ARCHITECTURE MN

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EDUCATION

Architects harmonize old and new on campus

BEST PRACTICE

Perkins and Will wins prestigious Firm Award

Honoring History

AN INNOVATIVE U GRADUATE PROGRAM POWERS RESEARCH

LAND O'LAKES' LEED-PLATINUM HEADQUARTERS EXPANSION

DIRECTORY OF ENGINEERING FIRMS

Minnehaha Academy rebuilds in the wake of tragedy

ARCHITECTURE MN

Architecture MN *is a publication of*
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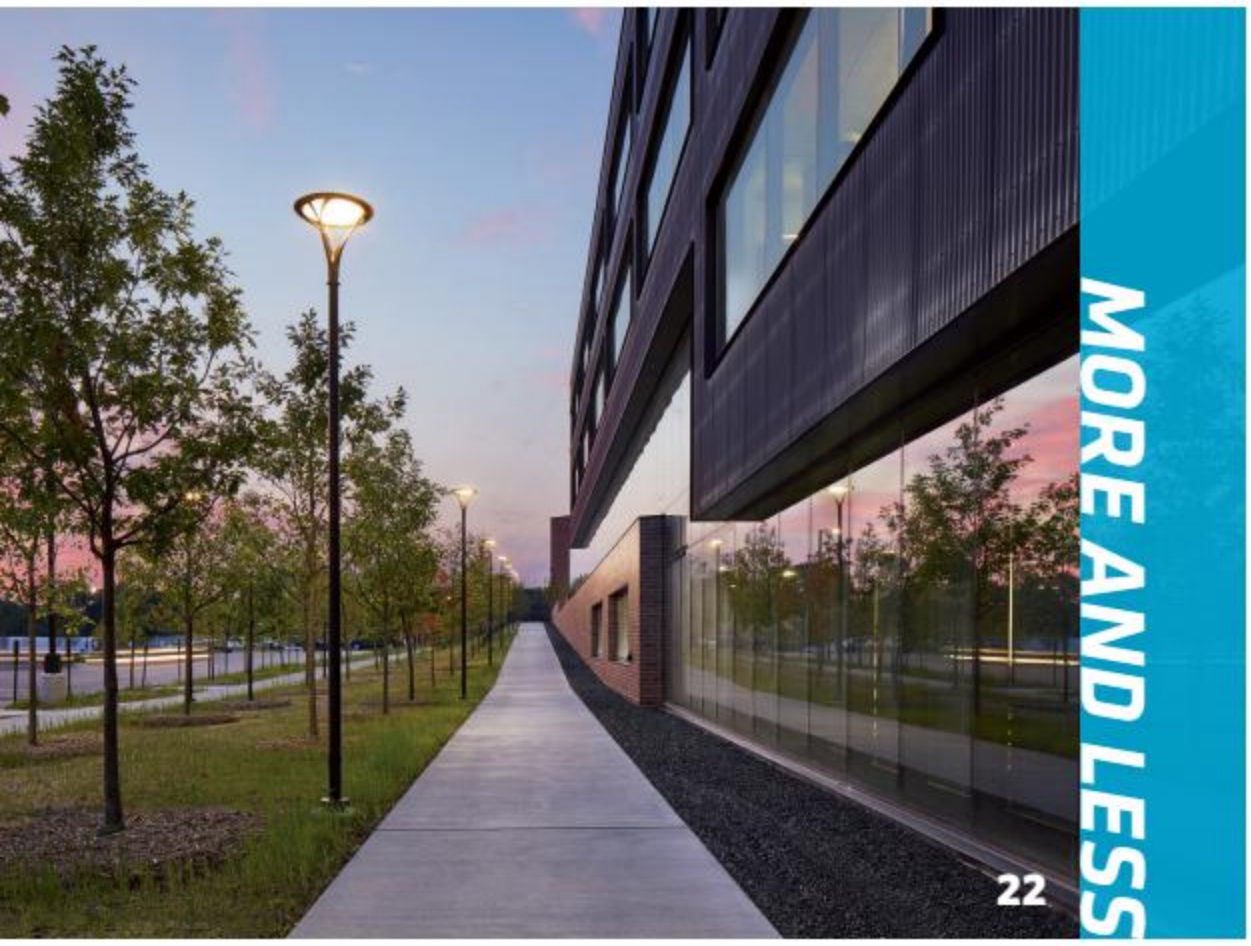
Architecture MN, the primary public outreach tool of the American Institute of Architects Minnesota, is published to inform the public about architecture designed by AIA Minnesota members and to communicate the spirit and value of quality architecture to both the public and the membership.

ON THE COVER
Minnehaha Academy Upper Campus
Minneapolis, Minnesota

"We're delighted that the worship tower made the cover. It's a beacon of hope built in the wake of tragedy, and the pivot point of the Upper Campus," says Gaffer Photography's **Corey Gaffer**. "And it gets even better inside: The prayer chapel and the steeple interior overhead are on our list of must-see architecture in Minnesota."

Features



Departments & Directories

DETAILS MATTER.

Major renovation plus two-story addition. // Includes new classrooms, kitchen cafeteria and support spaces. // Enhanced AV systems in every classroom. // Gender-neutral bathrooms. // New telecommunications throughout building. // Existing steam boiler system replaced with new high-efficiency hot water boiler system. // Ventilation ugraded by utilizing DOAS units with energy recovery. // Ventilation integrated into casework in classrooms. // Destratification fans in high-volume spaces to maximize thermal comfort. // Received Xcel EDA incentive.

