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Architectural Woodwork Institute

design solutions

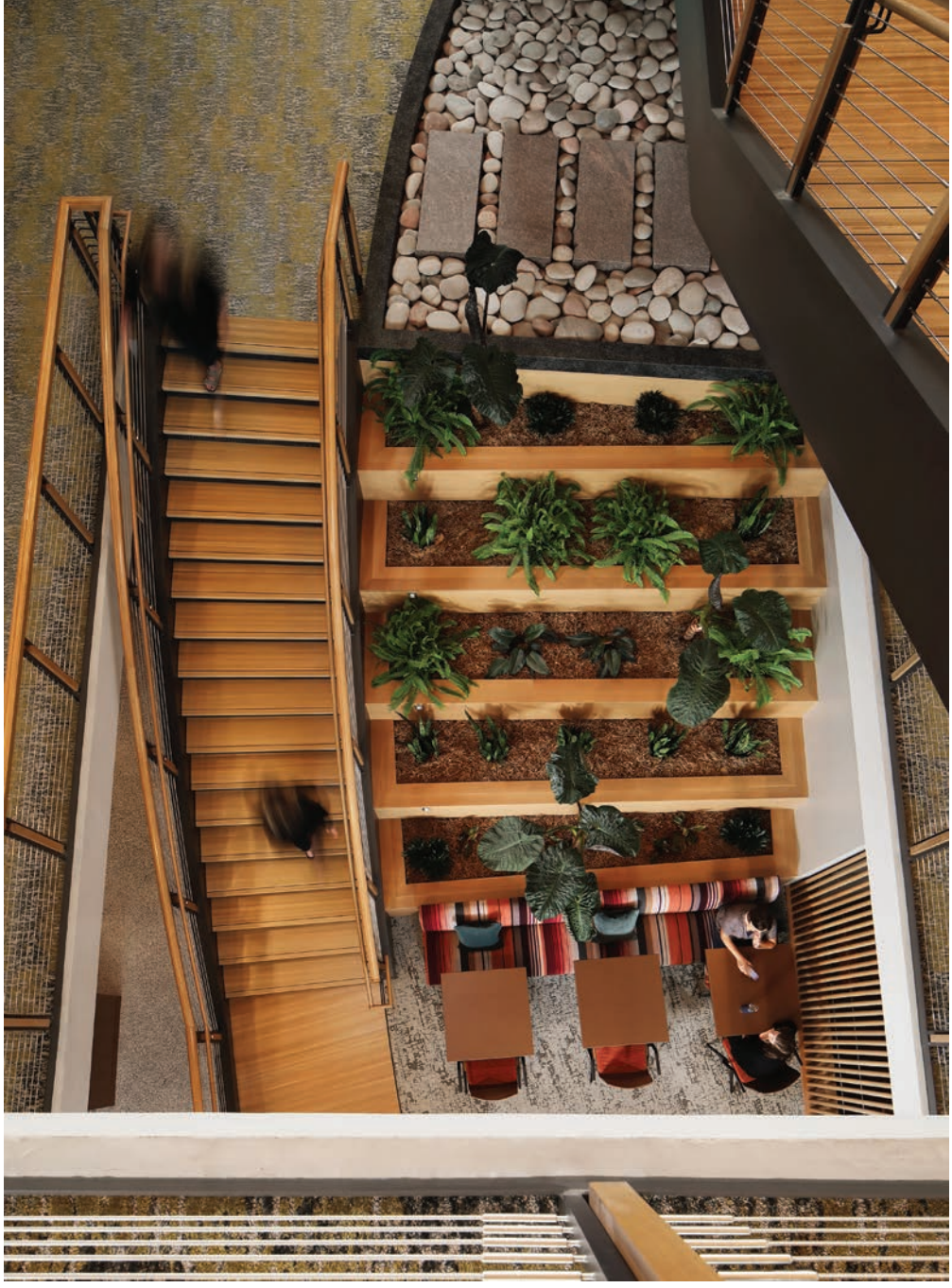
Winter 2024 | $6.25


Research
Ready.
Life Sciences Company Builds New
Research and Development Facility.

Promega Corporation is a leader in providing innovative solutions and technical support to the life sciences industry. The company's portfolio of over 4,000 products supports a range of life science work across areas such as cell biology; DNA, RNA and protein analysis; drug development; human identification and molecular diagnostics. Promega is headquartered in Madison, Wisconsin, with branches in 16 countries and over 50 global distributors.

