elements (typically 8-ft. dimensional lumber), construction and manufacturing offcuts, and lumber elements reclaimed from the deconstruction of buildings, ultimately contributing to a more sustainable practice.

ARCHITECT/
GENERAL CONTRACTOR
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Ann Arbor, MI

PHOTOGRAPHY
Arash Adel, Bob Berg, Jacob Cofer, Daniel Ruan, Mehdi Shirvani, Matthew Weyhmiller
Ann Arbor, MI

This school's mass timber structure is just the start of its education in sustainability.

JURY'S CHOICE

San Jacinto College Classroom Building

The latest addition to the school's central campus, this classroom building—the nation's largest mass timber project for this category of building—exhibits the mass timber structure throughout all public spaces and on its exterior facade. The building is comprised two wings with a two-story lobby; its instructional spaces consist of 56 classrooms, a robotics lab, and a lecture hall. Student gathering spaces are formal, as enclosed student study space and huddle rooms, and informal, as open collaborative zones at ends of the building and the lobby. The building looks to educate not only in the classroom, but also through educational plaques that highlight the building's sustainable features. This is a high-performing building with several sustainable strategies such as the reuse of existing building foundations, electrochromic glazing, gray-water reuse, tubular daylighting, photovoltaic panels on the roofs, and mass timber. The building's mass timber structure consists of glulam beams and columns and CLT for floor decks and roof decks.

ARCHITECT
Kirksey Architecture
Houston, TX

STRUCTURAL ENGINEER
Walter P. Moore
Houston, TX

GENERAL CONTRACTOR
Tellepsen
Houston, TX

PHOTOGRAPHY
Joe Aker
Houston, TX

The first mass timber project in Santa Monica brings its flair for flexibility to Main Street.

SUSTAINABLE FORESTRY INITIATIVE SPONSORSHIP

BA Collective Studio

Although the original site was nothing more than a single-surface parking lot, the beachside location was a place that the BA Collective was already familiar with on Santa Monica's vibrant Main Street, with numerous transit options and unique local businesses nearby. At the time of its inception, this 7,100-sq.ft. mass timber structure was the first mass timber project in the city. The building comprises two stories and a mezzanine, a second-floor deck, and a rooftop deck. A garage houses three parking lifts (two cars per lift), creating a greater footprint. In addition to the mass timber, all-new utilities, EV charging stations, light sensors, operable windows for natural airflow, and a solar system with battery backup were installed as part of the sustainability plan. There is plenty of flexibility with the design to allow for multi-tenant use. The result is an inspiring environment for conceptualizing and producing the architecture firm's body of work, giving its staff a sense of reinvesting in the community that they have been a part of for many years.

ARCHITECT
BA Collective
Santa Monica, CA

STRUCTURAL ENGINEER
Fast + Epp
Vancouver, Canada

GENERAL CONTRACTOR
Tatum Construction
Santa Monica, CA

PHOTOGRAPHY
Bruce Damonte
San Francisco, CA

"Use wood" and "like a plane" were the two ideas offered up for this project. To borrow a phrase from aviators: "Roger that."

SANSIN SPONSORSHIP

KF Aerospace Centre for Excellence

This building's design reflects two key ideas that form the vision KF Aerospace founder Barry LaPointe had for the center: to "use wood wherever possible" and "make it feel like a plane." The design does just that, organized around a symmetrical "hangar and hub" concept that places public exhibition space between (and overlooking) two large hangars that house both heritage and working aircraft. The soaring architectural expression is created by using large sweeping and tilting roof forms in wood trusses arching over

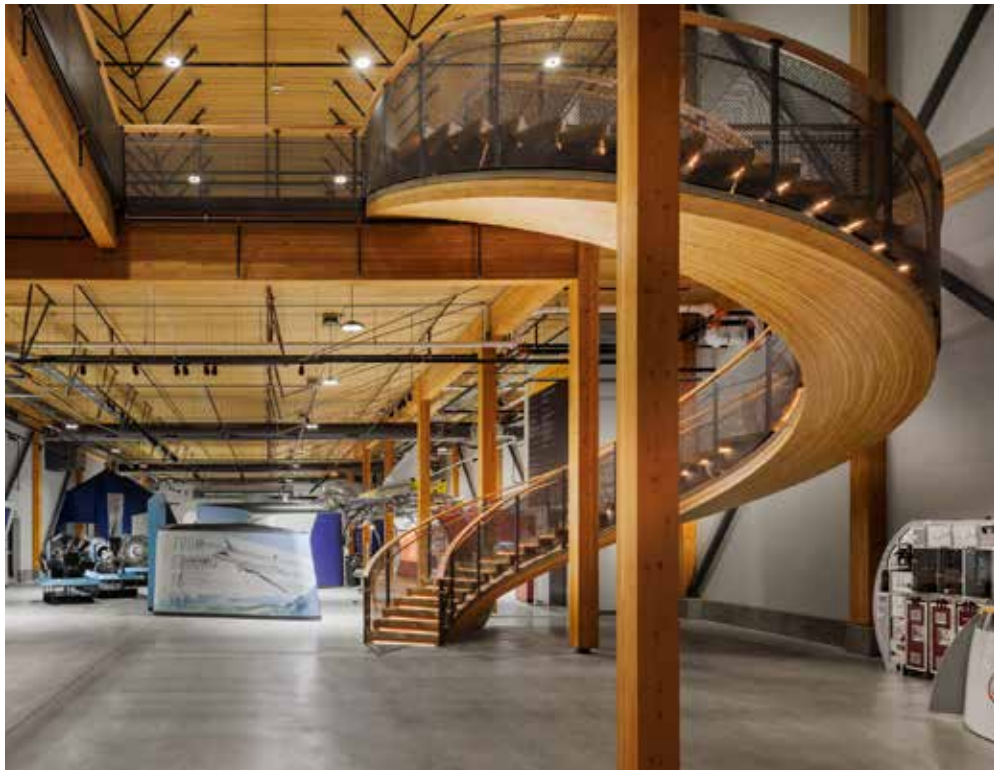
high mezzanine spaces framed in wood glulam, DLT, and CLT systems. The second floor is constructed using queen posts and cables to the underside of a DLT timber-concrete composite truss floor system that clear spans 45 ft. and is possibly the first use of this system in the world. The roof form with a prominent "tail" feature serves as an iconic sign feature for the building as it backs onto Highway 97, the main connector for British Columbia's Okanagan Valley. The entire wood structure was sourced from 100% BC local timber, mostly hemlock and Douglas fir.

ARCHITECT
Meiklejohn Architects Inc.
Kelowna, BC

STRUCTURAL ENGINEER
StructureCraft
Abbotsford, BC

GENERAL CONTRACTOR
Sawchuk Developments Co. Ltd.
Kelowna, BC

PHOTOGRAPHY
Shawn Talbot Photography Ltd.
Kelowna, BC



WESTERN RED CEDAR SPONSORSHIP

House at 9,000 Feet

Located in the western United States, the five-bedroom, 4,440-sq.ft. house is perched on a mountaintop 9,000 ft. above sea level. A 30% slope across the site combined with an annual snowfall of 40 ft. resulted in a strategy of "floating" the building on stilts and accessing it via a bridge. The south side of the house offers a continuous 88-ft.-long window seat, which passively controls solar heat gain and frames the spectacular southern views. The house is a 100-ft.-long extruded ellipse clad with western red cedar both inside and out. Outside, an open rainscreen is formed using gapped 2×6 boards, installed parallel with the long axis of the building. The boards are left unfinished to weather naturally. Inside, the walls and ceilings are clad with custom-milled 1×2 shiplap, providing texture and warmth to the finished surfaces. The use of western red cedar was inspired, in part, by the local material culture; using the same material both inside and out gives the house a unified and sculptural quality.

ARCHITECT
MacKay-Lyons Sweetapple Architects
Halifax, NS

STRUCTURAL ENGINEER
Blackwell Structural Engineers
Toronto, ON

GENERAL CONTRACTOR
Edge Builders LLC
Salt Lake City, UT

PHOTOGRAPHY
Nic Lehoux
Vancouver, BC

The spectacular views from this mountaintop house are matched only by the eye-popping details within.

You don't need a monocular to see the attention to detail in this Nova Scotian cottage and guest quarters.

WOOD PRESERVATION CANADA SPONSORSHIP

The Monocular

This Nova Scotian cottage was designed to choreograph one's experience of the dramatic waterfront site by framing the view of the basin beyond. The plan includes an open layout for living and dining, an unconditioned screened-in porch, a private bunkie, and activated outdoor amenity spaces. To fit these elements together, one of the earliest design decisions was to split these elements into two buildings: a major building that would contain the primary year-round living quarters, and a minor building for guests and seasonal spaces. Both buildings are modern interpretations of the wood-clad gable homes that are the local vernacular style. Like others in the area, the cottage uses bare cedar for the exterior. With the help of the salty Atlantic air, the cedar will achieve an aged silvery-gray color that time brings with the maritime climate. Cedar is also historically chosen for this climate for its minimal upkeep and its tendency to do well with humidity and insects. Otherwise, the use of wood was very much an aesthetic choice, giving warmth and comfort to this seaside home.

ARCHITECT
RHAD Architects
Dartmouth, NS

STRUCTURAL ENGINEER
Andrea Doncaster Engineering Ltd.
Dartmouth, NS

GENERAL CONTRACTOR
Black Diamond Builders
Halifax, NS

PHOTOGRAPHY
Julian Parkinson
Halifax, NS

Canadian WoodWorks Awards

Canadian WoodWorks Awards

We are honored to present the recipients of this year's Canadian WoodWorks Awards. This inspirational collection of winners, awarded through the regional WoodWorks programs across Canada, is a celebration of projects and project teams that, through design excellence, advocacy, and innovation, are advancing the use of sustainable wood products in all types of construction and building lasting legacies for our communities.

This year's remarkable winners demonstrate the exceptional versatility of wood construction. There are innovative residential solutions across the housing continuum including a deep energy retrofit of a single-family home, a collection of passive laneway suites that add gentle density to an established neighborhood, and multi-unit housing developments that are helping to address the housing availably crisis.

There are also beautiful commercial and institutional buildings of nearly every occupancy type, several of which have been realized in Indigenous communities by Indigenous designers. Examples of these include a wellness lodge, a childcare and family center, a boutique hotel, and a combined education, research, and cultural center with state-of-the-art, environmentally controlled spaces for libraries and archives.

Wood design and construction technologies are advancing at an encouraging rate, and the culture of information sharing in the wood industry, combined with the development of more progressive, science-based building codes, is empowering the design community to realize the full potential of wood construction to create a more sustainable and beautiful built environment for generations to come.

Collectively, the winning projects this year shine a light on the role that wood construction can play in addressing some of the larger challenges facing society today, notably housing supply and sustainability. We are honored to showcase these exemplary wood buildings.

Shawn Keyes
Executive Director
WoodWorks BC

Rory Koska
Executive Director
WoodWorks Alberta

Steve Street
Executive Director
WoodWorks Ontario

Jurors

RICARDO BRITES, PhD, Eng.
Head of Engineering & VDC,
Mass Timber Projects
MERCER MASS TIMBER
Vancouver, BC

VENELIN KOKALOV, Architect
AIBC, OAA, AAA, SAA, MRAIC, NCARB, AIA
Principal
REVERYARCHITECTURE
Vancouver, BC

GRAHAM BREWSTER
Director of Development
WESGROUP PROPERTIES
Vancouver, BC

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KALESNIKOFF TIMBER INSPIRES
SIMPSON Strong-Tie
STRUCTURLAM
StructureCraft
Western Archrib Structural Wood Systems
Weyerhaeuser

FUNDERS

Natural Resources Canada
Ressources naturelles Canada
Forestry Innovation Investment

KF Aerospace Centre for Excellence
Kelowna, BC
Please see page 88

British Columbia

Craftsmanship and innovation come together in this industrial facility that embraces its forestry roots.

Leon Lebeniste Facility

Nestled in the Squamish Valley, Leon Lebeniste Fine Furnishings and Architectural Woodworking has opened a 28,000-sq.ft. industrial facility that embraces its natural setting while continuing a long tradition of craftsmanship in this coastal town. The factory, which occupies the entire main level, features 5-axis CNC machining, custom veneer production, a millwork layout area, and finishing facilities. The offices and design spaces are on the mezzanine level above the production floor, and the top floor features industrial/office spaces with a rooftop patio and green roof open to the surrounding mountain views. Reflecting the owners' values of sustainable manufacturing, the building employs CLT for the floors and roof with a glulam structure throughout. All interior and exterior walls are wood-framed, and the building is clad with a combination of vertical cedar slats and a custom profile metal panel. All wood products were sourced in British Columbia from sustainably harvested producers. The building's unique design and careful massing has resulted in a human scale that is both welcoming to visitors and sympathetic to its wonderful natural setting—achieving the owners' goal of creating a space that not only serves their business purposes but is also inspires the community.

ARCHITECT
Hemsworth Architecture
Vancouver, BC

STRUCTURAL ENGINEER
Equilibrium Consulting Inc.
Vancouver, BC

GENERAL CONTRACTOR
Kindred Construction
Vancouver, BC

PHOTOGRAPHY
Ema Peter Photography
Vancouver, BC

Designed to exist in harmony with its surroundings, this boathouse is one amenity that's turning heads.

