

# ARCHITECTURE MN

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midcentury  
chapel

THE TEN TEN

COTE Top  
Ten winners  
designed in  
Minnesota

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WITH FSC US PRESIDENT  
COREY BRINKEMA

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THE OPTIMISM OF  
MIDCENTURY CONCRETE

NOVATION  
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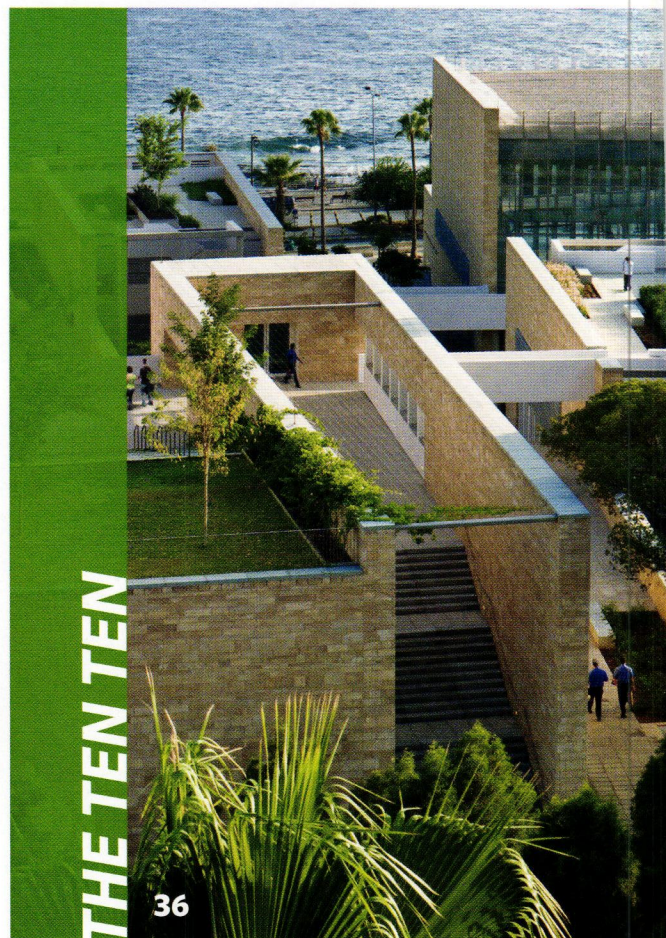
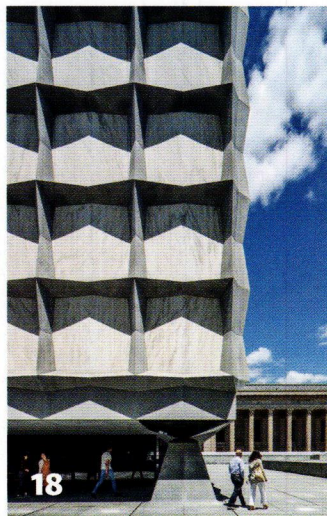
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# ARCHITECTURE MN

Architecture MN is a publication of  
The American Institute of Architects Minnesota  
architecturemn.com

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.



## Features

### 21 *Re-Modernizing Rapson*

Two midcentury buildings by modernist Ralph Rapson are sensitively renewed by the owners and their architects. "Rapson established simple forms and then purposefully played with them," says Minnesota Design Center director Thomas Fisher, Assoc. AIA. "That playfulness stirs our own creativity, prompting us to love and care for his buildings."

#### Arvonne Fraser Library

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By Joel Hoekstra

#### Rapson Revival

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By Joel Hoekstra

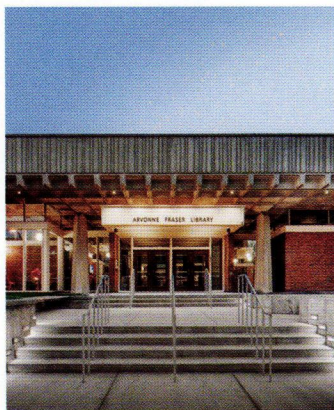
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By Andy Sturdevant

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A gallery tour of the 10 buildings designed by Minnesota architects that have won an AIA COTE Top Ten Award, an elite honor for sustainable design excellence. "It is the highest bar we have as a profession," says Snow Kreulich Architects' Julie Snow, FAIA. "Its winners point our way forward."