To support its mission and continued growth, Promega embarked on a comprehensive expansion of its primary headquarters location, significantly increasing operational capacity through a state-of-the-art research and development facility comprising 283,000 square feet of new construction, as well as an expansion of the campus' primary central utility plant. With labs specifically designed and equipped to invent technologies and a building design that fuels creativity, innovation, cross-pollination and collaboration, the Kornberg Center will support core product and technology development in life science research, cellular and molecular biology, genetic identity, clinical, diagnostic, and scientific applications and training for the Promega Corporation.

The Kornberg Center is located on the Promega Campus in Fitchburg, Wisconsin. From inception in December 2017 to completion in January 2021, the duration of the new construction facility was just over three years. The architectural design firm for the project was Ramlow/Stein Inc., Milwaukee. Architectural woodwork was fabricated by Lange Bros. Woodwork Co., Inc., an AWI member firm located in Milwaukee.



Inspired by Nature

The Kornberg Center takes inspiration from nature, scientific workflow, and Promega's people-centric culture of community, explains Ramlow/Stein's Steve Wellenstein. Featuring natural materials and curving forms that are not typically seen in buildings with primarily laboratory functions, the building also houses workspaces, meeting and collaboration rooms, wellness facilities, and community spaces. With a focus on employee wellness, occupant comfort, building performance, and energy conservation, the design team aimed to utilize state of the art technology to exceed standard sustainability metrics, ultimately reducing energy use by 65% relative to comparable facilities.

The building design includes specialized spaces such as an exhibition space, multipurpose auditorium and fitness courts, sound therapy room, kitchen and dining, greenhouse, outdoor courtyards, and an accessible rooftop landscape. Natural materials such as brick, stone, terrazzo and wood speak a vernacular language throughout the campus.

at a glance

AWI MANUFACTURING MEMBER:

Lange Bros. Woodwork Co., Inc.

LOCATION:

Milwaukee, Wisconsin

ESTABLISHED:

1932

FACILITY:

60,000 square feet

Licensed QCP Manufacturer

"These textures and earthy palette lay the framework for commissioned original artworks, two water features, and an abundance of plantings," says Wellenstein. "Spaces were designed with emphasis on achieving thermal comfort through a displacement air system with radiant heat and natural ventilation, at least 1.5% daylight factor and views, and optimal acoustic environments."

Nestled in a clearing and surrounded by woodlands, the design form is reminiscent of a four-leaf clover with a three-story atrium at the center. The leaves of each clover contain state-of-the-art laboratory spaces, in-lab collaboration, open workspace, and meeting areas -- all of which include open frontier space to test emerging technologies and for optimal future buildout and flexibility. The central atrium glues this amalgamation of functions together with "floating" bridges, monumental staircase, collaborative spaces, and hideaway focus nooks. The extensive use of wood becomes the dominant aesthetic challenged only by expansive glass providing layers of transparency and flooding the building with daylight and views.

A deep forest green, teal, and chartreuse palette provides balance to the warmth of the brick and wood. "As this was a project for scientists, the design approach took on a highly scientific nature as well leveraging many data driven approaches to the different challenges and opportunities," he continues.

"During the programming phase the team conducted an in-depth user survey tracking the percentage of time spent in each type of work mode, whether lab, desk, or relaxation." A 100-year-old Oak tree that the owner wished to save serves as a beautiful beacon for employees as they approach the west entrance and proclaims a definitive company value for preservation of native landscaping.

Warm Walnut

The beauty of Walnut is the epicenter around which this entire project navigates, says Wellenstein. "How it was brought into each visual plane with color, texture, and motif was paramount to the vision for the building in addition to its sustainable benefits."