Horseshoe Bay Sanctuary–Amenity Boathouse

Conceived as a gathering space for residents of the Horseshoe Bay Sanctuary development, this boathouse is designed in heavy timber to establish an ambience in harmony with the surrounding atmosphere of forest, cliff, and water. The two-level structure accommodates a kitchen/bar gathering area under a wood slat ceiling at the lower level and offers access to a second level via timber and steel stairs featuring open risers and glass guardrails. As visitors reach the second level, they emerge into the arches of the roof, where they can socialize under the more intimate scale of the vault. The ceiling features an exposed plywood deck reminiscent of the pioneering structures of West Coast modernism. The Amenity Boathouse has already become a destination in Horseshoe Bay, with visitors drawn to the structure after having viewed it from the adjacent park or from the ferry. They walk along the new wood boardwalk toward the boathouse and adjacent the Madrona Island footbridge and North Beach. The structure glows softly in the dark and reflects in the waters of the bay, providing delight for both residents and visitors.

ARCHITECT
Merrick Architecture – Borowski Sakumoto McIntyre Webb Ltd.
Vancouver, BC

STRUCTURAL ENGINEERS
Glotman Simpson
(concrete substructure)
Vancouver, BC

Aspect Structural Engineers
(timber superstructure)
Vancouver, BC

GENERAL CONTRACTORS
Icon West Construction Ltd.
Vancouver, BC

Kanin Construction Management
Richmond, BC

ITC Constructors BC Ltd.
Vancouver, BC

PHOTOGRAPHY
Ema Peter Photography
Vancouver, BC

A minimalist approach to this university stadium's roof structure delivers maximum results.

SFU Stadium

Recognizing that athletic events at Simon Fraser University occur only 20 days out of the year, the design team behind the university's new stadium aimed to create an outdoor gathering space for both formal and informal uses, providing a variety of gathering and viewing opportunities. The natural slope from the athletics complex down to the field was the perfect location for the new stadium with 1,823 formal seats and over 300 informal seats to enjoy events and socialize at Terry Fox Field. The most visible element of the project is the roof canopy that cantilevers 16 m over the center seating section, with massive box girder beams supporting the floating roof structure. To emphasize the viewing experience for the spectators, the structure was deliberately minimized, and all the services were integrated into the canopy. The design team developed the concept to drop CLT panels—chosen as a finish to provide a sense of warmth to spectators—below cantilever steel girders to provide a continuous wood structure. The canopy is as thin as possible to create the impression that the expansive roof floats above the seats.

ARCHITECT
Perkins & Will
Vancouver, BC

STRUCTURAL ENGINEER
Fast + Epp
Vancouver, BC

GENERAL CONTRACTOR
Chandos Construction
Vancouver, BC

PHOTOGRAPHY
Latreille Photography
Vancouver, BC

The deceptive simplicity of this West Coast house isn't the only secret it holds within its reclaimed walls.

Shor House

Despite its modest size, Shor House demonstrates that careful deconstruction of wooden buildings extends the life cycle of material otherwise destined for landfill. Much of the recycled lumber comes from the house and barn that once sat on this waterfront site; these two structures were unbuilt by dismantling rather than demolition, with their cladding, floors, and frames de-nailed and stacked for reuse—at first without a clear idea of their use in the new building. The massing of Shor House is simplicity itself: a straight salt box with the gabled end facing the water, almost entirely glazed. But looking carefully, this proves to be a deflected salt box with an asymmetry of roof slopes, with one angle chosen to maximize the efficiency of the array of 32 solar panels (hardly visible anywhere on-site). This decision also brings more visual dynamism to the great room inside, with its always-visible wood structure. There is also new wood in the house, but much of it is charred with a *shou sugi ban* treatment, with its low-maintenance surface serving as an analog to the corten steel used outside.

ARCHITECT
Measured Architecture
Vancouver, BC

STRUCTURAL ENGINEER
Fast + Epp
Vancouver, BC

GENERAL CONTRACTOR
Powers Construction
Vancouver, BC

PHOTOGRAPHY
Ema Peter Photography
Vancouver, BC

Tall by name, tall by design — meet one of the ways wood is helping this BC town provide much-needed rental housing.

District 56 Tallwood 1

Rising 12 stories in the heart of Langford, BC, District 56 Tallwood 1 is being celebrated as the first tall mass timber building on Vancouver Island, the first building that meets the National Building Code's encapsulated mass timber construction (EMTC) typology, and the second tallest wood building completed in Canada. The building also brings much-needed rental housing to the growing community of Langford, providing 11 stories of 124 apartments atop a concrete podium commercial space. The top level comprises of three unique penthouses featuring vaulted mass timber ceilings with exposed CLT, providing a sense of luxury homes floating in the sky. With the mass timber sourced in British Columbia, the mass timber structure is a streamlined and efficient point-supported CLT floor plate on glulam columns. This flat plate structure, devoid of drop beams in most of the floor plate, is made possible by a column spacing of 10 ft. by 12 ft. suitable to residential construction. It was fast to assemble and allowed effortless integration with MEP. Despite pandemic supply chain challenges and workforce issues that prevented the true gains in construction speed, the building was occupied within 24 months from start of construction.

ARCHITECT
Jack James Architect
Victoria, BC

STRUCTURAL ENGINEER
Aspect Structural Engineers
Vancouver, BC

GENERAL CONTRACTOR
Design Build Services (DBS)
Langford, BC

PHOTOGRAPHY
Aspect Structural Engineers © Skyscope
Vancouver, BC

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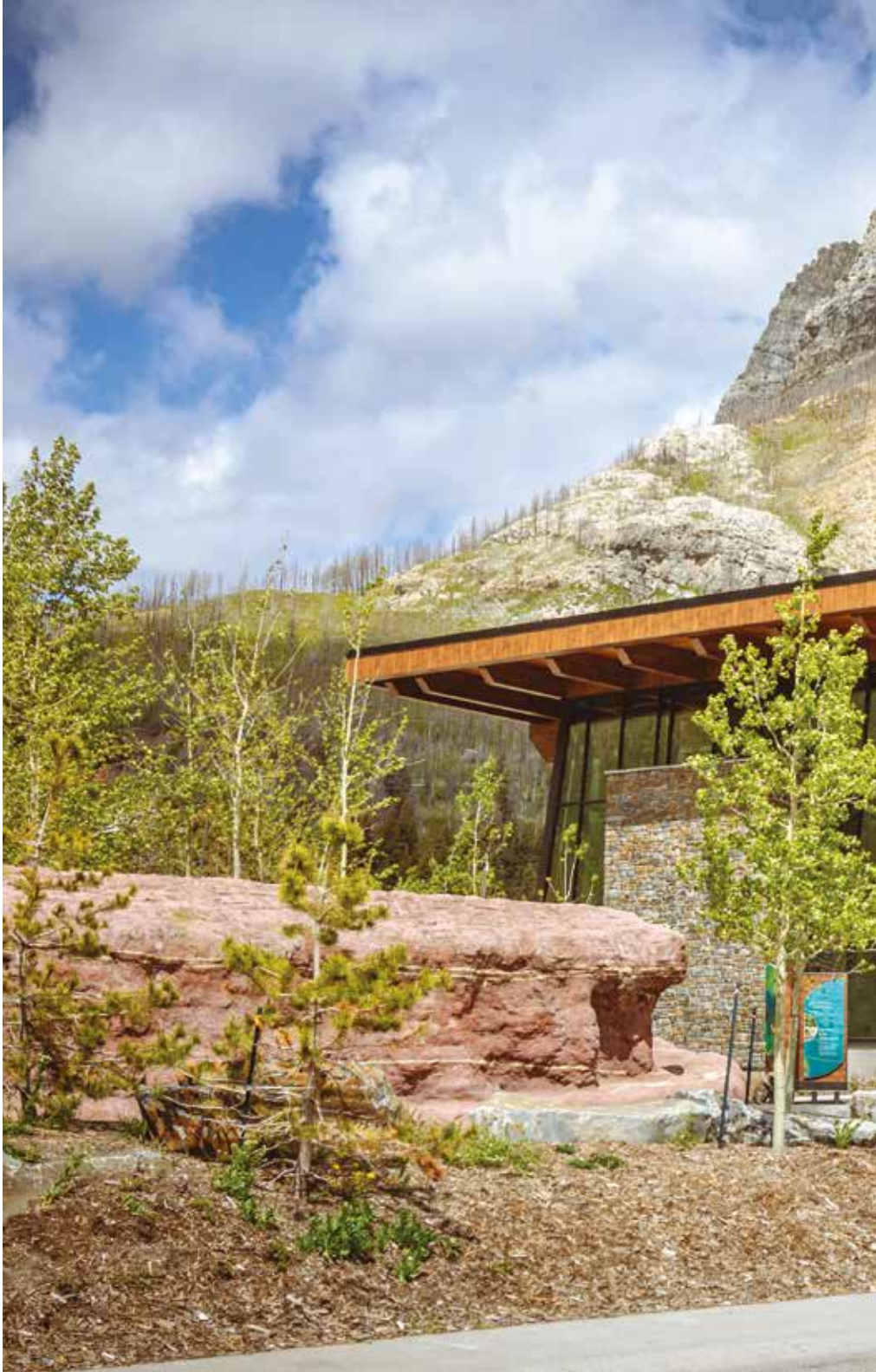
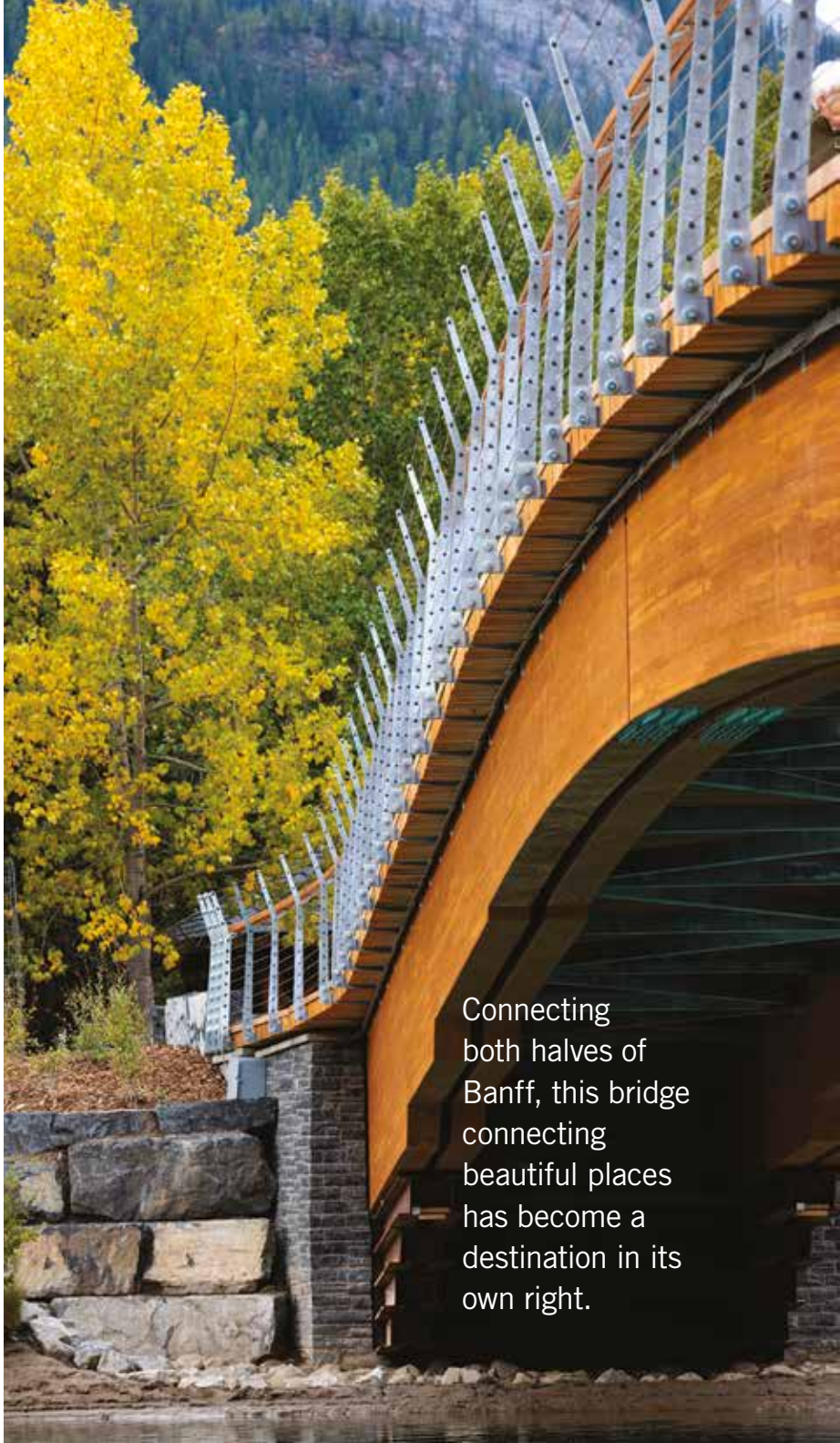
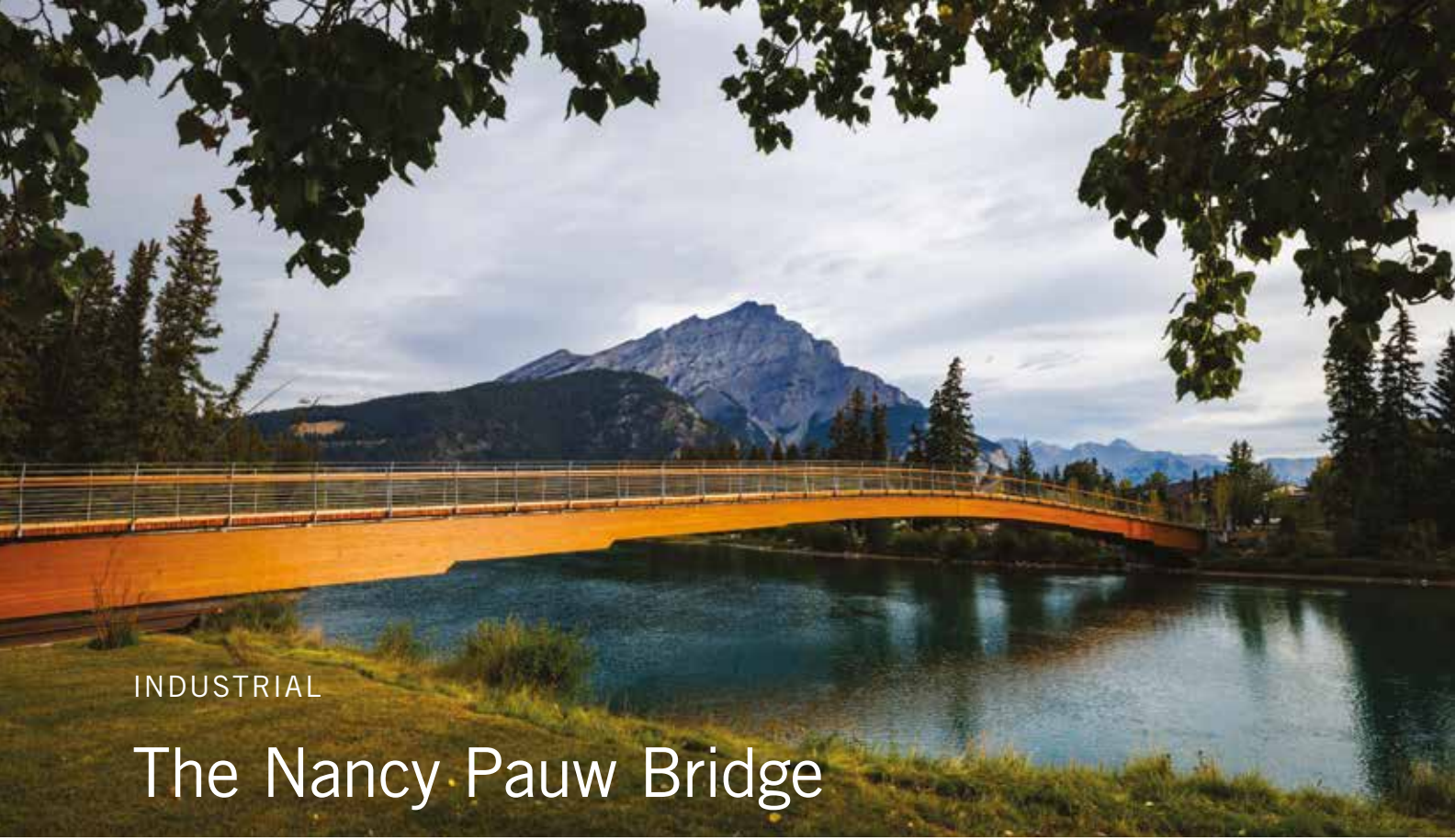