Amazing is in the details. Make it amazing.

PROJECT: St. Paul Public Schools, Horace Mann School
ARCHITECT: Miller Dunwiddie
CONTRACTOR: Rochon Corporation
PHOTO: Gilbertson Photography
TYPE: Major Renovation + New Construction
SIZE: 66,500 Square Feet
MEP: Emanuelson-Podas

emanuelson-podas
consulting engineers

AIR POWER LIGHT WATER

ERIC MUELLER

Acknowledgments

It's the end of the calendar year at *Architecture MN* as I write this, and as I look back I'm feeling more thankful than ever for all the people who help bring the magazine to life. I wish we had the space to run a full-page portrait of each and every one.

In this issue alone, a few of our contributors outdid themselves. Corey Gaffer and his team at Gaffer Photography went the extra mile to make the cover photo one of our favorites from the past few years. It's easy to get the best work from your cover photographer when he is as inspired as you are to tell the story of Minnehaha Academy's rebuilt Upper Campus (page 32).

We also owe a debt of gratitude to writer Regina M Flanagan, who waded into some intellectual topics and conducted numerous interviews for her feature on an innovative graduate program in the University of Minnesota School of Architecture (42). The program powers leading-edge research endeavors in Minnesota architecture and construction firms, and we couldn't be happier with the way Regina translated the heady subject matter for a general audience.

Corey's and Regina's efforts stood out in this issue, but natural enthusiasm for stories that highlight Minnesota architects engaged in their communities is a thread that runs through the work of our entire extended team. It starts with LN Design's Kären Larson and Ingrid Noble, who have shaped the visual experience of *Architecture MN* for more than a decade, with award-winning results; and it continues in the contributions of our regular writers, photographers, and volunteer advisors (7). Together, these folks make our lean operation appear much bigger than it actually is.

For 2020, we wish all our readers a good measure of the creative collaboration and camaraderie we've enjoyed at the magazine this past year. And if you happen to know an *Architecture MN* contributor or two or have the good fortune to be introduced to one in the coming year, please take a moment to thank them for service above and beyond.

Christopher Hudson, Hon. AIAMN
hudson@aia-mn.org

INTERACT & CONNECT

Tre Søstre (page 64) on Instagram
@archmnmag

Perkins and Will works with the Center for Victims of Torture
architecturemn.com/videos

Yale University design travel on Instagram
#archmnmagnewhaven2019

@archmnmag

Loewen

Builder: Hendel Homes • **Architect:** Eskuche Design Group • **Photography:** Landmark

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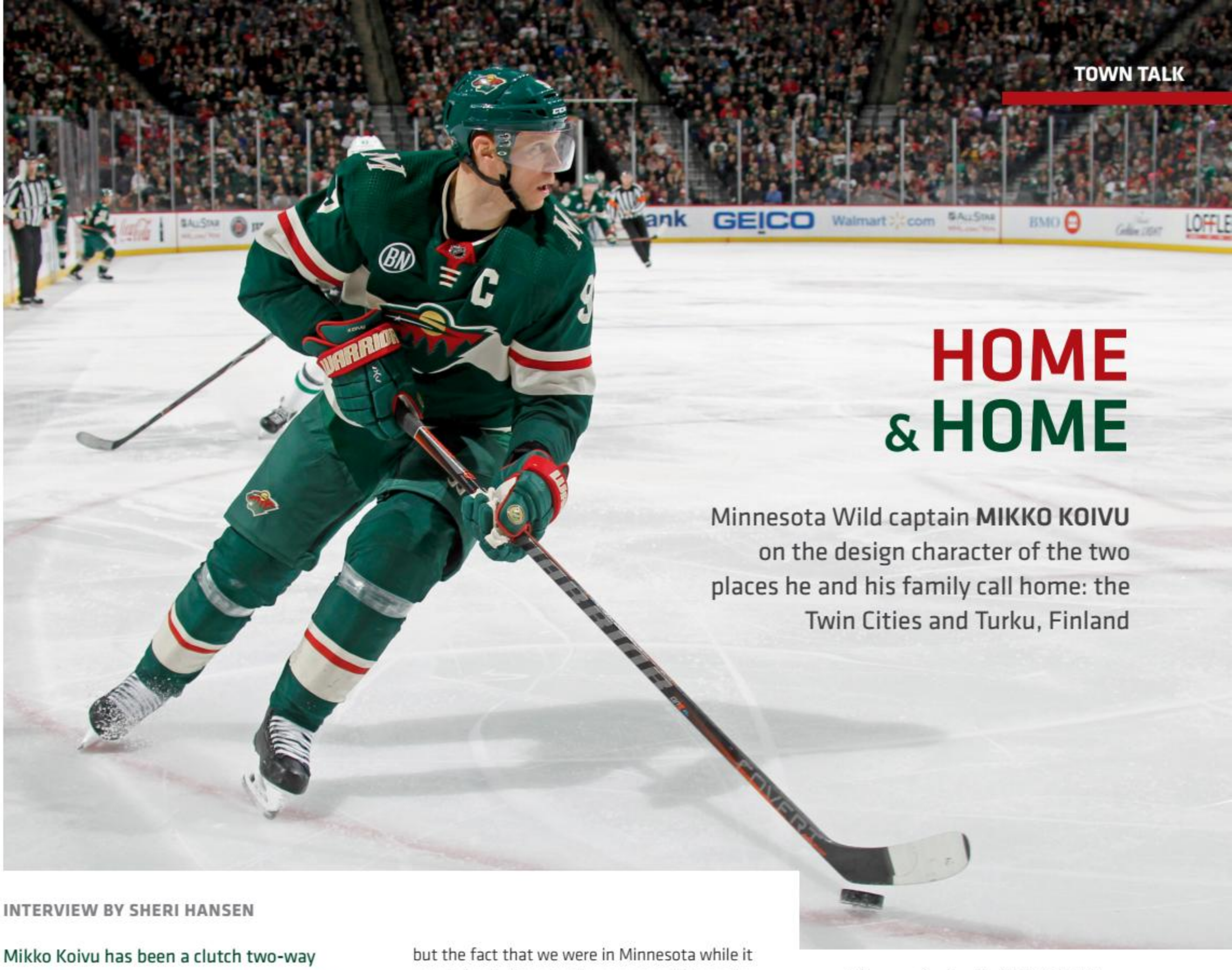
MINNESOTA WILD