#### ON THE COVER

Arvonne Fraser Library  
Minneapolis, Minnesota

"This Rapson classic has been a personal favorite since my time studying architecture at the University of Minnesota under the instruction of Dean Ralph Rapson," says photographer **Pete Sieger**. "I've long held an interest in doing a thorough photographic study of the building, and this recent photo assignment may, at long last, prove to be the beginning of that effort."





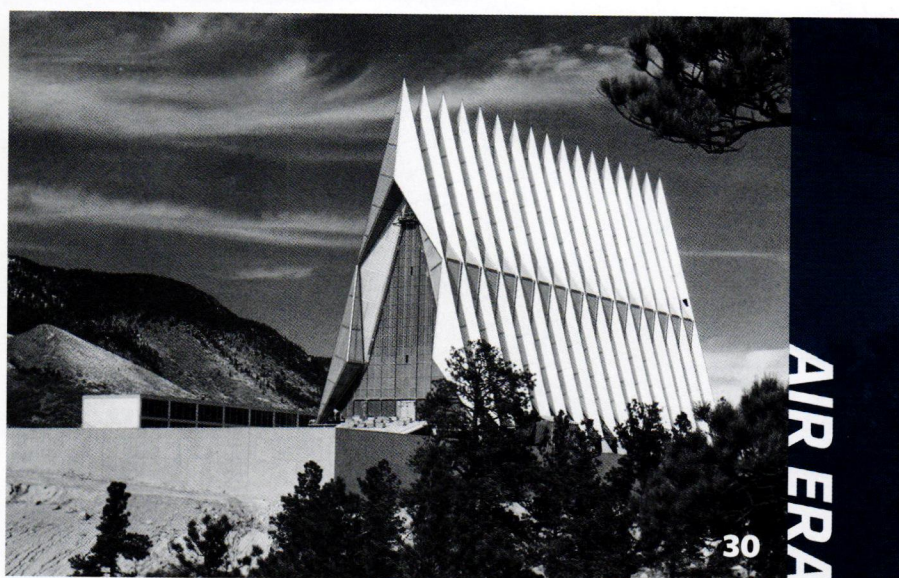
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## HEWING HOTEL



ERIC MUELLER



# Enter

We have some big news we're excited to share with our readers: In the coming months, the bimonthly *Architecture MN* magazine will transition to a digital weekly with an annual print publication, complete with a new name and a recalibrated focus. Plans for this new approach have been more than a year in the making.

Over that time, a common thread emerged in our conversations with readers, stakeholders, and consultants: Architecture isn't something that happens behind closed doors high up in a skyscraper, among experts using highly technical language. Ideally, it unfolds as a deep collaboration between communities, clients, and the design team, including architects, designers, engineers, artists, preservationists, community advocates, and others. We have talked at length about how to bring readers inside that creative, collaborative experience—especially those readers who want to be a part of shaping an equitable and sustainable built environment in Minnesota.

With this aim in mind, we've named the new publication *Enter*. For us, this simple title conveys the welcome, accessibility, and discovery that should undergird every architectural experience, from early neighborhood meetings on community projects to the openings of those buildings and beyond. We settled on the new digital format and schedule to align with your reading habits and sustain conversations on topics that matter to you. The weekly schedule also affords us the flexibility to be timelier and more responsive in our coverage of architecture's intersections with current events.

For example, the murder of George Floyd in Minneapolis and the COVID-19 crisis have fueled much-needed dialogue on the roles the built environment plays in longstanding racial disparities in Minnesota, and in public health and safety. *Enter* will dig into these and other important stories within a larger framework of features and interviews on how clients and communities can design for equity, climate impacts, innovation, economy, and beauty. To further enrich your reading, we'll be forging new connections with people and organizations that are working on parallel or intersecting tracks, and amplifying a wider array of voices in the process.

While we have immensely enjoyed our work on *Architecture MN*—we'll celebrate the magazine's history in the next issue—our time for change is now. We can't wait to begin planning and assembling stories for the January launch of the digital weekly and the fall 2021 publication of the print annual. We hope you'll make the leap with us.