Prairie



Connecting both halves of Banff, this bridge connecting beautiful places has become a destination in its own right.



INDUSTRIAL

The Nancy Pauw Bridge

The third pedestrian bridge to span the Bow River and connect both halves of the Banff community, the Nancy Pauw Bridge provides another way for residents and visitors to explore the scenic mountain town without the use of a vehicle. The bridge needed to be a clear span to minimize its impact on the river, and it needed to be low profile for user accessibility. Town officials also asked for a bridge that allowed unimpeded views while fitting in with the natural surroundings. Shaped glulam beams were chosen to create the natural form of a shallow tapered arch, which thrusts with enormous force into the abutments. The abutments consist of pile caps and large diameter piles, socketed into the stiff soil. Tapered weathering steel "haunches" were anchored to the abutments both to add stiffness and to protect the timber from the river. Steel bracing links two Douglas fir glulam girders, creating the diaphragm to resist lateral movements. Decking consists of spaced Douglas fir timbers pre-stressed into 1 m-wide removable panels using galvanized rods and rubber spacers.

ARCHITECT/
STRUCTURAL ENGINEER/
GENERAL CONTRACTOR
StructureCraft
Abbotsford, BC

PHOTOGRAPHY
Paul Zizka Photography
Banff, AB

Town of Banff
Banff, AB

StructureCraft
Abbottsford, BC

JURY'S CHOICE

Red Crow Community College– The Intrinsic Connection Between Wood and Indigenous Culture

As the first tribal college in Canada, Red Crow Community College (RCCC) is a leader in delivering education rooted in Blackfoot culture to meet the needs of students, elders, and the broader community. The use of natural wood as the fundamental building material is intrinsic to conveying the spirit of RCCC. The strength and permanence of trees adds a sense of stability and identity to the traditional Blackfoot culture. This is represented in the central gathering hall, a welcoming gateway and entry to the college. A sloped wood ceiling comprising a glulam timber deck is supported by a Douglas fir waffle glulam structure. Designed to reflect a canopy of trees, four solid wood columns (with branches connecting to the beams) define the gathering space. The sprinkler system is integrated above the structure to avoid interrupting the view of the wood ceiling; all electrical and HVAC detailing is likewise hidden.

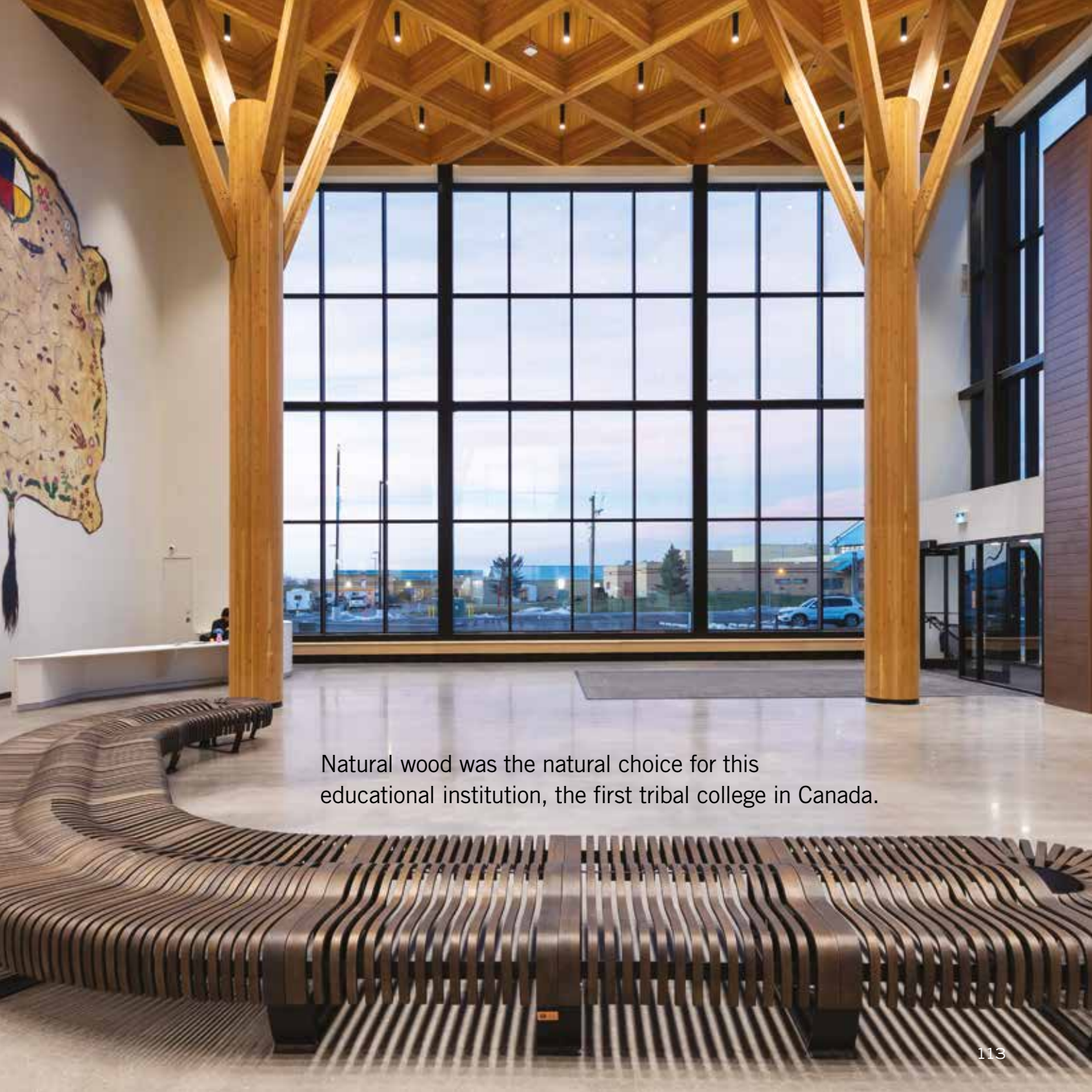
Anchored to the south of the gathering space is a ceremonial round room, with a wood panel detail reflecting the feather pattern of the traditional Blackfoot Stand Up headdress. Wood carries through the common spaces with suspended wood slat ceilings, furniture applications, signage, and locker millwork.

ARCHITECT
Kasian Architecture
Interior Design and Planning Ltd.
Calgary, AB

STRUCTURAL ENGINEER
Read Jones Christoffersen Ltd.
Calgary, AB

GENERAL CONTRACTOR
Clark Builders
Calgary, AB

PHOTOGRAPHY
Latitude
Calgary, AB



Natural wood was the natural choice for this educational institution, the first tribal college in Canada.

Large stone masses juxtaposed with the natural beauty of wood reflect the breathtaking views of this national park.

RECREATIONAL

Waterton Lakes National Park Visitor Centre

The design of the new Waterton Lakes National Park Visitor Centre celebrates the strength and natural beauty of wood while the large stone masses juxtaposed with voids of glass help create a dynamic quality to the building that celebrates the majestic views. While the aesthetics and naturality of the wood were the main considerations for choosing it, its structural capabilities, locality, and sustainability were all close behind. Carefully detailed and strategically concealed connections were used between mass timber elements, with a typical connection strategy of hidden self-tapping timber screws and bolted knife plates with wood plugs to conceal bolt heads for a clean aesthetic. Douglas fir was the chosen species for the glulam beams, columns, and the exposed bottom lamination of the CLT. To show off the beauty of the wood, it was exposed to the interior of the building and finished only with a clear coat. The structure of the east exterior entrance features a playful collection of log columns to support the canopy, each column being a different species of tree found in the park.

ARCHITECT
FWBA Architects
Lethbridge, AB

STRUCTURAL ENGINEER
ISL Engineering and Land Services
Canmore, AB

GENERAL CONTRACTOR
Graham Construction
Calgary, AB

PHOTOGRAPHY
Angus MacKenzie Photography
Calgary, AB

Charred cedar cladding is just the start of the many enhancements used to improve this home's beauty and energy efficiency.

RESIDENTIAL

Mountain Deep Energy Retrofit

The primary objectives of this building's remodel were to improve its energy efficiency and to take the opportunity to add a more functional entrance addition. The existing building was revitalized with charred cedar cladding and a timber frame entrance addition as focal points. The retrofit consisted of installing a Larsen truss system with ample insulation on the walls, which significantly reduces heat loss and thermal bridging and brought the building envelope to R-57. The roof was further insulated with cellulose to R-80. To mitigate thermal bridging at the foundation, the perimeter

was excavated and XPS insulation was installed. The existing gas connection was also removed and a new geothermal system installed. This deep well geothermal system covers heating, cooling, and domestic hot water demand. A new entry mudroom clad in local materials of cedar and Rundle stone was added. All existing windows were replaced with Passive House-certified windows, and many have new expanded openings to promote passive solar gain.

ARCHITECT/
GENERAL CONTRACTOR
HSS Design Build
Canmore AB

STRUCTURAL ENGINEER
Jamie Fukushima
Canmore, AB

PHOTOGRAPHY
Thomas Walton Photography
Canmore, AB

In both form and function, the wood used in this project draws inspiration from the past to help preserve a people's future.

COMMERCIAL

Métis Crossing Boutique Lodge

A cornerstone of an ambitious project at Métis Crossing, a cultural interpretive site in this town northeast of Edmonton, this two-story lodge offers 40 guest rooms and plays an essential role in providing an immersive cultural experience for visitors. Wood was essential to achieving the project objectives; the design team aimed to create a structure that is sustainable, comfortable, and culturally and economically relevant, as well as one that offers a specific aesthetic and sensory experience grounded in the history of the area. Many wood design choices, such as the dovetail joint and post-and-beam details, are reminiscent of the area's original buildings, which include fur trade-era homesteads and trappers' cabins. The lodge's feature stair is made with planks of 2 x 8 laminated eastern white pine, which provides a strong and stable base, while the large imperfect cuts align with the designers' overarching vision of a space that is warm, welcoming, and thoughtfully handcrafted. The sun screens, balcony balustrades, and exterior beams, made of a light Accoya modified wood, were chosen and designed to reference a stand of birch trees, a familiar sight in the area.

ARCHITECT
Reimagine Architects Ltd.
Edmonton, AB

STRUCTURAL ENGINEER
RJC Engineers
Edmonton, AB

GENERAL CONTRACTOR
GenMec ACL
Bonnyville, AB

PHOTOGRAPHY
Cooper & O'Hara
Edmonton, AB

This building's accessible and innovative features aim to show not all campus learning happens in a classroom.

INSTITUTIONAL

Northern Lakes College High Prairie Campus Building

Along with providing nursing, carpentry, welding, and machinery classes, the Northern Lakes College High Prairie Campus Building offers culinary and computer science training. It is a two-story mass timber project that is made of GLT columns, beams, and a Westdek GLT floor panel system, while walls are framed in dimensional lumber. All wood for this building was locally harvested and milled spruce-pine-fir. One distinct detail specially designed for this building was to "drop" the GLT beams three feet below the ceiling and introduce load-bearing, wooden-framed pony walls to allow for building services to stay tight to ceilings and distribute directly, and at the same level from hallways to classrooms, without the need to duck under structural members. That detail helped minimize overall building height while maximizing the suspended ceiling height in the interiors. With vision windows built into some of the interior partition walls, exposed building services, perforated suspended ceilings, and accessible mechanical rooms for students to visit, this facility is designed as a didactic environment, a place to spark students' curiosity in sustainable architecture.