HOME & HOME

Minnesota Wild captain **MIKKO KOIVU** on the design character of the two places he and his family call home: the Twin Cities and Turku, Finland

Koivu recently played in his 1,000th NHL game—all in a Minnesota Wild uniform.

INTERVIEW BY SHERI HANSEN

Mikko Koivu has been a clutch two-way forward for the Minnesota Wild since 2005 and team captain since 2009. He holds a number of franchise records, including for most points, assists, and games played. What fans may not know about this long-time Minnesota hockey fixture is that he recently completed a modern off-season residence in his hometown of Turku, Finland, on the Baltic Sea. *Architecture MN* sat down with Koivu to talk about his experience building the home and what he likes about Minnesota architecture.

Tell us a little bit about your house in Finland.
It was finished about a year ago. It was a long project; we had to tear down two houses that were at the end of their lives. Obviously, there was a lot of planning that needed to be done, since we were basically starting from nothing. I didn't realize how much effort it takes and how many of the little details you have to work through. It was stressful, but the fact that we were in Minnesota while it was being built made the process a little easier to enjoy. We had a good crew running the project, and I knew we could trust them. We're really happy with the home.

You chose a modern style for the house. Is that something that's common in that part of Finland, or do you just prefer modern?
It was a little of both. The previous houses were a lot older, but they were similar in style to the home we built; we didn't want to change [the character of the property] much. The style of the house sits well in nature. When you're looking at it from the sea, it doesn't pop out like a big castle; it blends into the setting. We really like that. It gives us privacy as well.

The most important thing was making sure we had views of the water throughout the house; that was one of the main reasons we used an architect [Pekka Mäki of Sigge arkkitehdit]. The house is designed so that you can see the Baltic

>> *continued on page 48*

VIDEO FEATURE:
For a glimpse of the Koivu home in Turku, Finland, watch the December 12, 2018, edition of *Becoming Wild* on *wild.com* or YouTube.

Steel reduces waste and features a material recovery rate greater than 98%! Structural steel features an incredibly sustainable manufacturing process. Consider these facts:

- The structural steel making process boasts a 95% water recycling rate with no external discharges, resulting in a **net consumption of only 70 gallons per ton.**

- **Steel is the most recycled material in the world.** Domestic mills recycle more than 70 million tons of scrap each year and structural steel has a 93% recycled content!

- **Steel production** productivity levels are up by a factor of 24 and labor hours have been reduced from 12 to just 0.5 per ton since 1980.

- **Steel's carbon footprint** is down 37%, energy use has decreased 32%, and greenhouse gas emissions have dropped by 45% over the last 40 years.

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Renewable Energy Partners purchased a 22,000-square-foot building in North Minneapolis for the purpose of creating a technical training facility.

PERFORMANCE AREA SPOTLIGHT

EQUITY

An interview with Renewable Energy Partners founder **Jamez Staples** on his company's efforts to foster equity in the built environment through a job training center for green-energy careers

By Sheri Hansen

The equity category in the 21st Century Development (21CD) matrix seeks to shift the development paradigm from focusing on doing less harm to embracing our role as stewards and co-creators of a living future for all. It aims to transform how we think about every aspect of design and construction and encourages us to see opportunities to positively impact the social and cultural fabric of our communities. The equity category examines the connections between human-scale neighborhoods, community services, and nature, and assesses investment in equitable development practices.

Jamez Staples is the founder and CEO of Renewable Energy Partners (REP), a company that is developing a training center for workers in the sustainability economy. *Architecture MN* talked with Staples about the 21CD equity category and the ways in which his work aligns with its goals.

Social entrepreneur Jamez Staples founded Renewable Energy Partners in 2013.

One of the focal points of REP's work is to provide greater access to green career training in economically challenged parts of Minneapolis. Why is that so important?

There are incredible opportunities for careers in solar-energy development and energy efficiency, which are essential parts of changing the energy footprint of our city and building a sustainable economy. But the training centers for these jobs are currently in outer-ring suburbs, or even farther from the core population areas. That means that transit options are extremely limited if you live in the heart of the city, and energy companies miss an untapped employee base because people can't get to the training.

> "It's important that every community, regardless of its location or median household income, know about the opportunities to create environmentally sustainable spaces and places for themselves."

REP wants to create pathways to help economically challenged communities get access to training and careers, which will help increase the power of the resilient economy of the future. It's all about awareness of and access to training so people are properly equipped and ready for success.