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

## INTERACT & CONNECT



**Hennepin County  
Maple Grove Library**  
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**Lakewood Cemetery  
Garden Mausoleum**  
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- Lindsay Brown, architect, The Brown Studio



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## Architecture MN Staff

Editor:  
Christopher Hudson  
[hudson@aia-mn.org](mailto:hudson@aia-mn.org)

Advertising Sales:  
Pam Nelson  
[nelson@aia-mn.org](mailto:nelson@aia-mn.org)

Circulation:  
PaviElle French  
[subscriptions@aia-mn.org](mailto:subscriptions@aia-mn.org)

Art Direction and Design:  
LN Design Co.  
[klarson@lndesignco.com](mailto:klarson@lndesignco.com)

Publisher:  
Mary-Margaret Zindren  
[zindren@aia-mn.org](mailto:zindren@aia-mn.org)

## Architecture MN Committee

Monica Hartberg, AIA  
Co-chair

Jeff Swiontkowski, AIA  
Co-chair

Jonathan Bartling, AIA

Amy Douma, AIA

Edward Eichten, AIA

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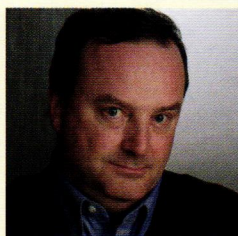
Mary-Margaret Zindren  
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## CONTRIBUTORS

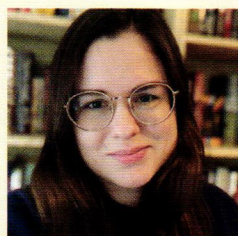
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Minneapolis writer **JOEL  
HOEKSTRA** contributes  
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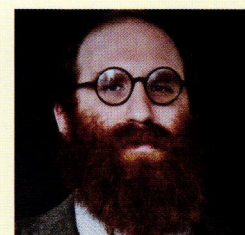
**FRANK EDGERTON MARTIN**  
is a veteran contributor to  
*Architecture MN*, *LAM*, and other  
design journals. He specializes  
in historic landscape preservation.



**ANN MAYHEW**  
([www.annmayhew.com](http://www.annmayhew.com))  
is AIA Minnesota's member  
programs, public outreach,  
and communications coordinator,  
and a freelance editor specializing  
in romance novels.



**MORGAN SHEFF**  
([morgansheffphotography.com](http://morgansheffphotography.com))  
is a St. Paul-based architectural  
photographer.



**ANDY STURDEVANT** is a writer  
and artist living in Minneapolis.  
He is the author of *Closing Time:  
Saloons, Taverns, Dives, and  
Watering Holes of the Twin Cities*  
and *Downtown: Minneapolis in  
the 1970s*.



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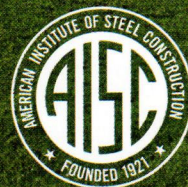


2020 IDEAS<sup>2</sup> National Award

**Mori Hosseini Student Union—  
Embry-Riddle Aeronautical University,**

Daytona Beach, Fla.

Photo: Brad Feinknopf



**2021  
IDEAS<sup>2</sup>  
AWARDS**

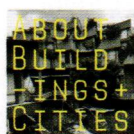
Innovative Design in Engineering and  
Architecture with Structural Steel



## Easy Listening

For many, the commute is the prime time to listen to music and catch up on podcast episodes. But even if you're working from home this summer, there are still plenty of opportunities to tune in to a podcast on the world of architecture and design. Next time you take a stroll, need a short work break, or are looking for inspiration, check out one of these recommended listens.

—Ann Mayhew



### About Buildings + Cities

About Buildings + Cities takes deep dives into the subjects named in its title, with “detours into technology, film, fiction, comics, drawings, and the dimly imagined future.” Hosts Luke Jones and George Gingell recently devoted four episodes to the career of the late Pritzker Prize-winning architect Zaha Hadid.



### Art Hounds from Minnesota Public Radio

In the five-minute episodes of this MPR podcast, local artists share which other local artists, ideas, and projects are currently inspiring them. It's the perfect way to take a quick break and be introduced to your favorite new artist, music, or creative hobby.