ARCHITECT
Reimagine Architects Ltd.
Edmonton, AB

STRUCTURAL ENGINEER
RJC Engineers
Edmonton, AB

GENERAL CONTRACTOR
Clark Builders
Edmonton, AB

PHOTOGRAPHY
Cooper & O'Hara
Edmonton, AB

A welcoming place of retreat and learning, this lodge uses its materials to create a powerful connection with the land.

INTERIOR SHOWCASE

Grey Buffalo Grandfather Wellness Lodge

A new facility for the Indigenous organization Ma Mawi Wi Chi Itata Centre, Grey Buffalo Grandfather Wellness Lodge is a welcoming place of retreat and learning. Meant to recede into its surroundings, the lodge is a single-story building with 12 bedrooms, a kitchen, a multipurpose room, washrooms, shower facilities, and ancillary spaces. The design team's approach was to build a wood structure and embed wood throughout the interior with glulam columns in the Great Hall, engineered trusses with plywood sheathing, and an expansive wood curtain wall. On the exterior, wood was thoughtfully placed with a variety of treatments to break up the lines and add variety through patterning. The cedar siding allows the building to disappear into the surroundings, creating an understated but beautiful building that integrates well with the site and doesn't intimidate new guests. Wood decking was added in the courtyard to give guests ample space to relax in the quiet of a summer sunset. The result is a comfortable, airy living space with a powerful connection to the landscape, a place where community members of all ages can gather to heal and renew.

ARCHITECT
Cibinel Architecture Ltd.
Winnipeg, MB

STRUCTURAL ENGINEER
Beach Rocke Engineering
Winnipeg, MB

GENERAL CONTRACTOR
Three Way Builders
Steinbach, MB

PHOTOGRAPHY
Lindsay Reid Photography
Winnipeg, MB

Cost-effective, energy-efficient, quick to assemble... Winnipeg's Soho Flats is so far a success.

INDUSTRY

Soho Flats Cost-effective 5-Storey Apartment

Located in Winnipeg's historic Exchange District, Soho Flats is one of the first five-story wood frame apartment buildings constructed in Manitoba. Because local building codes do not currently permit wood buildings over four stories, the structure required specialized approvals. The team worked with building code specialists to create a solution that was accepted by the City of Winnipeg. Wood was central to the success of the 88-unit project because it offered the quickest and most cost-effective option for delivering much-needed affordable housing. The hybrid solution employed a mixture of light wood frame technologies and prefabricated wood components that enabled the project to be rapidly assembled on-site. The natural insulating properties of wood systems produced a gain of over twice that of typical steel stud wall assemblies and resulted in an energy efficient design that exceeds the National Energy Code of Canada for Buildings by approximately 28%.

ARCHITECT
Verne Reimer Architecture Inc.
Winnipeg, MB

STRUCTURAL ENGINEER
Beach Rocke Engineering Ltd.
Winnipeg, MB

GENERAL CONTRACTOR
Bouchard Bros. Ltd.
Winnipeg, MB

PHOTOGRAPHER
Scott Zielke Photography
Winnipeg, MB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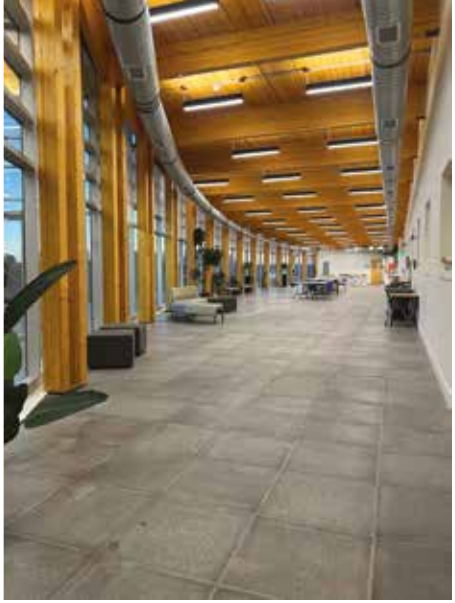
Ontario Structural Wood Association
resolute Forest Products
Timber Systems

Churchill Meadows Community Centre and Mattamy Sports Park
Mississauga, ON
Please see page 10

Neil Campbell Rowing Centre
St. Catharines, ON
Please see page 14

Ontario



This Teaching Lodge draws on Indigenous heritage to create a state-of-the-art research facility by and for Indigenous people.

Shingwauk Education Trust Anishinawbek Discovery Centre

Shingwauk Education Trust Anishinawbek Discovery Centre is a combined education, research, and cultural center, housing classrooms and administrative offices as well as a student lounge, café, art gallery, and performing arts space. The roof above the library and resource room is crafted from spruce; the dome is modeled after traditional teaching lodges that stood in Anishinaabe communities for thousands of years. Of note are the two parallel ridge beams, signifying both male and female energies moving from east to west. The roof in the main archive area has select pendant lights and uplighting to accentuate it. The main gallery space, with its bank of windows facing St. Marys River, is supported by a series of twinned glulam columns on a steel moment connection above the raised floor. In this special, state-of-the-art space, environmentally controlled libraries and archives are located in the heart of the building. These spaces will eventually be the new home of the National Chiefs Library that is currently housed in Ottawa.

ARCHITECT
Two Row Architect
Ohsweken, ON

STRUCTURAL ENGINEER
Timber Systems Ltd.
Markham, ON

WSP
Thunder Bay, ON

GENERAL CONTRACTOR
Colliers Group
Ottawa, ON

PHOTOGRAPHY
Erik Skouris
Toronto, ON

Matthew Solarski
Ohsweken, ON

An officially cool neighborhood in Toronto's west end is the place to be for this collaboration of steel and heavy timber.

12 Ossington Avenue

A crown jewel in the ongoing revitalization of Toronto's Ossington Avenue (recently named one of the coolest streets in the world by *Time Out* magazine), 12 Ossington, in many ways, represents the future of the neighborhood. The goal for this four-story retail/office project was to convey the spirit of Ossington, by creating something special that speaks to the area's vibrant uniqueness. Unfinished white spruce—reflective of the neighborhood's unpretentious and down-to-earth character—was sourced from a Québec supplier and installer of mass timber systems. The fully accessible building has a hybrid steel and heavy timber structure, and the arched windows throughout the second floor allow in an abundance of natural light while paying homage to the architecture of the site's previous structure. A full rainwater collection and harvesting system, green roof, high-efficiency HVAC system, and high-efficiency glazing add to the project's sustainability bona fides.

ARCHITECT
Hariri Pontarini Architects
Toronto, ON

STRUCTURAL ENGINEER
RJC Engineers
Toronto, ON

DEVELOPER
Hullmark
Toronto, ON

PHOTOGRAPHY
DoubleSpace Photography
Toronto, ON

A training center for Local 249 union carpenters, this building is a showcase for the skills and expertise of the union tradespeople who built it.

Carpenters Union Local 249 Training Facility

This 25,000-sq.ft. headquarters for the Carpenters Union Local 249 celebrates the art and craft of carpenters through examples of both traditional and modern work. This is done through the design and use of heavy timber structures, custom wood entry doors at the main entrances, bespoke 20-ft.-long solid walnut boardroom table with a steel substructure, wood grills and lattice work, and fine millwork. The design team arranged each of the building's three program elements (training, social, and administration) into separate blocks, defining each element through the use of different ceiling heights appropriate to each function. Clerestory windows fill the shared circulation spaces with natural light from all directions, and wood lattice screens diffuse this natural light. The building design also highlights other materials and systems that are now part of the work of the carpenters union, such as board-formed concrete formwork and the installation of exterior panels systems. It was also important that the work of other unions, such as structural steel and masonry, was included in the project. All work on this project was completed by union trades.

ARCHITECT
Shoalts and Zaback Architects Ltd.
Kingston, ON

STRUCTURAL ENGINEER
RJC Read Jones Christoffersen Ltd.
Toronto, ON

GENERAL CONTRACTOR
David J Cupido Construction Ltd.
Kingston, ON

PHOTOGRAPHY
Krista Jahnke
Kingston, ON

Shawn Butler
Kingston, ON

Michael Malleson
Kingston, ON

The first net-zero fire station in Canada makes extensive use of wood to boost its energy efficiency.

Port Stanley Fire Station

Operated by the Municipality of Central Elgin and the Central Elgin Fire Rescue and funded through the Green Municipal Fund, Port Stanley's new net zero fire station—the first Net Zero Energy fire station in Canada—is built using CLT, a renewable, low-carbon material that delivers several advantages to this project. Among other sustainable systems and energy-saving features, the fire station boasts a high-performance and energy-efficient CLIPs (cross-laminated insulated panels) envelope system, a prefabricated CLT-based exterior wall panel solution that delivers superior thermal performance in a system that can be rapidly assembled on-site. Heating for the 10,000-sq.ft. facility is supplied by a geothermal system, and hydro is provided by solar panels installed on the parking lot's carport structures. Structurally, the building is designed as a CLT and glulam framed structure; the CLT panel assembly provides the shear wall and roof deck assembly,

while the glulam beams and columns provides the clear spanning space, within the truck apparatus bays and the front-end feature window. The new station is equipped with three double drive-through bay and is designed to post-disaster standards.

ARCHITECT
Thomas Brown Architects
Toronto, ON

STRUCTURAL ENGINEER
Stephenson Engineering
Toronto, ON

GENERAL CONTRACTOR
PK Construction
Tillsonburg, ON

PHOTOGRAPHY
98 Images
London, ON


LOVE

This Indigenous gathering place sparks children's imaginations and helps reconnect them with their heritage.

Nshwaasnangong Childcare & Family Centre

The Nshwaasnangong Child Care & Family Centre is an Indigenous led childcare center that provides early childhood services and cultural and language programming, such as land-based learning, ceremonies, and community support, to children and families in London and across Southwestern Ontario.

The building was conceived as a feminine form to hold and protect Indigenous children and their caregivers. It was important to surround the children in natural and non-toxic materials. CLT was selected as the primary building material for this reason but also for its warmth, its ability to capture carbon, and as a contemporary material that instills many Indigenous traits. The oval-shaped floor plan has a tiered curved roof that is lower and more 'kid sized' in spaces where the children are to create a feeling of security.

The central interior spaces are flooded with daylight by a ring of clerestory windows. The sunbeams entering through the clerestory change their position as the sun travels across the sky each day and cycles through a low path in the winter to a high path in the summer. The change of seasons and time of day impact on how the central spaces are experienced and help the children to understand the cyclical nature of an Indigenous world view. Efforts were taken to expose the wood members so that the children can see and understand how Nshwaasnangong is put together much like the interior of a traditional longhouse, wigwam, or bighouse.

ARCHITECT
Two Row Architect
Ohsweken, ON

STRUCTURAL ENGINEER
Latéral
Montréal, QC

GENERAL CONTRACTOR
Sierra Construction
Woodstock, ON

PHOTOGRAPHY
Tom Arban Photography
Toronto, ON

A prefabricated, wood-based construction approach promises affordable, sustainable infill housing in Canada's largest city.

Passive Laneway Housing Prototypes

These three prototypes are the first of 40 laneway and infill homes proposed for the Huron Sussex neighborhood, a historic area adjacent to the University of Toronto's downtown campus. Advancing the ideals of urban sustainability and intensification, the project revitalizes its heritage context. The project uses a fully integrated wood-based prefabrication approach to reduce community impacts during construction, reduce waste generation and disposal, and enhance performance outcomes. Prefabricated wood construction designed using Passive House principles plays a central role in the project's overall feasibility. The prototypes are clad in thermally treated ash to produce a contemporary and durable exterior appearance that complements the historic surroundings. Interior partitions are wood-framed, and interior wood finishes include maple veneer doors, birch baseboards, and wood staircases. Prefabrication of the framing and envelope systems eliminated the need for specialized site labor, enabling a replicable approach for achieving high environmental performance and cost predictability—essential for validation of the prototypes and ongoing rollout of the larger project vision.

ARCHITECT
BSN Architects
Toronto, ON

STRUCTURAL ENGINEER
Local Impact Design
Guelph, ON

GENERAL CONTRACTOR
Index Construction
Vaughan, ON

PHOTOGRAPHY
Tom Arban Photography
Toronto, ON

Exposed mass timber elements impart a sense of warmth and well-being in this transitional housing project.

RESIDENTIAL

YW Kitchener-Waterloo Supportive Housing for Women

With access to Rapid Housing Initiative funding from Waterloo Region and Canada Mortgage and Housing Corporation, the YW of Kitchener-Waterloo had an opportunity to expand its mission of supporting homeless women through the construction of a new housing development designed for safety, accessibility, and inclusivity. The design team was tasked with delivering 41 accessible one-bedroom transitional housing units on a challenging property within one year of contract award. The team's response to the challenge achieved optimal utilization of the site through a narrow building form comprising prefabricated CLT and glulam timber structural elements in an arrangement that maximized material efficiency and minimized installation time. Perhaps the most visually impactful element of this project was the exposure of mass timber elements on walls, ceiling, beams, and columns. The efforts of the design team to understand and conform to the fire and acoustic performance requirements made this exposure possible inside the suites, in corridors and common spaces, and within the building's canopy entrance. Wood elements were exposed for their proven biophilic health benefits, allowing the exposed wood imparts to create a general sense of warmth and well-being for all occupants.