>> continued on page 50

ABOUT 21st CENTURY DEVELOPMENT

21st Century Development (21CD) is a new framework for achieving the best in development through radical incrementalism. How can we make strides in key areas of building performance to provide a healthy environment for all people and living systems today and into the future? How can we move, step by step, toward a regenerative reality in architecture? This robust tool for architects, developers, funders, and policy-makers provides detailed yet easy-to-digest answers.

Learn more about the 21st Century Development performance areas, development matrix, and case studies at *21stcenturydevelopment.org*.

AIA Minnesota's biennial Firm Award is the highest honor bestowed by the association, recognizing an AIA Minnesota member firm that has made outstanding contributions to the advancement of the profession of architecture. Perkins and Will is the 16th recipient of the award.

2019
FIRM AWARD

Best Practice

Recipient of the prestigious AIA Minnesota Firm Award, Perkins and Will's Minneapolis studio is changing its approach to design, process, and practice as if its future—and perhaps the profession's—depends on it

By Joel Hoekstra

GAFFER PHOTOGRAPHY

Practice, then preach.

That might be the mantra of Perkins and Will's Minneapolis studio if the 72-person studio wasn't located in the aw-shucks Midwest and thus allergic to boasting. Instead of preaching, the firm quietly but firmly seeks to *persuade*—and only after conducting considerable research, conferring with various partners, reflecting on past experience, and sometimes even carrying out experiments on itself. Case in point: In 2016, eager to better understand the experiences of clients who had converted to a "free address" workplace, Perkins and Will became the first architecture studio in the state to go fully mobile (September/October 2019 issue).

Former AIA Minnesota president Meredith Hayes Gordon, AIA, describes Perkins and Will's approach to design, process, and practice as "radical" in the best way—innovative, boundary-pushing, future-oriented. From practice innovations and advocacy efforts to teaching and pro bono work, the Minneapolis office is testing limits and traditions. The aim isn't attention or recognition but rather the honing of a set of principles and practices that can deliver a healthier future for the profession. Says Hayes Gordon, who nominated the studio for the AIA Minnesota Firm Award: "Perkins and Will is bridging disciplines to drive innovative thinking, build leadership, and engage communities."

Wrapped in corrugated metal and glass, the newest structure on the Land O'Lakes campus created an opportunity to shape an expansive central courtyard. The new outdoor space reinforces the cooperative's focus on fostering community and collaboration.

MORE *AND LESS*

Perkins and Will helps Land O'Lakes cultivate its future with a LEED-Platinum headquarters expansion that's big on work-style flexibility while reducing the cooperative's overall footprint BY JOEL HOEKSTRA

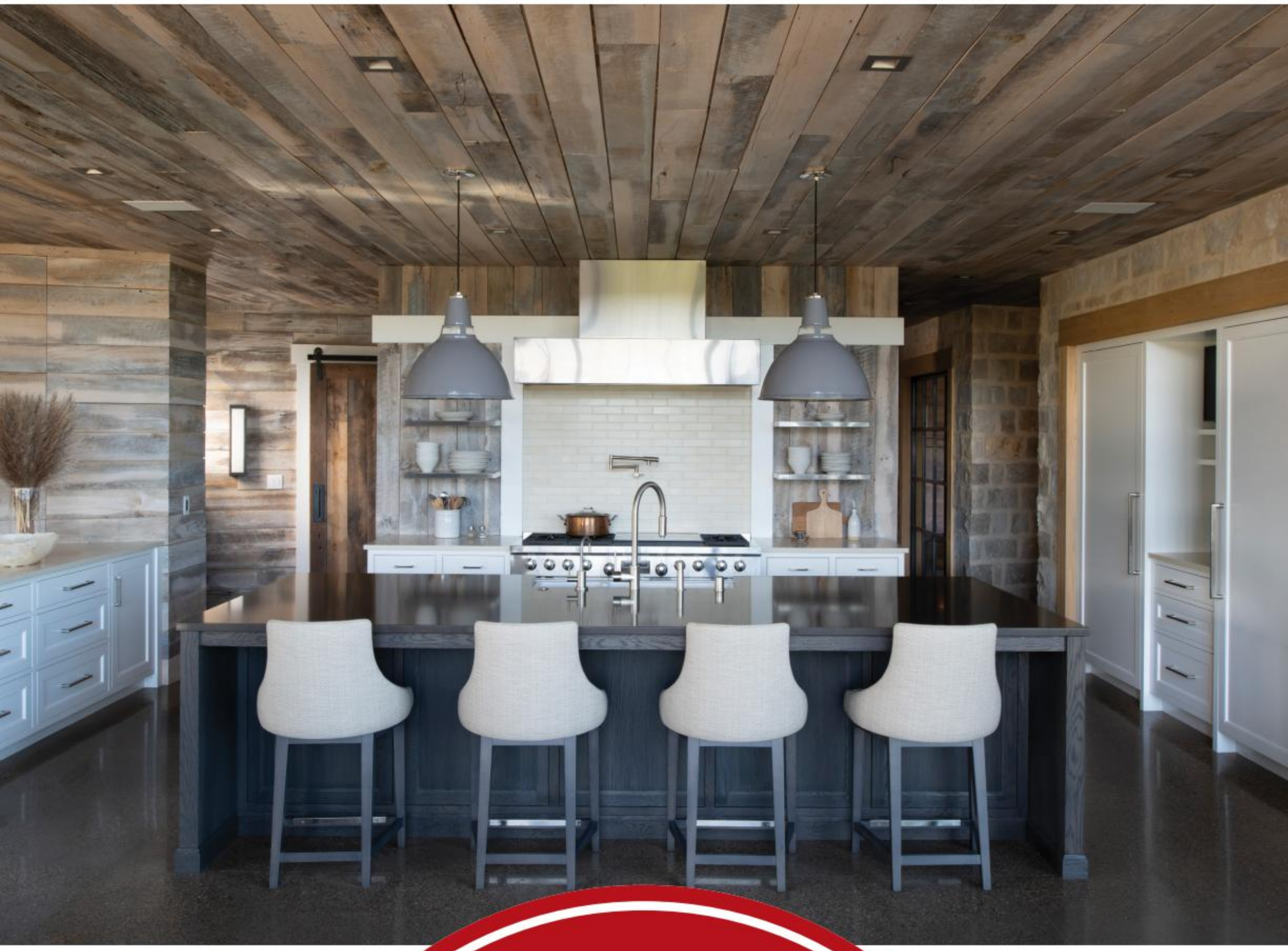
LAND O'LAKES, INC., WAS BURSTING AT THE SEAMS. As 2014 drew to a close, the Arden Hills–based cooperative—created to serve dairy farmers a century ago and still one of the largest producers of butter and cheese in the U.S.—had little available space in its headquarters or several rented spaces in nearby buildings. With leases coming up for renewal at year's end, leadership needed to decide what to do. Renew? Relocate? Build from scratch? Looking for additional perspective, company officials turned to the Minneapolis studio of global design firm Perkins and Will.