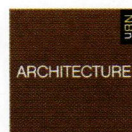
### Failed Architecture

With a new episode released every few months, Failed Architecture examines the intersection of the built environment and the “real world” through in-depth research and personal stories. Recent episodes include a look back at Beyoncé and Jay-Z's provocative appropriation of the Louvre in a 2018 music video, and the impact of a rising number of pilgrims on Mecca, the holiest city in Islam.



### The Black Urbanist Radio Show

Kristen Jeffers, founder of The Black Urbanist multimedia platform, discusses her thinking on “design, urban planning, transportation, architecture, and life as a black woman in the modern world.” The podcast has been on hiatus since 2018, but past episodes are available to patrons.



### New Books in Architecture

New Books in Architecture is exactly what it sounds like—book reviews and interviews with authors on the latest books about architecture. Part of the New Books Network, the podcast highlights new releases on a broad range of design topics. Last fall, Minnesota architect Dewey Thorbeck, FAIA, joined the program to discuss his *Agricultural Landscapes: Seeing Rural Through Design*.



### 99% Invisible

Possibly the best-known design-themed podcast, 99% Invisible has explored everything from scientists' and artists' quest for (and feuds over) the blackest black to the issue of shade and climate change in Los Angeles to the origins of the song “Who Let the Dogs Out.” Host Roman Mars is popular among architects; in 2019, he served as host for the American Institute of Architects' national conference.

## A roundup of engaging architecture- and design-themed podcasts



### There Goes the Neighborhood

This podcast examines gentrification in cities through interviews with those adversely affected by the changes. Past seasons focused on Brooklyn and Los Angeles. The third season, produced in partnership with Miami public radio station WLRN, looked at the impact of climate change on affordable housing in Miami.




### UnderRepresented Podcast

Twin Cities designers Calvin Buchanan and Cornel Beard explore the world of design and culture through the eyes of Black design professionals, with insights garnered from their own workplace experiences and challenges.




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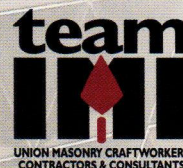
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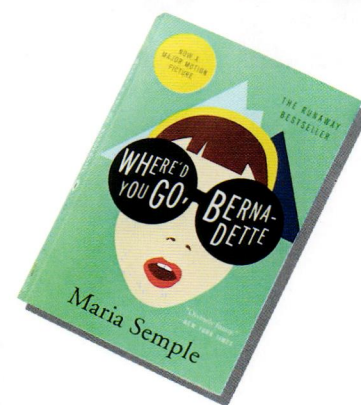
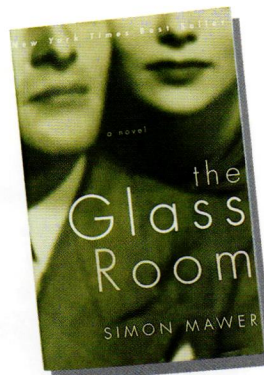
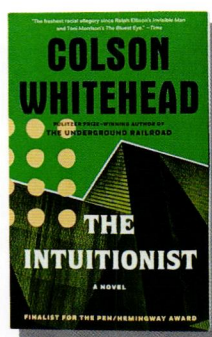
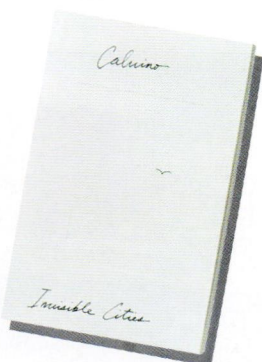


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## Summer Reading List

An eclectic selection of literary works in which architecture plays a leading or supporting role

—Frank Edgerton Martin

### In Praise of Shadows

By Junichiro Tanizaki

This little known essay by the celebrated novelist Junichiro Tanizaki (1886–1965) is a quiet ode to the aesthetics of darkness and shadows in Japanese buildings. In his foreword, architect Charles Moore writes that, while sunlight is our “most powerful ally” in Western culture, Tanizaki’s praise of shadows reveals how the mysteries of night and the enveloping shadows of privies carry moods of their own. “Darkness,” Moore writes, “illuminates for us a culture very different from our own,” helping us to “look deep into ourselves to our own inhabitation of our world.”