ARCHITECT
Edge Architects Ltd.
Kitchener, ON

STRUCTURAL ENGINEER
MTE Consultants Inc.
Burlington, ON

GENERAL CONTRACTOR
Melloul Blamey Construction Inc.
Waterloo, ON

PHOTOGRAPHY
Riley Snelling
Toronto, ON

Jurors

CAROLINE FRENETTE, Ing. Ph.D.
Senior Manager
CECOBOIS
Québec City, QC

ERIC KARSH,Ing
Founding Director
EQUILIBRIUM CONSULTING
Vancouver, BC

ÉTIENNE MONDOU, Ing
Teacher
CÉGEP DE L'OUTAOUAIS
Montréal, QC

JACQUES WHITE
Architect, Full Professor
LAVAL UNIVERSITY'S SCHOOL OF ARCHITECTURE
Québec City, QC

JOHANNA RELANDER
Architect
TECTONIQUES
Lyon, Auvergne-Rhône-Alpes, FRANCE

Sponsors

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Canada

Canadian Wood Council / Conseil canadien du bois

Conseil de l'industrie forestière du Québec

Ressources naturelles et Forêts Québec

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EXPERT EN STRUCTURES

FONDS de solidarité FTQ

maibec

LGT

FPInnovations

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UNICEL ARCHITECTURAL

LEC

Stantec

ULTIMA FSC

rothoblaas

PLURITEC

GLT+

EMS


Québec

What better way to showcase a builder's know-how than with a building showcase like this?

COMMERCIAL BUILDING

Ed Brunet and Associates Head Office

Illustrating the inventiveness and know-how of its owners—who are themselves builders—this four-story building, three of which feature a wood structure, makes abundant use of this material. Left exposed inside, the mass timber beams help create open and uncluttered spaces that promote a sense of well-being. In addition to traditional glulam elements, the project features two innovative products; namely, laminated-weld wood floors and glulam beam columns. With its cleverly concealed junctions and elegant appearance, the wood structure steals the show. This project speaks to the client's desire to create a building in their image, a building that exhibits their environmental consciousness and where wood is assertively present and displayed with pride. This project also serves to demonstrate the inherent advantages of wood, including its efficiency and intrinsic biophilic quality. The jury particularly commended the efforts made to push for the use of new wood products, which required ingenuity and a heavy investment in research. These materials help make this head office a true technological showcase for the know-how of the company that's occupying it.

ARCHITECTS
BGLA architecture
Montréal, QC

design urbain
Montréal, QC

STRUCTURAL ENGINEER
Douglas Consultants
Québec City, QC

GENERAL CONTRACTOR
Ed Brunet and Associates
Gatineau, QC

PHOTOGRAPHER
Agento Marketing
(Sophie Carrière-Groulx)
Gatineau, QC

Reflecting the character of its neighboring boreal forest, this remote airport terminal is ready for takeoff.

INSTITUTIONAL BUILDING UNDER 1000 M²

Chibougamau-Chapais Airport Terminal

Located at the gateway of the Eeyou Istchee Baie-James region, this remote airport terminal expresses an undeniably Nordic style where wood is thoughtfully showcased. With a footprint totaling 12,450 sq.ft., the project boasts a unique feature: post-tensioned CLT panels that allow for a 40-ft. span above the passenger seating area—a choice that had the effect of providing a maximum sense of openness in the public space while also contributing to the interior lighting strategy thanks to the roof's generous overhangs. Both timber and steel bracing systems are used to withstand lateral efforts. The curtain walls reflect the character of the neighboring boreal forest, and the roof's configuration allowed for the integration of a south-facing clerestory that bathes the interior space with natural light. Timber sourced locally is transformed in the Chibougamau manufacturing plant a few kilometers away from the terminal, making the building material as locally sourced as possible. Impressed by its lightness, refined appearance, and high efficiency, the jury compared the building to a racing bike, and particularly praised the elegant, innovative uses of wood in all its forms.

ARCHITECTS
EVOQ Architecture
Toronto, ON

ARTCAD Architectes
Rouyn-Noranda, QC

STRUCTURAL ENGINEER
SNC-Lavalin
Montréal, QC

CIMA +
Montréal, QC

GENERAL CONTRACTOR
Construction Unibec
Dolbeau-Mistassini, QC

PHOTOGRAPHER
Maxime Brouillet
Montréal, QC

A wooden lattice shell supporting both the roof and massive curtain wall in this project adds to its unexpected character.

INSTITUTIONAL BUILDING OVER 1000 M²

CNESST Head Office

As the headquarters for Québec's Commission des normes, de l'équité, de la santé et de la sécurité du travail, the provincial government body that concerns itself with occupational health and safety, this project features an eight-story wood structure atrium that is as beautiful as it is ingenious. Used judiciously, wood plays the lead role in this space of theatrical proportions where the meticulous structural details create the architecture. The use of a wooden lattice shell, which supports both the roof and the massive curtain wall, adds to the unexpected character of the project. In addition to being located in the center of the building, making it visible from everywhere, the wood frame atrium is also visible from the outside, contributing to the dynamic identity of the Écoquartier d'Estimauville, the new eco-district in Québec City. The impressive, innovative geometry of the latticed roof assembly is beautifully showcased and is perfectly complemented by the finesse of the built-in furnishings and wooden signage, all of which contribute to the premium quality of this building that was designed with the well-being of its users in mind.

ARCHITECT
Coarchitecture
Québec City, QC

STRUCTURAL ENGINEERS
SNC-Lavalin
Montréal, QC

CIMA+
Montréal, QC

GENERAL CONTRACTOR
EBC
Montréal, QC

PHOTOGRAPHY
Stéphane Groleau
Montréal, QC

Like a diamond in the heart of the city, this particularly inclusive project has the potential to improve the daily lives of those who frequent the area.

INSTITUTIONAL BUILDING OVER 1000 M²

Esplanade Tranquille Pavilion

A veritable oasis of peace in downtown Montreal's Quartier des Spectacles, this pavilion allows urbanites to reconnect with the warmth and beauty of wood in an otherwise dense and inorganic environment. Very open on the urban space thanks to its generous fenestration, the building unexpectedly yet graciously harmonizes with its surroundings and serves to enhance the previously sterile neighborhood. Its well-protected wood structure was designed to adapt to the different desired experiences the building will accommodate.

The jury was especially delighted by the designers' willingness and intent to "green up" the city. By opting to use wood to introduce a more peaceful and pleasant atmosphere, the designers helped create a cocoon of softness in an area that didn't already offer such tranquility. The building's carefully designed and meticulously executed details bring a level of elegance to the project that makes it stand out even more.

ARCHITECT
Les architectes FABG
Montréal, QC

STRUCTURAL ENGINEER
WSP
Montréal, QC

GENERAL CONTRACTOR
Entreprise de construction TEQ
Montréal, QC

PHOTOGRAPHY
Steve Montpetit
Montréal, QC

The hybrid structure of this urban elementary school combines light frame construction with glulam elements.

EDUCATIONAL INSTITUTION

Fernand-Seguin Elementary School

This remarkable wood frame school in a decidedly urban environment leaves a lasting impression. Well established in its environment, the school presents a very apt, well-executed design, easily appropriated by the children. With a view to optimization, the hybrid structure combines light-frame construction with glulam elements. The abundance of natural light, radiant heating, and protected natural ventilation attest to a design focused on the well-being of the school's students. This meticulously executed expansion is proof that it is possible to design schools that are warm and inviting, attractive, and economical. The jury especially commended the playful design, which was built on a child's scale while still presenting a refined style. The particularly well-crafted wooden lockers and bookcases were built with the needs and sensibilities of the young users in mind. The result is a high-quality project that will certainly serve as a model for future educational buildings.

ARCHITECTS
Smith Vigeant Architectes
Montréal, QC

BGLA architecture
Montréal, QC

STRUCTURAL ENGINEER
Les Services EXP
Montréal, QC

GENERAL CONTRACTOR
Gamarco
Laval, QC

PHOTOGRAPHY
Stéphane Brugger
Montréal, QC


PREMIUM

Abundant natural light and the lightness of its glulam structure contribute to the elegance and airiness of this industrial facility.

INDUSTRIAL BUILDING

SmartMill Head Office

This beautiful wood building reflects the innovative image of the company it houses. Offering spaces bathed in natural light, the administrative area is distinguished by its transparency and by the lightness of its glulam structure that gracefully spans over the entrance to the interior courtyard. The use of a new acoustic product for the CLT slabs made it possible to avoid using conventional concrete screeds. This considerably reduced the weight of the floor and resulted in a slimmer, more elegant structure. In the factory area, the prefabricated curved glulam trusses were designed to create a span of 21.5 m Refreshingly airy and bright, the building stands out for its elegance and attention to detail, so much so that you almost forget the building's industrial vocation. The biophilic aspect of the project is also evident both in the office spaces and in the stunning interior courtyard that further contributes to the well-being of the company's employees. The wood overhead traveling crane in the factory area reinforces the bold character of the project.

ARCHITECT
Atelier Guy Architectes
Québec City, QC

STRUCTURAL ENGINEER
GÉNIE+
Lévis, QC

GENERAL CONTRACTOR
Ronam Constructions
Lévis, QC

PHOTOGRAPHY
Charles O'Hara
Québec City, QC

Wood equals welcoming at this park building that's in harmony with its natural surroundings.

LIGHT FRAME

Camp-de-Touage Services Centre, Pointe-Taillon National Park

This SÉPAQ reception pavilion is an excellent example of a well-detailed, perfectly proportioned building. Faithful to the client's tradition, many wood elements were used for both the structure and the interior and exterior cladding of the building. The wood components contribute actively to the creation of welcoming spaces that are in perfect harmony with the building's natural surroundings. Designed almost exclusively with a light frame, this very airy project illustrates how this type of system can produce more positive impacts when coupled with a well-coordinated hybrid structure. Using the right material in the right place is an economic way of creating airy spaces that offer simplicity as well as a rich user experience.

ARCHITECTS
Blouin Tardif Architectes
Montréal, QC

Éric Painchaud, architectes et associés
Chicoutimi, QC

STRUCTURAL ENGINEER
WSP
Québec City, QC

GENERAL CONTRACTOR
Construction J. & R. Savard Ltée.
Saint-Honoré, QC

PHOTOGRAPHY
Stéphane Groleau
Montréal, QC


quai

This multi-functional meeting space meets the twin objectives of urban animation and accessibility to the beauty of the Saint Lawrence River.

LIGHT FRAME

Sainte-Anne-de-Beaupré Pier Pavilion

Although small, this project, built with a 100%-light wood frame, illustrates all the potential and flexibility of this type of wood construction system. Among other carefully designed elements, the geometrically configured roof contributes to the building's elegance.

The reception pavilion takes the form of a large, simple volume with a gable roof and is covered with light gray metal cladding and Eastern white cedar slats. Running parallel with the pier that reaches out into the river, its two ends point towards the town's famed basilica and invite you to walk the promenade. The shape of the pavilion is inspired by boat sheds and nods to the simple shapes of historic residential buildings in Côte-de-Beaupré. Three roof windows articulate the geometry of the ceiling and magnify the light at the end of the day.

Described as stunning by the jury, this elegant project presents light, refined details. The flexibility of the light wood frame made it possible to create a unifying shape that plays with space and proportions. The project aptly demonstrates how economy of effort can produce a more than convincing result.

ARCHITECT
Groupe A
Québec City, QC

STRUCTURAL ENGINEER
LGT
Québec City, QC

GENERAL CONTRACTOR
Escalera Entrepreneur Général
Québec City, QC

PHOTOGRAPHY
Groupe A
Québec City, QC


Majella
2½ • 3½ • 4½ • 5½
À LOUER
LOGISCO

Even the setback of a fire during construction couldn't stop this light-frame building from going up in record time.

MULTI-RESIDENTIAL BUILDING

Le Majella

This five-story light-frame building is remarkable in several respects. It not only reflects a growing interest in the industry for this type of structure, but it also serves as an example of innovative strategies that can be used for similar projects. Opting for light wood frame construction made it possible to reduce the weight of the building on a site with a low-bearing capacity, thereby ensuring an economical and profitable solution. The resilience of the project team also must be lauded: following a fire that happened during construction, they rolled up their sleeves, resumed construction, and completed the project in a record time of 100 days—a feat that was made possible thanks to the high rate of prefabrication of the structural elements.

ARCHITECT
Architectes Roberge et Leduc
Lévis, QC

STRUCTURAL ENGINEERS
L2C Experts-Conseils
Montréal, QC

ÉQIP Solutions Génie
Charny, QC

Génio Experts-conseils
Québec City, QC

PHOTOGRAPHY
Logisco
Lévis, QC

The social mission of this architecture, interior design and urban development firm is reflected in its own working environment.

SUSTAINABLE DEVELOPMENT

Expansion of Rayside Labossière Headquarters

Pushing the boundaries of holistic ecological thinking, this expansion project attests to a strong interest in predicting the socio-environmental impacts of the building. The Rayside Labossière project aims to achieve LEED Platinum, Living Building Challenge, and WELL certifications, as well as carbon neutrality. In addition to a reduction in greenhouse gas emissions of 123 kg of CO_2 equivalents per m^2, the new building boasts a geothermal system and photovoltaic panels that reduce its energy consumption. The use of a wooden structure fit perfectly into the vision for the project. The exposed wood structure, combined with the abundance of natural light that highlights the interior spaces, provides a welcoming work environment that promotes well-being.