"They said, 'We need more space,'" recalls Perkins and Will principal Lisa Pool. "But we said, 'Hold on. Before you add more seats, let's talk about your business strategy and objectives. Let's look at how your employees work.'"

The design firm had a longstanding relationship with Land O'Lakes. Years earlier, the company had retained the Minneapolis studio to refresh its visitor lobby and, shortly thereafter, revamp the interiors of its main headquarters building. The original campus, built in 1980, consists of two red-brick structures—one for offices, one for research and development labs—that overlook a small lake. The remainder of the site was covered with woodland and parking lots.

Before settling on a course of action, Land O'Lakes surveyed its workers. Not surprisingly, it found that employees were eager to have more access to daylight and more collaboration spaces, as well as lounge-like spaces for individual work and an up-to-date fitness center. But perhaps most telling were these findings: If you factored in time

NO SHORTCUTS. EVER.



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HB

Minnehaha Academy
Rebuilt Upper Campus
Page 32

Blake School
Ice Arena Renovation
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MODERN HISTORY

Two of the oldest private schools in Minnesota—Minnehaha Academy and the Blake School—update their campuses with contemporary design that harmonizes with the surrounding historic architecture.

After a tragic event leveled a beloved building, Minnehaha Academy turned to Cuningham Group Architecture to help rebuild its campus and community By Joel Hoekstra

Minnehaha Academy Upper Campus

In August 2017, just weeks before classes were going to resume at Minnehaha Academy in Minneapolis, a gas explosion rocked the upper campus of the private Christian school. The blast took the lives of two people and critically injured a third. The historic heart of the campus—a century-old academic wing—was ultimately deemed unsalvageable.

Grief-stricken school administrators scrambled to set up classes in temporary quarters. Then, after a period of mourning, the community began to weigh options for moving forward. Speed was paramount, of course, but school leaders wanted more than a replacement building. They saw a once-in-a-generation opportunity to build a structure that could accommodate future changes in enrollment, technology, and teaching styles. Design-wise, they wanted a facility that blended into the existing campus yet looked contemporary and met modern expectations for environmental sustainability.

"It was a tall order," says Minnehaha Academy president Donna Harris. "We needed a partner who knew what we are all about, someone who understood us and could move fast."