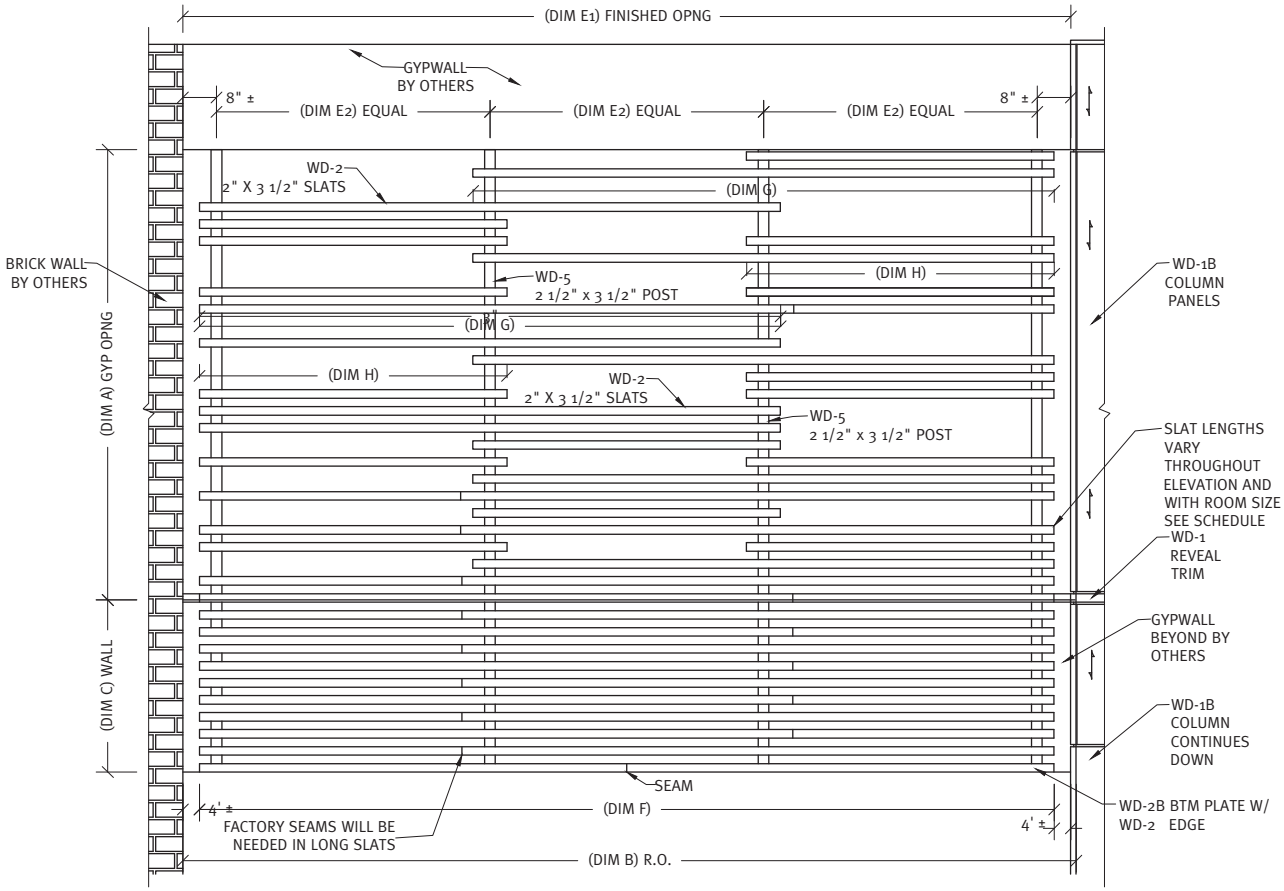
According to Lori Poull of Lange Bros. Woodwork, the firm fabricated wall panels, radius handrails, staircases, fireplace wall system, radius window seals, and wall panel and decorative ceiling fins.

WALNUT

"One hundred feet of radius handrails were provided for two staircases," she notes.

Wood bridges are the keystone features that are highlighted and complemented by monumental Oak stairs and privacy screen. The floating bridges link curving forms across the activity hub, supported by 'queen posts' with ornately shaped connections emulating the clover-shaped atrium. These wood columns, along with steel tension rods, allow for long clear spans of over 100 feet while providing visual elegance. The roof and bridges are major structural elements left exposed so people can appreciate the wood's natural beauty.

> "We are your partner, and from concept to completion, Lange Bros. collaborates with architects and contractors to ensure each detail is captured, translated into the design, into the wood, into the finish, and installation to create an inspirational interior."
>
> **– Lori Poull, Co-owner, Lange Bros. Woodwork Co., Inc.**



ELEVATION @ SLAT WALL PANELS

Live edge Walnut slabs were harvested from the site and notched into found boulders for a seating feature in the center of the atrium. Walnut became a spring point for the design palette, creating the backbone with two-story veneer columns and eight-foot slab doors. To balance the richness of the Walnut, a lighter tone rift sawn White Oak was used for acoustic ceiling baffles and wall paneling, windowsills and railings, as well as veneer casework throughout. Black Locust trees were also harvested from the site, de-barked and treated to become sculptural elements in the 'Beer Garden.'