ARCHITECTS
Rayside Labossière architectes
Montréal, QC

STRUCTURAL ENGINEER
L2C Experts-conseils
Montréal, QC

GENERAL CONTRACTORS
Art Massif
Québec City, QC

PMC Lachance
Sherbrooke, QC

PHOTOGRAPHER
Saul Rosales
Montréal, QC

U.S. WoodWorks Wood Design Awards

U.S. WoodWorks Wood Design Awards

Celebrating excellence in wood building design with the Wood Design Awards is always a privilege, and this year is no exception. Our role at WoodWorks is unique. It gives us the special opportunity to understand why many teams choose wood—and to see firsthand wood's innate ability to support multiple project objectives, either alone or in combination with other materials. This year's winners exemplify this range and the designers who are challenging the expectations of modern design and construction with inspiring buildings that respond to today's myriad needs.

In the heart of downtown Milwaukee, WI, Ascent takes mass timber higher than ever with 19 stories of CLT and glulam over a six-story concrete podium. Mississippi Workshop reinterprets the classic industrial loft typology in Portland, OR, and through a USDA Wood Innovations Grant, is being shared as a proof of concept for sustainable building systems in various applications. Washington, DC's 80 M is the first high-rise overbuild mass timber structure in the Mid-Atlantic, paving a new path for vertical expansion in cities. In California, a high-tech company's mass timber office prioritizes sustainability, designed to target LEED Platinum, Net Zero Water, and Well Building Standard certifications. Most poignantly, all the winning projects underscore how wood diversifies the physical landscape of our communities and enriches the experience of those who inhabit them.

I hope you enjoy learning about these projects as much as I did. I want to extend a sincere thank you to the teams who made these projects a reality. Your dedication to quality and the pursuit of more sustainable construction practices continue to expand the possibilities for wood design

Sincerely,

Jennifer Cover

Jennifer Cover, PE
President & CEO
U.S. WoodWorks

Jurors

COREY MARTIN
Principal | Lead Design
HACKER
Portland, OR

CHEUNG CHAN
Architect, Associate
NEUMANN MONSON ARCHITECTS
Des Moines, IA

LAUREN WINGO
Senior Structural Engineer
ARUP
Washington, DC

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HASSLACHER NORICA TIMBER From wood to wonders.

HUBER ENGINEERED WOODS

MAXXON

MERCER

SANSIN

SIMPSON StrongTie

SMARTLAM NORTH AMERICA

STERLING Structural

StructureCraft

VAAGEN TIMBERS

WOOD IN SCHOOLS

San Jacinto College Classroom Building

Houston, TX

Please see page 84

DURABLE AND ADAPTABLE WOOD STRUCTURES

MacLac Building D –
Rebirth of an Historic Paint Factory

San Francisco, CA

Please see page 38

United States

This addition to Portland's Mississippi Avenue district updates the classic industrial loft typology for a new century.

COMMERCIAL WOOD DESIGN—MID-RISE

Mississippi Workshop

Located on a busy commercial street, Mississippi Workshop was designed as a prototype for new sustainable building systems and construction technologies. Adaptive, durable, and beautiful, it reinterprets and updates the classic industrial loft typology for the 21st century. Mass timber was used for all primary components of the structure and spatial definition without the need for additional fireproofing or interior finishes. The 9,555-sq.ft. building comprises six equal spaces stacked in three tiers on opposite sides of a shared courtyard, which serves as a multipurpose gathering space and transition from the busy street. Its configuration, materials, and building systems were designed to respond to a range of contexts and potential uses; the current programming includes a café, woodshop, creative offices, and top-floor apartment. Last year, the Waechter-led team received a USDA Wood Innovations Grant to study and share findings on the project's performance and identify potential applications for its innovative approach in other commercial, institutional, and residential settings.

ARCHITECT
Waechter Architecture
Portland, OR

GENERAL CONTRACTORS
Waechter Architecture
Portland, OR

Owen Gabbert, LLC
Portland, OR

Cutwater PDX
Portland, OR

STRUCTURAL ENGINEER
KPFF Consulting Engineers
Seattle, WA

PHOTOGRAPHY
Lara Swimmer
Seattle, WA

High-Tech Client Campus

When a high-tech company decided to use mass timber for a new building on its Silicon Valley campus, its commitment to fostering a deeply sustainable workplace overshadowed the challenges posed by the lack of detailed provisions in the building code at the time. This required that the design and engineering teams work closely with code officials over the project's six-year duration. The building features a hybrid design that combines CLT-concrete composite floors with glulam columns, steel beams, and concrete shear walls. The composite floor system allowed the CLT panels to span further, creating a more open interior, and the concrete topping also concealed power and data systems. The two-story mass timber structure was designed to target LEED Platinum, Net Zero Water, and WELL Building Standard certifications. The design team estimates their decision

Mass timber leads to mass benefits for employees and the environment alike at this California high-tech company. This addition to Portland's Mississippi Avenue district updates the classic industrial loft typology for a new century.

to use mass timber for the new building yielded an estimated structural embodied carbon savings of 36%. Overall, mass timber accounts for more than half the structural components in the three-building, 2,000-employee campus.

ARCHITECT
WRNS Studio
San Francisco, CA

STRUCTURAL ENGINEER
Holmes
San Francisco, CA

GENERAL CONTRACTOR
Rudolph and Sletten
Menlo, CA

PHOTOGRAPHY
Bruce Damonte
San Francisco, CA

Mass timber leads to mass benefits for employees and the environment alike at this California high-tech company. This addition to Portland's Mississippi Avenue district updates the classic industrial loft typology for a new century.

MULTI-FAMILY WOOD DESIGN

Central Lofts

Central Lofts is among the pioneers of mass timber multi-family developments in Portland. Located at the base of the iconic St. Johns Bridge, the four-story, 30-unit building takes full advantage of its charismatic neighborhood and prominent location next to a plaza, which sits at the center of the area's commercial corridor. Because designers wanted to minimize the use of steel and concrete yet provide a flexible ground-story layout, the CLT and glulam structure is combined with exterior wood shear walls. This wood exoskeleton is paired with a central scissor stair made of two interlocking CLT stair systems, which provide shear stability and optimize the 27,500-sq.ft. building's footprint by minimizing circulation area. With floor-to-ceiling glazing that provides views into neighboring Forest Park, the bright, airy apartment units are awash with natural light, highlighting the exposed wood beams and ceilings while promoting resident well-being.

ARCHITECT
Jones Architecture
Portland, OR

STRUCTURAL ENGINEER
Froelich Engineers
Portland, OR

GENERAL CONTRACTOR
R&H Construction
Portland, OR

PHOTOGRAPHY
David Papazian
Portland, OR

Jones Architecture
Portland, OR

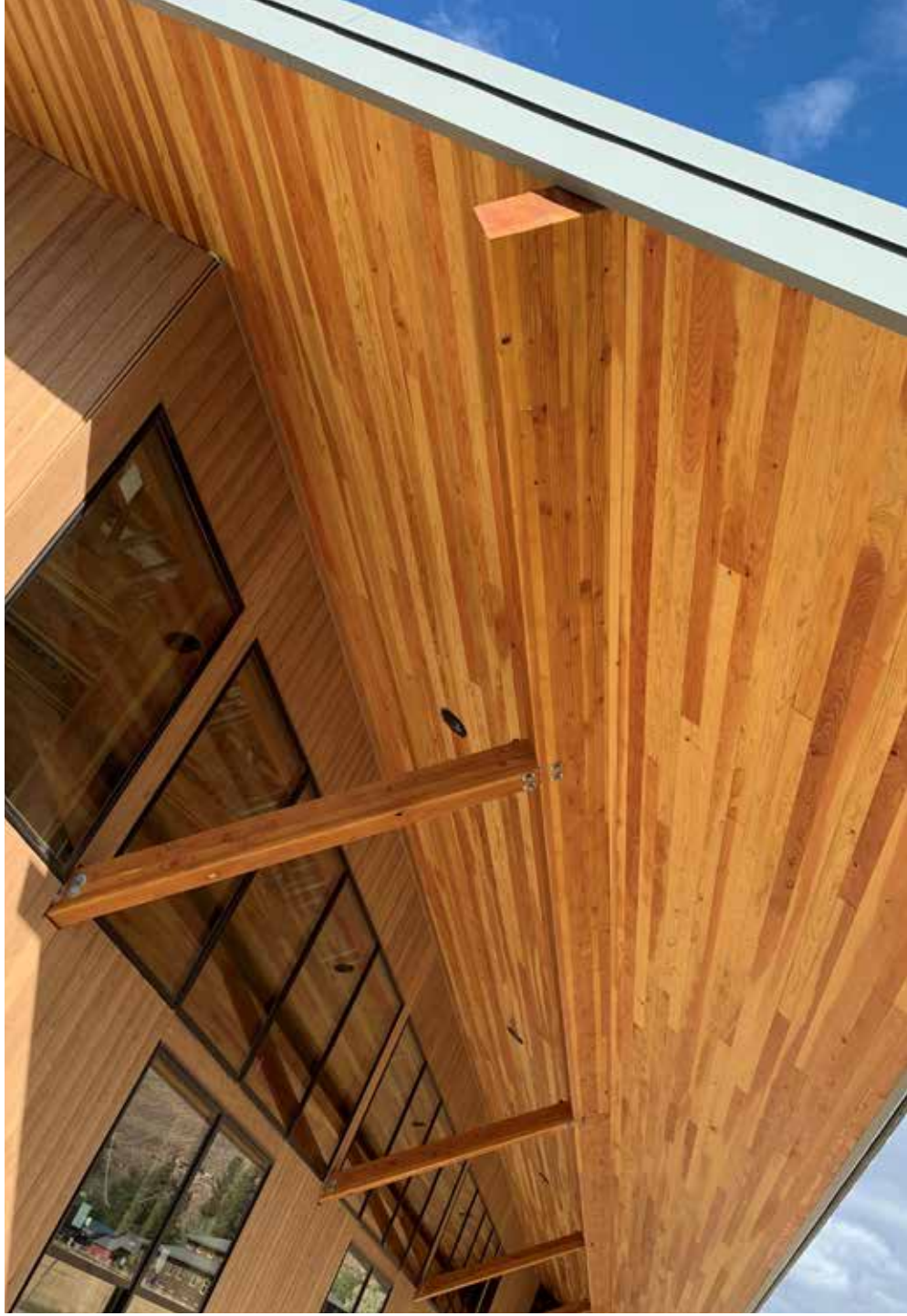
Winthrop may be a tiny place, but its love of libraries (and beautiful spaces in which to put them) is anything but small.

WOOD IN GOVERNMENT BUILDINGS

Winthrop Library

Built on the former site of a trading post and lending library tracing back to 1898, this new 7,300-sq.ft. library received much of its funding via private donations from the small yet engaged Winthrop community. Replacing two smaller libraries, one of which supports almost 30 book clubs, the new light-filled structure provides meeting and library space for the area's diverse users. The layout for the rectangular structure centers on two axes: the north/south axis follows the nearby Methow River and the east/west axis points toward Gardner Mountain. Inspired by the community's love of agrarian buildings, the design features glulam columns and exposed open-web wood and steel trusses. The prefabricated trusses reduced material costs, shortened the construction schedule, and provided a finish that fit with other historic wood-frame buildings in the area. Wood baffles line the walls and ceiling, forming sound-absorbent surfaces that diffuse ambient noise to create a comfortable environment. Built on a tight budget and designed to LEED Silver, the library reflects both the ecological and fiscal values of its patrons and community.


LIBRARY
RETURN



ARCHITECTS
Johnston Architects
Seattle, WA

Prentiss Balance Wickline
(associate architect)
Seattle, WA

STRUCTURAL ENGINEER
Methow Engineering
Twisp, WA

GENERAL CONTRACTOR
Impel Construction
Stanwood, WA

PHOTOGRAPHY
Benjamin Drummond
Twisp, WA

Johnston Architects
Seattle, WA

Drawing inspiration from Kentucky's historic buildings, this event space offers maximum impact (and reduced noise) on a modest budget.

INSTITUTIONAL WOOD DESIGN

Locust Grove Event Pavilion

This open-air pavilion takes full advantage of its beautiful location, a 55-acre, 18th-century farm that was once home to the founder of nearby Louisville. Inspired by the property's collection of historic buildings, the design emulates the porches of Georgian farmhouses, combining limestone walls with a low-slung glulam roof canopy that minimizes visual impact on the landscape while providing unobstructed views. Despite a modest budget, the 7,636-sq.ft. project presents a high degree of detail. Profiled glulam beams are infilled with decorative secondary framing to create a coffered ceiling that mimics the intertwined branches and sinewy texture of black locust tree bark, the property's namesake. A popular event space, the pavilion holds musical performances, weddings, and galas for up to 350 people, and the coffered ceiling also helps reduce noise. The limestone walls are set in a herringbone pattern that evokes patterns and hand-laid stonework of the ha-ha walls and split-rail fences that surround the property.

ARCHITECT
de Leon & Primmer
Architecture Workshop
Louisville, KY

STRUCTURAL ENGINEER
Structural Services
Waxahachie, TX

GENERAL CONTRACTOR
Woodbine Construction
Louisville, KY

PHOTOGRAPHY
de Leon & Primmer Architecture
Workshop
Louisville, KY

Woods proves to be a natural choice for this learning center highlighting the link between human and natural systems.

SUSTAINABLE WOOD DESIGN

The Ecology School

This non-profit residential learning center works to link human and natural systems through immersive learning experiences for children and adults, making the purposeful use of wood construction and finish materials a natural choice. Designed through a unique three-firm architectural collaboration, the 16,500-sq.ft. project includes a dining commons and three two-story dormitories made from a mix of mass timber and light-frame wood construction. The team used wood to meet both the school's embodied carbon goal and strict requirements of the Living Building Challenge, one of the most rigorous measures of social and environmental performance in the built environment. They reduced embodied carbon by using local renewable materials, including FSC-certified New England wood, and accounted for the project's total embodied carbon impact through a one-time carbon offset within the property's boundary. The Ecology School is Net Zero Energy, and Net Zero Water, and is built to Passive House standards.