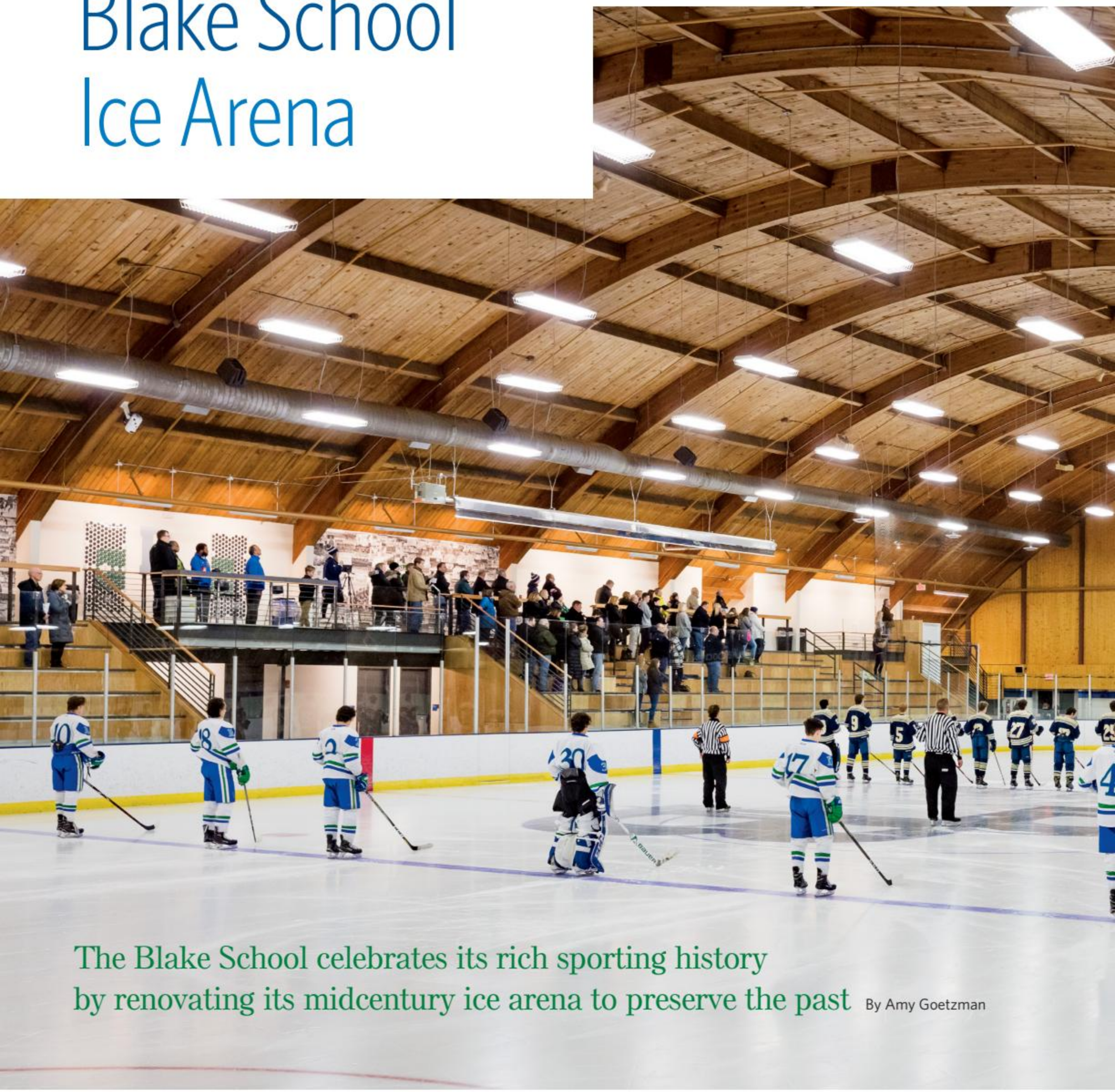
Prior to the explosion, the school had retained Minneapolis-based Cuningham Group Architecture to do master planning and designs for a new STEM lab. Cuningham's deep experience in

Top left: The main entry. The hand-molded tile cladding the two academic wings was made by a Danish brick manufacturer that's been in business since 1791.

Top right: Angularity continues inside the main entry.

Left: The expansive commons is anchored by two olive trees beneath a large, angular skylight.

Blake School Ice Arena



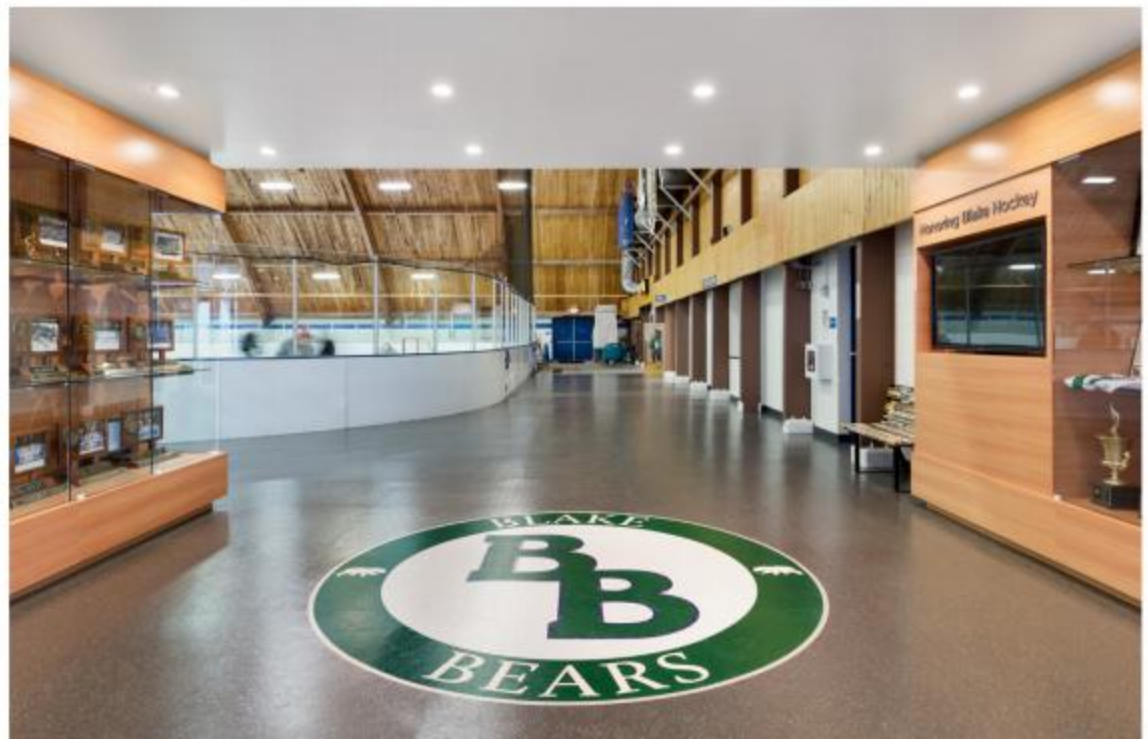
The Blake School celebrates its rich sporting history by renovating its midcentury ice arena to preserve the past

By Amy Goetzman

With the completion of Allianz Field, U.S. Bank Stadium, CHS Field, TCF Bank Stadium, and Target Field over the past decade, it can seem like just about every major sports venue in the Twin Cities is a recent build. Demolish and build new; thanks for all the memories. The Blake Bears, one of Minnesota's oldest high school hockey programs, got their new arena back in 1964, and no one has said a word since about replacing it with a shiny new thing. That's because the original design was close to perfect.

