Best of 2021

The year’s best in wood design + construction.

Featuring designs from Lake|Flato, Engberg Anderson Architects, Hickock Cole, SmithGroup, Cooper Carry, Berners Schober, Skylab Architecture, Hartshorne Plunkard Architecture, CO-OP Architecture, and more
2021 has been a ground-breaking year for wood construction. From a first-of-its-kind mass timber hotel in Austin, TX to the adaptive reuse of a 130-year-old Milwaukee, WI warehouse, get inspired by these cutting-edge designs and discover ideas for your next project.

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Timber Lofts

To transform the site of a 130-year-old Milwaukee warehouse into a vibrant 60-unit multifamily, mixed-use complex, Engberg Anderson Architects and Catalyst Construction turned to mass timber for this adaptive reuse and redesign.

As Wisconsin’s first mass timber structure, Timber Lofts’ unique design unites the renovation of an 1891 heavy timber warehouse with a sleek, new four-story cross-laminated timber (CLT) addition. The 28,000-square-foot addition connects to the existing brick building at each floor, creating a continuous interior loop that showcases the exposed wood in both the old and new structures.

The apartments inside offer an eco-friendly, warm aesthetic featuring exposed glulam columns and beams and CLT ceilings highlighted by floor-to-ceiling windows.

The renovation preserved and reused original wood flooring from the historic landmark. Individual boards were meticulously deconstructed, stacked, and set aside for cleaning and sandblasting to remove paint, exposing the wood’s maple grain. The original arched window openings, rolling fire doors, and exposed heavy timber frame, including wood joist rafters, were also preserved.

“We received many compliments from people in the neighborhood about how beautiful the addition is,” explained Ann Pieper Eisenbrown, owner and president of Pieper Properties, the developer for the project. “I think that’s a major accomplishment because it’s not just about looking historic or just looking like the neighborhood—we want to harmonize. That’s what keeps it interesting.”

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We took a lot of time making sure there was a seamless transition from the existing structure to the new building, and you can see it right away - rustic timber beams and original hardwood flooring in the historic building, complemented by warm, raw CLT in the new structure.

—Dan Wood, Project Superintendent | Catalyst Construction
Project Name: Discovery Center
Location: Philadelphia, PA
Architect: DIGSAU
Developer: East Park Leadership and Conservation Center
Photo: Halkin Mason Photography
Austin’s First Mass Timber Hotel Welcomes with Wood

Austin-based hospitality group Bunkhouse delivers unique travel experiences, and their project Hotel Magdalena is no exception. Designed by award-winning architecture firm Lake|Flato, the 89-room boutique hotel is constructed from mass timber, giving added warmth to its mid-century meets rock-n-roll aesthetic. Located in the heart of Austin’s South Congress neighborhood, the hotel includes a ground floor restaurant, swimming pool, outdoor pool bar, and event space that all integrate into the central courtyard terraces.

The first-of-its-kind in North America, Hotel Magdalena includes three buildings at two, three, and four stories, respectively. Dowel-laminated timber (DLT) panels on light wood frame bearing/shear walls provide the primary structure for the hotel room interiors. Exposed timber walkways canopy the outdoor corridors and extend into guest rooms composed of gapped timber panels on a glue-laminated timber (glulam) substructure.

“In the past, people have thought about hotels as a place where they go into their rooms, close their blinds, and lock themselves away,” said Michael Britt, associate at Lake|Flato. “We are flipping that concept to bring people outdoors into a vibrant, shared experience with a shared sense of community that so many are looking for right now. That’s what’s truly unique about the project.”

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By exposing the wood structure to guests, mass timber helps tell the story of how the hotel was built while paying homage to the premises. The exposed wood also provides a warmer, more textured material in the guest rooms and common outdoor porches.

—Amar Lalvani, CEO | Standard International + Bunkhouse
Project Name: Catalyst
Location: Spokane, WA
Architect: Michael Green Architecture (Design Architect), Katerra (AOR)
Developer: Avista Development, McKinstry, South Landing Investors LLC
Photo: Ben Benschneider
First Mass Timber Overbuild Differentiates in D.C.