ARCHITECTS
Simons Architects
Portland, ME

Kaplan Thompson
Portland, ME

Briburn Architecture
Portland, ME

STRUCTURAL ENGINEER
Thornton Tomasetti/
Becker Structural Engineers, Inc.
Portland, ME

CONTRACTOR
Zachau Construction
Freeport, ME

PHOTOGRAPHY
Trent Bell
Biddeford, ME

The performers on stage aren't the only stars of the show at this Oregon performing arts center.

BEAUTY OF WOOD

Patricia Reser Center for the Arts

The 46,366-sq.ft. Reser Center serves as a beautiful example of how biophilic design and natural woodwork can be used to connect a performing and visual arts facility to its Pacific Northwest environment. When the City of Beaverton requested that wood be used in public interior spaces, Opsis Architecture answered with designs that provided both highly engineered acoustic performance and artistic expression. Locally sourced Douglas fir—layered sticks and panels in the lobby and vertical cutouts and folds in the theater—creates a complex, ordered pattern that seamlessly integrates acoustical and theatrical systems. The theater's embracing wood enclosure and performance-based geometry create an intimate relationship between audience and performers. In the lobby, the play of natural light through a linear skylight strategically placed across the interior wall is dynamic and diffuse, evoking the organic crisscross of a beaver dam's woven structure within this visually calming community space. The lobby's expansive two-story wood and glass curtain wall presents the center's rich wood interior to the surrounding community as a warm and inviting beacon to the arts.

ARCHITECT
Opsis Architecture
Portland, OR

STRUCTURAL ENGINEER
KPFF Consulting Engineers
Seattle, WA

CONTRACTOR
Skanska
Seattle, WA

PHOTOGRAPHY
Jeremy Bittermann
Portland, OR

Josh Partee
Portland, OR

INNOVATION

Ascent

Aptly named, this 25-story hybrid tower took mass timber higher than it had ever gone. With 19 stories of CLT and glulam over a six-story concrete podium, Ascent placed 259 apartments and amenity spaces in the heart of downtown Milwaukee, making a mass timber statement for all to see. The team chose timber with sustainability, carbon, and biophilia in mind, exposing about 50% of the wood throughout to help curb stress and boost well-being. To demonstrate fire safety, the team worked with USDA's Forest Products Laboratory to complete the world's first three-hour glulam fire test. The building sequesters approximately 7,200 metric tons of CO_2, equivalent to taking 2,400 cars off the road for a year, and the volume of wood used takes an estimated 25 minutes to grow in North American forests. The project took just two years to build, reducing the schedule by several months compared to other building systems. Ascent gave mass timber construction worldwide attention, illuminating both short- and long-term opportunities for sustainable building design.

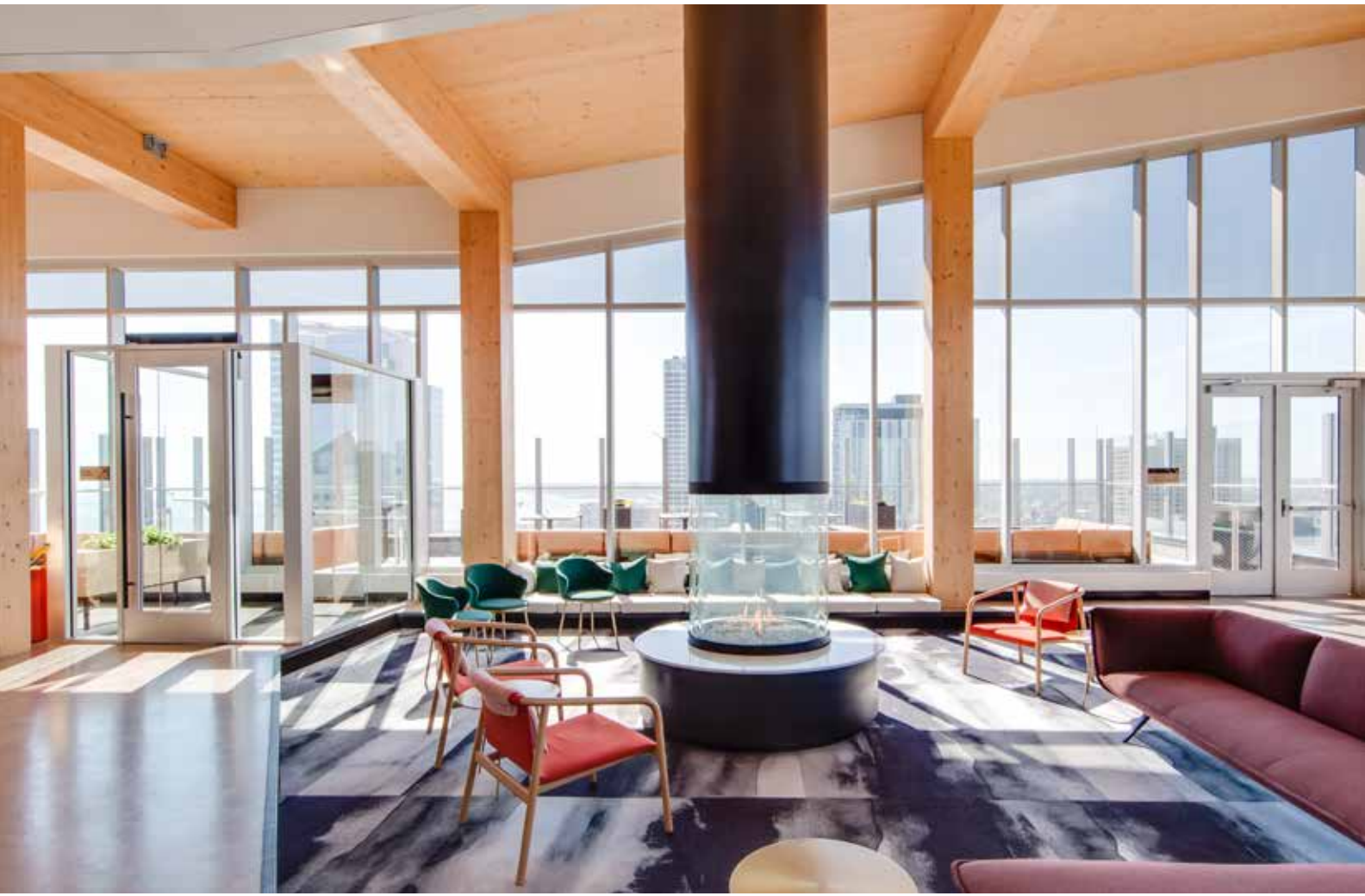
ARCHITECT
Korb + Associates
Milwaukee, WI

STRUCTURAL ENGINEER
Thornton Tomasetti/
Becker Structural Engineers, Inc.
Portland, ME

GENERAL CONTRACTORS
C.D. Smith Construction
Fond du Lac, WI

Catalyst Construction
Petersburg, ON

PHOTOGRAPHY
Korb + Associates Architects
Milwaukee, WI



Looking for the latest trend-setting development in Cleveland's downtown? Allow us to INTRO-duce...

REGIONAL EXCELLENCE

INTRO

This two-acre, mixed-use project was built on a prime location, across the street from Cleveland's oldest publicly owned market. Because of the prominent site, the developer's goal was to deliver an innovative, lifestyle residential building that would complement its iconic neighbor. Mass timber delivered with an aesthetic and sustainability ethos that makes INTRO distinct. The building includes nearly 300 market-rate apartments, an upscale restaurant, retail space, and rooftop event venue. It achieved LEED Gold BD+C certification and was the

first and largest U.S. LEED Gold project to utilize mass timber at the time of completion. With eight stories of mass timber over a one-level podium, it was also one of the first buildings to take advantage of the tall wood provisions in the 2021 International Building Code (IBC). Because the 2021 IBC had not yet been adopted by the state at the time of entitlement, INTRO's design team had to go the extra mile to provide additional testing data and demonstrate mass timber safety and fire resistance, setting the stage for future developments in the region.

ARCHITECT
Hartshorne Plunkard Architecture
Chicago, IL

STRUCTURAL ENGINEER
Forefront Structural Engineers
Chicago, IL

GENERAL CONTRACTOR
Panzica Construction
Cleveland, OH

PHOTOGRAPHY
Aerial Agents,
Cleveland, OH

Josh Dobay
Cleveland, OH

Nick Johnson, Tour D Space
Cleveland, OH

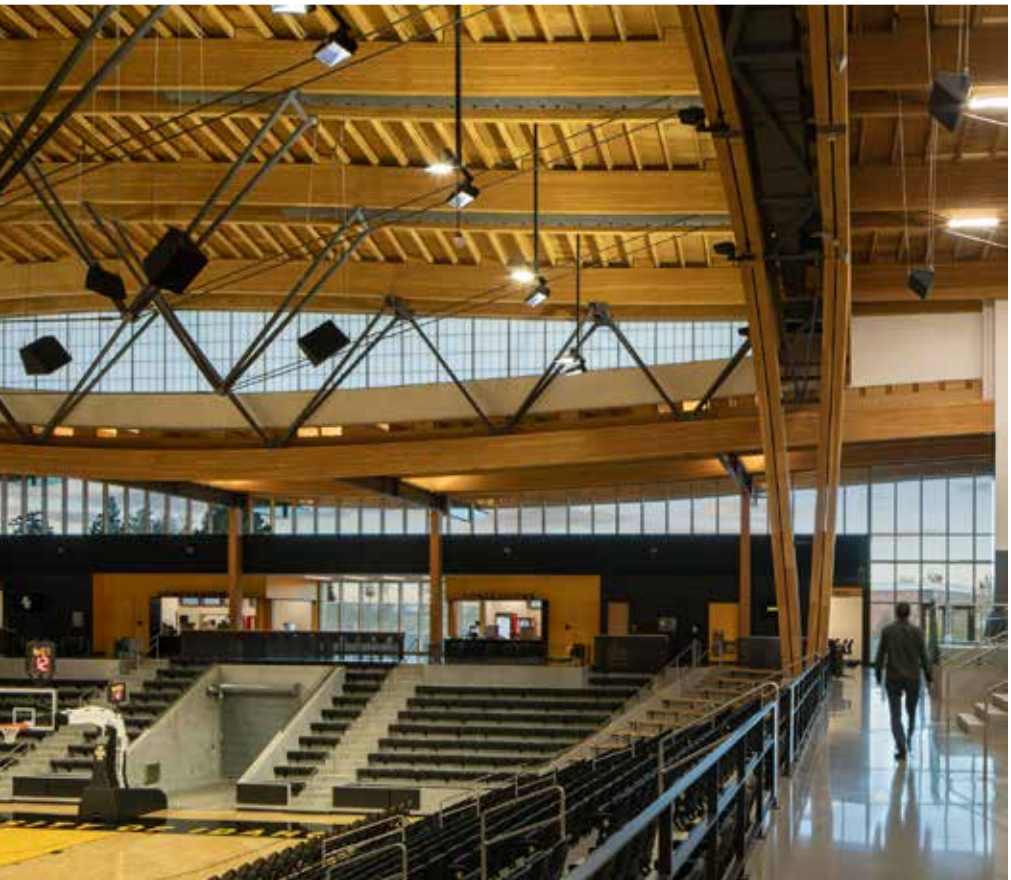
Hartshorne Plunkard Architecture/
Harbor Bay Ventures
Cleveland, OH

The soaring roof on this arena is giving sports fans at the University of Idaho one more reason to cheer.

REGIONAL EXCELLENCE

Idaho Central Credit Union Arena

The design of the roof structure for this 4,000-seat arena was inspired by the undulating landscape of the nearby Palouse region of Idaho. Warm timber and natural light represent a significant break from the traditional steel and concrete sports arena typology. The soaring roof was built using a large glulam portal frame and 140-ft.-long glulam king post trusses engineered to meet the complex loading requirements of the long spans and double-curved roof shape. The facility also includes a three-level structure housing locker rooms, coaches' offices, and alumni center constructed with a glulam post-and-beam system and DLT panels. Most of the wood came from the University of Idaho's own forests and was milled and fabricated by Idaho firms. The visually stunning structure is used to host a multitude of activities, including athletic events, concerts, and campus programs. The structure also provides educational opportunities by serving as a learning laboratory for students in the university's forestry and engineering departments.



ARCHITECTS
Opsis Architecture
Portland, OR

Hastings+Chivetta
(sports architect)
St. Louis, MO

STRUCTURAL ENGINEERS
KPFF Consulting Engineers
(base building)
Boise, ID

StructureCraft
(roof structure)
Abbotsford, BC

GENERAL CONTRACTOR
Hoffman Construction
Portland, OR

PHOTOGRAPHY
Lara Swimmer
Seattle, WA

This new office building in the heart of Nashville's historic Music Row is hitting all the right notes.

REGIONAL EXCELLENCE

1030 Music Row

A new boutique office building stands out in Nashville's historic Music Row district. The design team for 1030 Music Row originally chose the mass timber system with glulam columns and beams, DLT decks, and CLT elevator walls for its versatility and ability to create an open floor plan that can be adapted over time. The 122,000-sq.ft. project includes state-of-the-art air quality and touchless systems, and the biophilic characteristics of the timber structure are intended to promote a sense of well-being. Private terraces on each level and floor-to-ceiling glass throughout provide both natural light and views of the neighborhood. The DLT, manufactured with unusually wide 3-in. laminations to create a clean aesthetic, was left exposed indoors and out. Larch glulam columns are also expressed on the outside for passersby to enjoy the beauty of wood. Market demand was almost immediate; the office building was 80% leased just six months after completion, reinforcing the concept of a national "flight to quality" in the commercial office market.