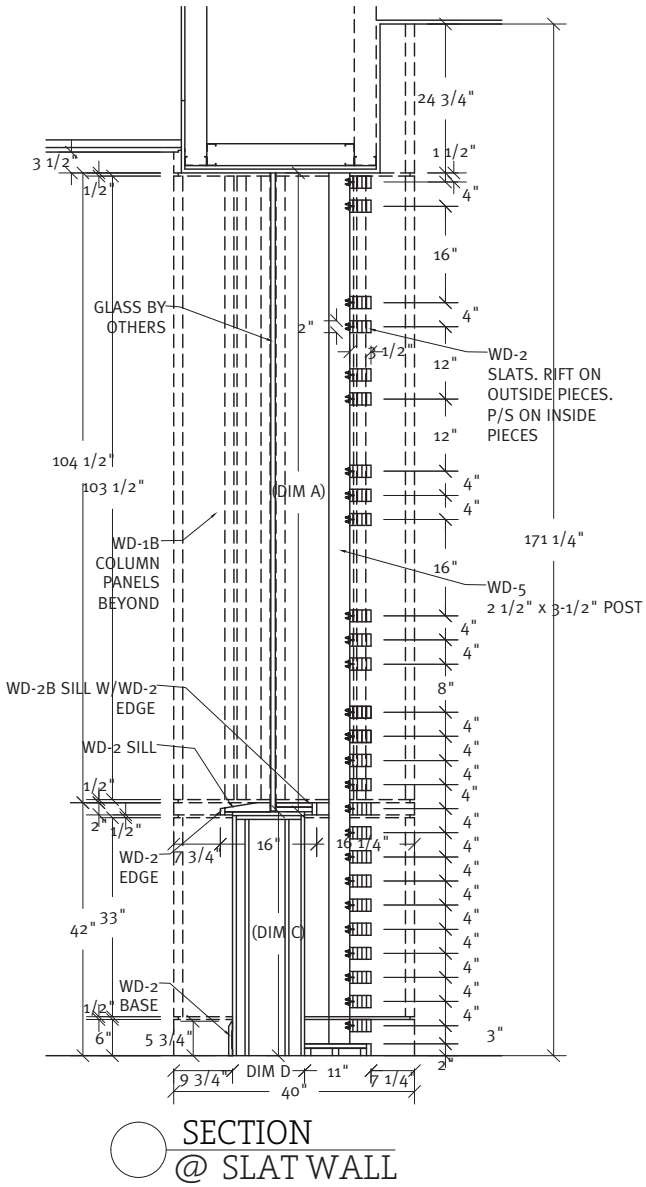
WHITE OAK

Special Elements

Lange Bros. contributed numerous remarkable woodworking features in Kornberg, adds Wellenstein. “One of the most stunning structures can be seen upon entering the building. Once past the doors, you are struck with a stacked lab block visual that spans three levels and is connected through the central atrium. The custom, curving monumental staircase descends to the ground level, creating ‘third spaces’ on the landings and in the underutilized space below, known as the Fort.

The planters, handrails, and panels curve laterally and vertically which was incredibly intricate and difficult to detail, fabricate and install. The quality and consistency of the veneer panels are excellent with exquisite connection details at corners and dowel accents.”

The attention to detail extends to all the wood elements throughout the building including a special feature seen on the circulation path from atrium to the gymnasium, he continues. “Eighteen-foot-high vertical baffles of alternating Walnut and Oak on an Oak background create a stylized spectrogram of Promega’s CEO saying ‘Seeking Sound Science’. The feature is lit from above.



SECTION @ SLAT WALL

Not to mention that the gymnasium features acoustic wood wall paneling and a linear baffle ceiling design that conceals drop down projectors, elevating the multipurpose amenity to a standard that supports global presentations.”

Poull notes that the wall system in front of the windows with moveable sections, as well as the cozy Oak paneled Fort meeting room under the stairs were particularly challenging.

Precision Team

“Our working relationship with Lange Bros. has been nothing short of exceptional,” summarizes Wellenstein. “From the outset, we were blown away by the outstanding quality of work they consistently delivered. Their meticulous attention to detail not only elevated the project but also played a pivotal role in its triumphant outcome. The Lange team members supported and collaborated with the design

team on almost every part of the project. They generated many mock-ups of details to test concepts and ensure quality and their unwavering dedication to excellence truly set the foundation for the design's success."

There was open communication on all levels of this project to help in keeping everything moving forward, agrees Poull. "Regular meetings kept track of our progress and the entire relationship was very collaborative."

PROJECT:
Kornberg Research & Development Center
Fitchburg, WI

PROJECT OWNER:
Promega Corporation
Fitchburg, WI

WOODWORKER:
Lange Bros. Woodwork Co., Inc.
Milwaukee, WI

ARCHITECT:
Ramlow/Stein Inc.
Milwaukee, WI

GENERAL CONTRACTOR:
Kramer Brothers
Plain, WI

PHOTOGRAPHER:
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Oconomowoc, WI