Just look at that barrel vault. The natural wood ceiling curves down as if to hug the ice, its warm hue lending intimacy to a space that accommodates an NHL-size rink. "We had to start by preserving that ceiling; we were reacting to it with every other decision we made," says Patrick Regan, AIA, of James Dayton Design, the firm brought in to restore and refine the arena. "It's such a great building. You go in there and you feel the history of hockey in Minnesota."

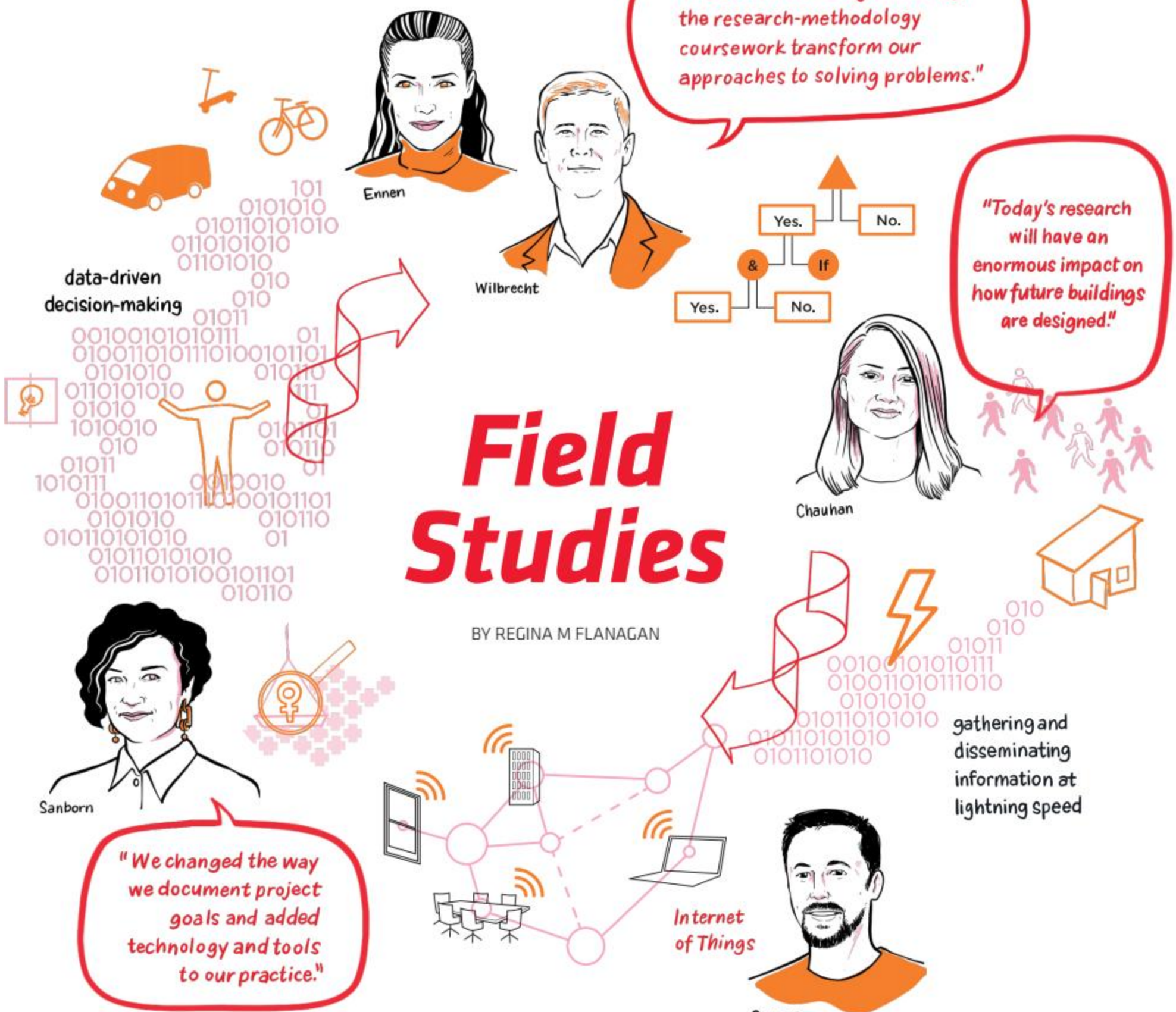
OK, so we said *close to* perfect. As the building passed its first half-century, a few things needed attention. "Originally, the ends were open to the outside, and there was no lobby," says Regan. "The building had been enclosed at some point, but you still basically walked in the door of a shelter. It needed a box



The redesigned entry highlights the legacy of Blake hockey with new display cases while establishing a welcoming atmosphere for both the Blake community and visitors.

Field Studies

BY REGINA M FLANAGAN



An innovative graduate program in the University of Minnesota College of Design places students in Twin Cities architecture, engineering, and construction firms to conduct research on topics related to the future of the industry

Illustrations by Lisa Troutman @drawnwell

"In a period of profound social, technological, and environmental shifts, the built environment must respond to the changing conditions facing communities, organizations, and individuals in ways that enhance human experience and well-being, minimize costs, maximize efficiency, optimize resources, and enhance quality of life," begins AIA National's affirmation of the value of research.