A first-of-its-kind for Washington D.C., 80 M Street is an innovative mass timber overbuild that adds two stories of trophy office space and amenities to an existing seven-story commercial building.

At a current height of 90 feet (seven stories), 80 M Street was a perfect candidate for vertical expansion. The project’s developer, Columbia Property Trust, aimed to differentiate the District’s crowded commercial market and worked with architects at Hickok Cole to envision a 100,000-square-foot mass timber overbuild.

The decision to use mass timber was driven by a number of factors—chief among them was timber’s light weight. According to project architect Tom Corrado, the existing building could not handle the load of a traditional concrete overbuild without adding structural reinforcements at added cost. The overbuild features glulam beams, columns, arches, and trusses, along with CLT walls, floors, and ceiling. Adding to the timber aesthetic are wood products from a variety of species including spruce, pine and fir.

“[In addition to amenities like conference rooms and fitness facilities,] we’re going to have something that’s special and unique,” said Pat Keeley, senior vice president at Columbia Property Trust. “That has already resonated with a large tenant that has pre-leased more than 50 percent of the space. We’re confident in a post-Covid world that the best product will continue to do well, and that 80 M Street will represent the best product in the market.”
Columbia recognized the increased marketability of having 16 feet floor-to-floor with mass timber instead of 9.5 feet floor-to-floor with concrete.

—Jason Wright, Senior Associate | Hickok Cole
Project Name: Bob & Leona DeArmond College & University Center
Location: Coeur D’Alene, ID
Architect: Integrus Architecture
Developer: Lewis-Clark State College, University of Idaho, and North Idaho College
Photo: Lara Swimmer Photography
Eco Homes Infill Brings Sustainable Single-Family Construction to Detroit

This urban infill project, featuring 13 new single-family eco homes, shows how innovative light-frame wood construction can breathe new life into the historic Midtown Detroit neighborhood, while meeting rigorous sustainability and net-zero requirements.

To accommodate small lot sizes, the eco homes range from 1,400 to 1,800 square feet, with multilevel, two- and three-bedroom models. Architect SmithGroup took on the project pro bono, organizing an internal design competition that generated five-building typologies—this created an individual distinction for each home, while complementing the surrounding neighborhood.

What differentiates the eco homes is their sustainable design equipped to meet net-zero requirements. Green features include solar panels on the roof, low-VOC paint, low-flow toilets, and energy-efficient appliances.

The homes feature natural cedar and fiber siding, and include a tight envelope and heavy insulation, along with rainwater collection. Sloped gable roof systems and porches in the front and back yard encourage social interaction between neighbors.

“Watching the city come back has been wonderful,” said Paul Urbanek, vice president and design director at SmithGroup. “For me, the coolest thing about this project is what it means for Detroit overall. It sets a new direction for the city when it comes to quality residences, and the neighborhood is taking it to heart.”

Detroit Eco Homes

Project Name: Detroit Eco Homes
Location: Detroit, MI
Architect: SmithGroup
Developer: Midtown Detroit, Inc.
Size: >1,800 ft²

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I’ve always felt like this neighborhood had a lot of potential. There has been a lot of disinvestment and a lot of vacancy - vacant land, vacant buildings. We were asking ourselves, ‘how can we do an appropriate urban infill’?

—Sue Mosey, Executive Director | Midtown Detroit, Inc.
Project Name: Brentwood Public Library
Location: Brentwood, CA
Architect: Fog Studio
Developer: City of Brentwood
Photo: JNM STUDIO
The Andy Quattlebaum Outdoor Education Center at South Carolina’s Clemson University is the university’s first mass timber facility, and one of only two in the country built using locally-sourced and manufactured southern yellow pine CLT. The center has become a campus destination to unite the student body and facilitate outdoor recreation, while promoting physical, mental, and emotional health.