ARCHITECT
Anecdote Architectural Experiences
Nashville, TN

STRUCTURAL ENGINEER
StructureCraft
Abbotsford, BC

GENERAL CONTRACTOR
Turner Construction
Toronto, ON

PHOTOGRAPHY
Andrew Keithly
Nashville, TN

"M" stands for "mass timber" at this M Street office building, the first high-rise overbuild mass timber structure in the region.

REGIONAL EXCELLENCE

80 M Street

A renewed building sitting in the heart of Washington, DC's vibrant Capitol Riverfront neighborhood isn't your typical office building. The 108,000-sq.ft. 80 M Street is the first high-rise overbuild mass timber structure in the mid-Atlantic, a promising sign of the growing potential for developers seeking vertical expansion opportunities in already built-out neighborhoods. The project team added three new floors of mass timber on top of an existing seven-story concrete building, including a penthouse level with office and amenity spaces and a rooftop terrace. Mass timber's light weight allowed designers to maximize the vertical build while avoiding disruptive structural strengthening interventions in tenant spaces, saving capital and allowing the existing stories to remain fully operational during construction. The exposed mass timber aesthetic differentiates 80 M from standard Class A office buildings in the competitive commercial arena. The new floors feature 16-ft. slab-to-slab heights, which provide nearly 200% more light penetration than typical office spaces and add to the building's appeal as a wellness-driven property.

ARCHITECT
Hickok Cole
Washington, DC

STRUCTURAL ENGINEER
Arup
Washington, DC

CONTRACTOR
James G. Davis Construction
Rockville, MD

PHOTOGRAPHY
Ron Blunt
Washington, DC


SAIE

A light-filled learning space is the centerpiece of this complex feeding the minds of tomorrow's agriculture leaders.

REGIONAL EXCELLENCE

Chemeketa Community College Agricultural Complex

This Net Zero Energy, 14,700-sq.ft. agriculture complex is an academic facility serving a wide range of agriculture and horticulture programming. The FFA team worked closely with Chemeketa Community College and its partners from educational extension programs, local businesses, and community outreach groups. Their vision was guided by the idea of establishing a "collective hub" for this broad community—a center for teaching and learning in the region. Anchored at the north edge of the eight-acre site is a new flexible student classroom building, the center of which is a light-filled, double-height space offering views through a large glass wall and overhead door that opens onto demonstration gardens. The primary structural system comprises glulam and veneer-based CLT. Reinforcing the concept of a hub, the site also includes a central courtyard amphitheater, which will serve student and public needs with outdoor group training, industry events, presentations, festivals, community outreach activities, and farmers' markets.

ARCHITECT
FFA Architecture and Interiors
Portland, OR

STRUCTURAL ENGINEER
KPFF Consulting Engineers
Portland, OR

GENERAL CONTRACTOR
Swinerton Builders
Portland, OR

PHOTOGRAPHY
Christian Colombres
West Linn, OR

"Educated in the midst of beauty" is how this college's founder thought students should be taught. This building agrees.

REGIONAL EXCELLENCE

Wellesley College Science Complex

In 1870, the founder of Wellesley College said he thought women should be "educated in the midst of beauty," and his philosophy rings true for this new Science Complex. The ambitious 97,000-sq.ft. project transforms the college's existing facility with a careful mix of removal, renovation, and addition, with mass timber providing the main structure for the expansion. Designers created a series of multistory pavilions with classrooms, labs, and breakout areas that promote collaboration and provide strong visual connections to both indoor and outdoor spaces. A timber portal frames the entrance leading into the heart of the addition, the Chao Foundation Innovation Hub, which is built with NLT decking over glulam beams and columns. Exposed wood in this "indoor main street" creates a warm and welcoming environment for students, faculty, and visitors. The LEED Platinum project confirms Wellesley's commitment to its carbon and energy-efficiency goals. After previously consuming more energy than any other building on campus, the new Science Complex is now among the most efficient.

ARCHITECT
Skidmore, Owings & Merrill
New York, NY

STRUCTURAL ENGINEER
Le Messurier
Boston, MA

GENERAL CONTRACTOR
Turner Construction
Boston, MA

PHOTOGRAPHY
Dave Burk
Chicago, IL

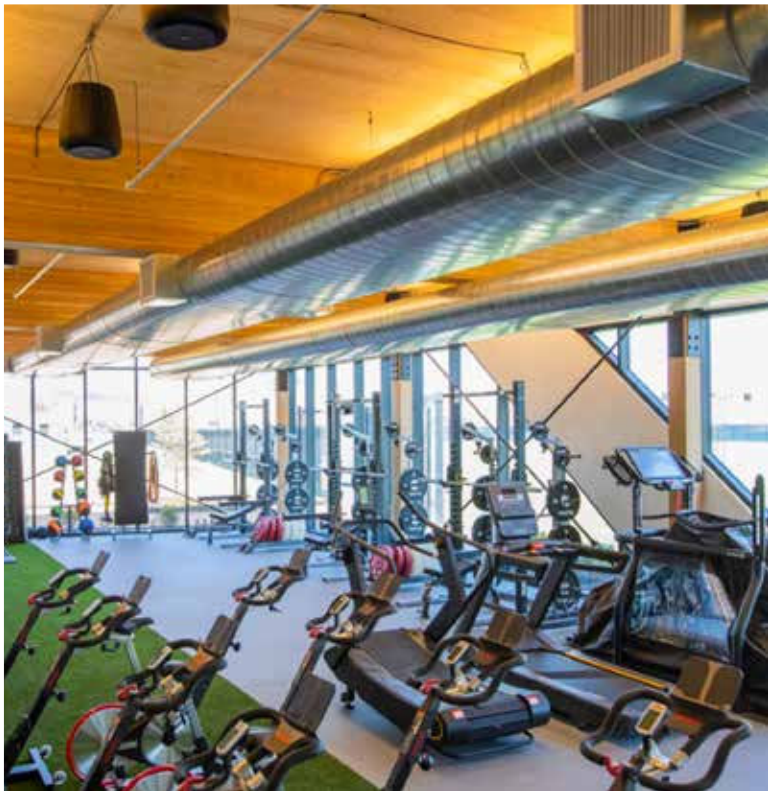
For this professional soccer team, a training facility that was both functional and beautiful was the only goal worth pursuing.

REGIONAL EXCELLENCE

Kansas City Current Training Facility

The Kansas City Current National Women's Soccer League Training Facility is said to be the first center built exclusively for a women's professional sports soccer team. The designers chose mass timber, leaving the glulam and CLT exposed to create a distinctive world-class complex that signals the Current's desire to compete at the highest level. The 17,600-sq.ft. building houses all of the organization's operations under one roof, providing a variety of spaces designed for work, wellness, culture, and socializing. In

addition to a locker room, weight and cardio rooms, and offices, it includes a film room, café, nutrition and wellness area, and rooftop deck overlooking three full-size soccer pitches. The use of mass timber also helped expedite construction. It took Monarch Build, a female-owned construction firm, less than two months from timber delivery to complete the vertical structure.



ARCHITECT
Generator Studio
Kansas City, MO

STRUCTURAL ENGINEER
Apex Engineers
Kansas City, MO

GENERAL CONTRACTOR
Monarch Build
Kansas City, MO

PHOTOGRAPHY
Kansas City Current
Kansas City, MO

Monarch Build
Kansas City, MO

Nate Sheets
Kansas City, MO

A Civil War-era warehouse gets a 21st-century makeover with the help of some timeless building materials.

REGIONAL EXCELLENCE

Nanotronics Smart Factory

Mass timber went high-tech to turn this Civil War-era warehouse into a smart manufacturing facility and headquarters. Over the years, the 42,000-sq.ft. building had been used to manufacture everything from armor plating for wooden warships to parts for hydrogen fuel cell submarines. Today, it's used to develop advanced industrial microscopes and optical inspection systems capable of working on a nanometer scale. The design team left the shell of the original building intact, retaining the building's existing columns and roof trusses, and added four stacked pods inside. The mass timber pod structures, assembled in just 28 days, serve as enclosures for the various fabrication activities within, and are connected by CLT bridges in the double-height spaces. The innovative decision to construct the CLT pods within the existing structure solved the challenge of creating enclosed workspaces—some of which need to be airtight, soundproof, and climate-controlled—without impeding the flow of collaborative spaces or compromising the beauty of the long, narrow building.

ARCHITECT
Rogers Partners
New York, NY

STRUCTURAL ENGINEER
Silman
New York, NY

GENERAL CONTRACTOR
Eurostruct
Brooklyn, NY

PHOTOGRAPHY
Albert Vecerka
New York, NY

A private foundation dedicated to giving gives itself a stunning new facility based on a hybrid design.

REGIONAL EXCELLENCE

Houston Endowment Headquarters

The stark white exterior stands in direct contrast to the warm wood ceilings in this new headquarters for Houston Endowment, a private foundation that supports the city's arts, parks, and public schools. The headquarters was originally planned as a concrete structure, but the project team chose a hybrid design that includes exposed CLT floor and roof systems. The team says the use of mass timber helped reduce costs while offering a lighter weight structure that resolved problematic soil conditions.

An extensive solar array sits on a semi-freestanding canopy that shelters the entire structure, meeting 90% of the building's annual energy demands. The 25,000-sq.ft. building also uses a unique closed-loop geothermal HVAC system with interior fans placed throughout the building, reducing the need for air conditioning. Formerly located in dark offices in a downtown high-rise, the new headquarters gives Houston Endowment a facility that meets its ambitious carbon reduction objectives and 2030 Net Zero goals.

ARCHITECTS
Kevin Daly Architects
Los Angeles, CA

Productura
Mexico City, Mexico

STRUCTURAL ENGINEER
Arup
Houston, TX

GENERAL CONTRACTOR
W.S. Bellows
Houston, TX

PHOTOGRAPHY
Iwan Baan
Amsterdam, The Netherlands


CITY OF CEDAR RAPIDS
ELLIS GOLF COURSE

An Iowa golf course brings beauty and sustainability to the fore with its new clubhouse.

REGIONAL EXCELLENCE

Ellis Golf Course Clubhouse

When a 2020 derecho windstorm destroyed the clubhouse on this 120-year-old municipal golf course, it opened the door for a new gathering space that would better serve the community. In a tribute to the trees lost in the natural disaster, OPN Architects chose to prominently feature wood in their design, with an exposed structural wood roof deck supported by steel beams. The new ADA-accessible clubhouse is organized around a broad, continuous porch created by a single-slope roof that forms an overhang covering the patio. Floor-to-ceiling windows in the pro shop, concessions area, and event space allow golfers to look onto the course, and the building's orientation allows it to capitalize on views of the beautiful 18th hole and pond. The new clubhouse will help course managers attract golf tournaments to the area while also providing a space for community and private events. With rooftop solar panels, the 5,820-sq.ft. facility is on track to meet Net Zero Energy targets.

ARCHITECT
OPN Architects
Des Moines, IA

STRUCTURAL ENGINEER
Structural Design Group
Nashville, TN

GENERAL CONTRACTOR
Septagon Construction
Des Moines, IA

PHOTOGRAPHY
Cameron Campbell Integrated Studio
West Des Moines, IA

Curved and faceted acoustical wood reflectors is just one way that wood is helping this arts center raise the curtain on performance excellence.

REGIONAL EXCELLENCE

Crested Butte Center for the Arts

This historic mountain community signaled its support for the arts when it built this 35,600-sq.ft. center, a vibrant and inviting public arts facility. The intimate character and excellent acoustics of the center's 320-seat theater are primarily due to the extensive use of wood. Curved and faceted acoustical wood reflectors direct sound and can be custom-tuned for both music and spoken-word performances. A gallery, art studios, and rehearsal rooms surround a double-height lobby that combines massive wood structural members, textured copper, and floor-to-ceiling glass walls to create a warm and welcoming space. The design team made creative use of wood structural systems, including glulam columns, LVL rafters, the lobby's unique wood-and-steel 3D space-truss system, and an entry canopy with skewed glulam columns. The blue-stained cedar exterior cladding makes the Crested Butte Center for the Arts one of the most recognizable buildings in town.

ARCHITECTS
Steinberg Hart
Los Angeles, CA

Andrew Hadley Architect
Crested Butte, CO

STRUCTURAL ENGINEER
Resource Engineering Group
Crested Butte, CO

GENERAL CONTRACTOR
Black Dragon Development
Crested Butte, CO

PHOTOGRAPHY
James Ray Spahn
Crested Butte, CO

Tom Kessler Photography
Omaha, NE

Factory-built, prefabricated timber components help transform this Oakland commercial building into affordable (and affordably made) housing.

REGIONAL EXCELLENCE

316 12th Street

This unusual project saw the transformation of a one-story commercial building into a five-story, mixed-use building, all within the original footprint. The first two floors, which feature commercial and office space, were built with glulam columns and beams and CLT floor panels. Above them sit three stories of market-rate, affordable apartment units built with floor panels point-supported on columns, both made from a different veneer-based CLT. This unique combination of framing systems resulted in a project with estimated cost and time savings of 20% to 30%, due in large part to the team's use of factory-built, prefabricated timber components. By retaining the masonry facade of the original structure, the new 35,000-sq.ft. building fits seamlessly into an historic area of downtown Oakland while still providing modern spaces. The project served as a pilot for future mass timber affordable housing developments, allowing the team to test varying approaches to lateral systems, acoustic isolation, and interior finishes.

ARCHITECT/
GENERAL CONTRACTOR
oWOW Design
Oakland, CA

STRUCTURAL ENGINEER
Altos Structural Engineering
San Francisco, CA

GENERAL CONTRACTOR
oWOW Construction
Oakland, CA

PHOTOGRAPHY
Mike Baker
Oakland, CA

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QUÉBEC

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