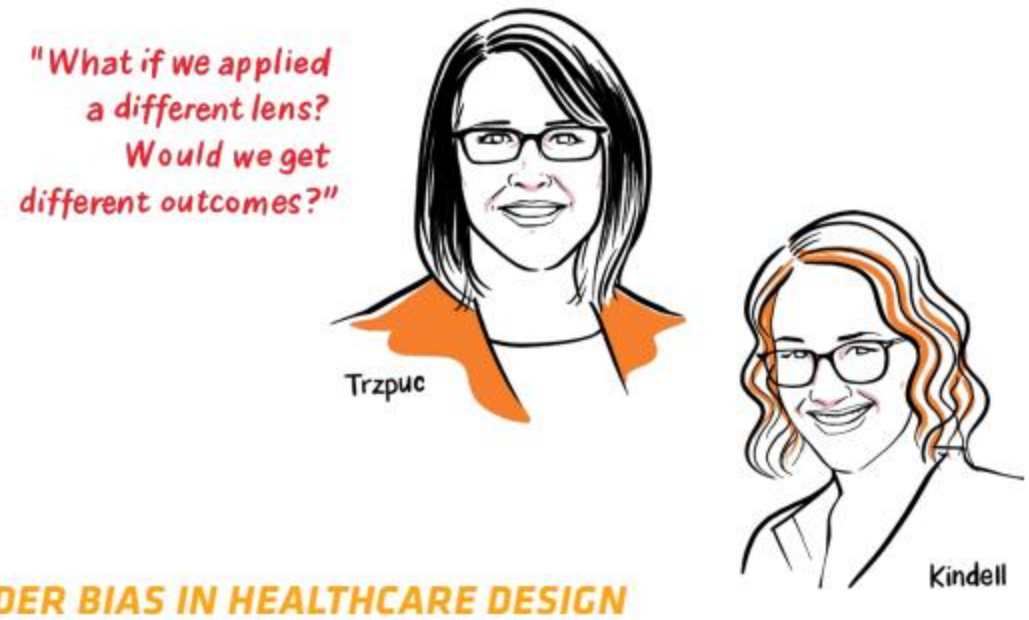
Recognizing the role that research can play in addressing these needs, the University of Minnesota School of Architecture in 2013 initiated its Master of Science in Architecture with a concentration in Research Practices (MS-RP) under the leadership of founding director Renee Cheng, FAIA. The program matches graduate students with local architecture and construction firms and faculty advisors to conduct research on topics of mutual interest and benefit. It accelerates the path to architectural licensure for the students by integrating research with practice. The 10 firms in the Consortium for Research Practices (see sidebar) pay a fee to participate.


Srivastava

Malini Srivastava, AIA, who became director of the MS-RP program in 2018, says the university's role is helping students to "vision a gap"—that is, learn how to perceive missing knowledge, formulate questions, and conduct research. Coursework, which is also open to other MS in Architecture students, combines social-science and scientific research methods, especially quantitative methods, and translates them to architecture. Students interact with firm leaders and faculty experts, receive a bird's-eye, big-picture view of the profession, and are given a meaningful voice at an early stage in their career. All these benefits are known to be strong predictors of future success for young designers.

In its first five years, the program has also focused squarely on promoting diversity in the profession by supporting women and people of color, who often face unique challenges on the way to reaching leadership roles in the field. In order to achieve these goals, says Srivastava, the program is working to create structures that diversify the content and scale of the research by bringing small and minority- and woman-owned practices into the consortium, and to establish connections beyond the Twin Cities.

Architecture MN spoke with research leaders at three consortium firms—Cuningham Group Architecture, BWBR, and DLR Group—and with recent MS-RP graduate Pratibha Chauhan about the focus and the impact of their research efforts.



BWBR

GENDER BIAS IN HEALTHCARE DESIGN

In 2007, BWBR's **Stefnee Trzpuc** was pursuing a master's degree in design with a focus on research while her mentor at the firm, Katherine Leonidas, was developing the vision for what would become BWBR's Design Research and Knowledge Management Program. "The things we're asked to design are increasingly complex, and our clients are more sophisticated," says Trzpuc, now a principal at BWBR and director of the research program. "They ask us what's new and what we've been studying. They often want to see data, and providing it becomes a way to strengthen relationships and also leverage our clients as thought leaders, which forms valuable partnerships." In her research role, Trzpuc often remains in contact with the client long after the project ends.

Erin Kindell, BWBR's current MS-RP intern, was paired with the firm because of a mutual interest in exploring how gender bias has influenced design standards for healthcare facilities. Intrigued by Caroline Criado Perez's *Invisible Women: Data Bias in a World Designed for Men*, Trzpuc, Kindell, and faculty advisor Daniela Sandler are asking: "What if we applied a different lens? Would we get different outcomes?" The three are examining the processes and systems involved in the design of healthcare facilities, especially during predesign, when significant decisions are made.

Through its participation in the consortium, BWBR is also able to seek advice from university faculty who work on health and well-being research. Trzpuc says that partnering with these experts helps the firm better understand the biases embedded in traditional design approaches.

CONSORTIUM FOR RESEARCH PRACTICES

Ten Minnesota firms currently participate in the MS-RP program:

- BWBR
- Cuningham Group Architecture
- DLR Group
- HGA
- Meyer Borgman Johnson
- Mortenson Construction
- MSR Design
- Perkins and Will
- RSP Architects
- SALA Architects