The center includes instructional spaces for academics, yoga, rowing, aerobics, and events. There are specialized areas dedicated to bike repairs, adventure trip planning, and experiential learning. Additionally, amenities include a boathouse with a wide range of rafts, kayaks, stand up paddle boards, and equipment. The building sensitively sits on the edge of Lake Hartwell, providing outdoor gatherings spaces such as a fire pit, covered patio, nature trails, and elevated porches.

The CLT floors, roof, and shear walls are left exposed throughout the building, adding visual warmth and biophilic benefits. In addition to the CLT, the structural framing is built of glue-laminated beams and steel columns.

“We were able to fine tune the design of mass timber to really take advantage of the CLT planks, maximize the spans, reduce the number of framing members, and eliminate the ceiling finishes since we were going to leave it open, exposed, and beautiful,” said Brian Campa, principal at Cooper Carry, the architect for the project. “All of those things in play allowed us to create a beautiful aesthetic using a more cost-effective approach with mass timber vs. steel.”

Timber Rec Center Becomes University’s ‘Finest Front Porch’

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I consider this Clemson’s finest front porch. It will be a place visited by millions in the years to come, and prospective students will choose to come to Clemson because this building is here.

—Patricia Layton, Director, Wood Utilization + Design Institute | Clemson University
Project Name: NW 28th Brewery + Office
Location: Portland, OR
Architect: ZGF Architects
Developer: OSB2LAN MGM LLC
Photo: Josh Partee
Award-Winning Design Brings Authentic Truth to Short-Term Housing

Architect Berners Schober’s Freedom House redesign in Green Bay, WI, is a wood-frame, cedar-clad facility that demonstrates how transitional housing design can be elevated to award-winning architecture.

“When people consider short-term housing, they think it shouldn’t be visually engaging. It was important for us to illustrate that these buildings can be designed well,” said Ian Griffiths, president of Berners Schober.

Replacing an outdated and decaying structure, the team pursued a two-building design that provides emergency housing, food, and support to families, as well as administrative space for staff. A bifurcated plan makes best use of a challenging site, separating the two structures but linking them with a glazed bridge. The repetitive shape of the steep gables and rhythmic openings can hold up to 16 families in private rooms with dedicated bathrooms.

After consideration of other building materials, the team chose light wood-framing for all primary structural elements including the walls, roof, and floors.

One of the property’s most distinctive and welcoming features is its exposed, Western red cedar façade, offering a nod to Wisconsin’s ample forest surroundings and local, natural building materials.

“There is a truthfulness to the material,” explained Griffiths. “It’s not trying to be something it’s not. That message transcends into the people and the programs available at Freedom House.”
The form of the dormitory structure is the simplest way we think about a house—almost how a child would draw a house. The authentic simplicity ultimately makes it feel more like a home.

—Steve Srubas, Associate | Berners Schober
Project Name: Jones Beach Energy & Nature Center
Location: Wantagh, NY
Architect: nARCHITECTS, PLLC
Developer: NYS Department of Parks, Recreation & Historic Preservation
Photo: Michael Moran
Outpost, a mixed-use development in Hood River, OR, modernizes the industrial waterfront in an exposed, mass timber design that unites commercial and retail environments. The project elevates street-level retail to a shared second floor experience, where tenants and guests mingle with makers and retailers while enjoying waterfront views from an elevated vantage point.

Outpost’s two 15,000-square-foot, three-story buildings are joined by a central public plaza that includes a central elevator, outdoor fireplace, and partially-covered pavilion. A double-height observation deck and generous outdoor connections provide visual access to the day-to-day industrial activities within the complex.

Another quality that differentiates Outpost is its use of locally-sourced timber. The buildings are constructed almost exclusively from wood, including glulam beams and exposed Douglas fir decking. The project’s unique façade was designed to demonstrate how various wood species can live together harmoniously, serving as a metaphor for the property’s diverse tenant base. Timber’s durability and the industrial-grade finishes also provide protection from the harsh waterfront elements, explained Brent Grubb, managing principal at Skylab Architecture, the architecture firm for the project.

“Our goal was to use as much wood as possible. That shift has been driven by sustainability, by cost and by the beauty of wood itself,” he adds.
Industrial production is more exciting to the general public with businesses like breweries, coffee-roasters, and soft-goods prototyping. We’re using architecture and site planning to showcase these businesses, resulting in a symbiosis between industrial and retail.

—Claudia Munk-von Flotow, Chief Operations Officer | Key Development
Project Name: Cedar Speedster
Location: Seattle, WA
Architect: Weber Thompson
Developer: Revelation LLC
Photo: Built Work Photography
Tall Timber Differentiates in Coveted Cleveland Locale

When Chicago-based Harbor Bay Real Estate acquired a coveted corner lot adjacent to Cleveland’s well-known West Side Market, they embraced the opportunity to honor the cultural prestige of their historic surroundings. The resulting development, dubbed INTRO, will be the city’s first—and one of America’s tallest—mass timber buildings.

Partnering with design firm Hartshorne Plunkard Architecture (HPA), Harbor Bay’s 115-foot tall timber, 512,000-square-foot complex will offer 300 apartments—many with unobstructed lake and skyline views.

The project also features an acre of public green space, 40,000 square feet of new ground-floor retail, and a top floor event venue with 55-foot-long roof trusses.

“Timber started out as an aesthetic differentiator,” said Dan Whalen, vice president of design and development at Harbor Bay Real Estate. “But as we studied it more and more, it became advantageous across a number of channels—from the constructability and the speed; the cleanliness of the construction site; and the renewability and sustainability of the material—the story just started to become so strong and powerful.”

Nearly half of the building’s interior surfaces will feature exposed structural wood, including precisely cut glulam beams and columns, as well CLT floors and ceilings in the units’ bedrooms and living rooms. The project is set to be completed in spring 2022.

Designed to stand the test of time, Whalen adds, “In 50 years, people will look at this building and know that it’s not just another apartment building. Timber helps us bring that to fruition.”
Now that we have this wealth of information and knowledge about mass timber construction, other clients are looking at us as market leaders and experts in this niche. They see what we’re doing and asking, ‘How do we do this with our site?’

—John Mitchell, Associate Partner | HPA
Project Name: Princeton Embodied Computation Lab
Location: Princeton, NJ
Architect: The Living (Design Architect), NK Architects (ADJ)
Client: Princeton University
Photo: Michael Moran, Pablo Marvel
Redeveloped Railyard Ushers In New Generation of Timber Construction

Railyard Flats is a four-story, mixed-use project in Sioux Falls, SD that includes 41 loft-style apartments atop ground-floor retail and two-stories of office space. The project features dowel-laminated timber (DLT), making it the first mass timber building in the state.

Developed by Pendar Properties and designed by CO-OP Architecture, the 83,000-square-foot project's aesthetic pays homage to historic local railroads of the past, while offering all the comfort, amenities and advanced technologies of a modern-built structure.

Visual-grade glulam beams and columns and mass timber decking serve as the primary structure, while light-frame wood and brick cladding form the walls. The innovative hybrid structural design leaves an abundance of wood exposed, adding warmth to the building's interior. Prefabricated 5.5-inch DLT panels were ideal for Railyard Flats' long horizontal spans, and the thinner material proved more cost effective than a CLT alternative. DLT also helped designers improve the project's visual appeal of the exposed ceiling through the addition of a fineline kerf profile to the exposed board edges.

As Gerald Epp Jr., business development engineer at StructureCraft, the project's timber engineer and supplier, remarked, “What we love about timber is that the exposed structure becomes a unique part of the architectural expression. We wanted to offer something unique leveraging the value, the ambiance, and the aesthetic of exposed wood. It's also sustainable and extremely efficient from an engineering perspective.”
We wanted to build a community and tell a story. The more we discovered about mass timber - from the aesthetics to the environmental qualities - the more we realized this was the direction we wanted to go.

—Anne Haber, Partner | Pendar Properties