1933

### Invisible Cities

By Italo Calvino

*Invisible Cities* is a Scheherazade-like ensemble of stories about the cities along the Silk Road visited by Venetian explorer Marco Polo after he set off for China in 1271. The magical cities Calvino’s Polo describes for the Mongol emperor Kublai Khan challenge traditional notions of space and time and the possibilities of urban culture. In the end, we learn that all of these imagined cities grow out of one city—the rich cultural mosaic of Polo’s hometown.

1972

### The Intuitionist

By Colson Whitehead

Lila Mae Watson is the first Black woman in a big city’s Department of Elevator Inspectors in this dark and fascinating account of the battle between intuition and empiricism in the design and inspection of elevators. Lila Mae is an “intuitionist”—someone who can diagnose problems with an elevator by listening to its sound and feeling its vibrations in ascent. She becomes caught in a power struggle with the old-boy empiricists. “Verticality is such a risky enterprise,” she concludes. But she also knows its power to transform cities and human life.

1999

### The Glass Room

By Simon Mawer

*The Glass Room* is a fictional biography of a daringly modern house built by the Jewish automotive industrialist Viktor Landauer and his wife Liesel in the Czech city of Lodz around 1930. Based on the Villa Tugendhat in Brno, designed by Mies van der Rohe and Lilly Reich, the Landauer’s home is an astonishing statement of technological optimism.

In March 1939, the Landauers flee as Germany invades. The villa lives on through the subsequent war, the Soviet occupation that followed, and decades of use as a lab and a gymnasium. In 1969, Liesel revisits the house with her daughter. Now blind, she experiences the enduring power of their family home and the glass room at its heart.

2009

### Where'd You Go, Bernadette: A Novel

By Maria Semple

Starchitect Michael Graves. Antarctic tourism. Green construction. Landslides. Using pigs to remove invasive blackberries. All are topics explored in this fictional biography of Bernadette Fox, a once-famous architect now living in Seattle’s Queen Anne neighborhood with her Microsoft guru husband and their 15-year-old daughter Bee, both of whom are brainiacs. This often hilarious novel parodies the petty righteousness of privilege and reaches a crescendo in a garden party—as great novels sometimes do.

2012



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# St. Louis MLS Stadium

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HOK and Snow Kreilich Architects design a 22,500-seat, open-air stadium for St. Louis's new Major League Soccer team. The project will transform a mostly undeveloped 30-acre site in the city's Downtown West neighborhood.



RENDERINGS COURTESY OF MLS4THELOU

▲ Fans will be able to enter the stadium on all four sides. The dramatic **CANOPY**, designed to heighten the sound and energy of cheering fans, will be the largest stadium canopy in the MLS.


►► An expansive **ENTRY PLAZA** will serve as a gathering space for pregame activities and postgame celebrations. The stadium and its main plaza will anchor a district of new mixed-use development.



◀ The stadium will host approximately 17 to 20 regular season MLS home games and three exhibition games a year. The **MULTIPURPOSE VENUE** may also be used for concerts, high school and collegiate sporting events and tournaments, and soccer camps.

**Project team:** HOK and Snow Kreilich Architects, architects; Mortenson, Alberici Corp., and L. Keeley Construction, general contractors; Kwame Building Group, owner's representative and program manager





*Brinkema on a forested trail near  
the Lyndale Park Gardens on Lake  
Harriet in Minneapolis.*

INTERVIEW BY JOEL HOEKSTRA

Forests cover roughly a third of Earth's land surface. They generate oxygen and store carbon, and an estimated 80 percent of all terrestrial species can be found within their cooling shade. Forests help purify our groundwater and prevent erosion. And, of course, forests have long provided us with pulp for paper and wood for myriad buildings and products.

Corey Brinkema is president of the Forest Stewardship Council US, a nonprofit based in Minneapolis. The American branch of a global forest conservation organization founded in 1994, FSC US is dedicated to protecting forests for future generations. But FSC also recognizes the value of forests as a renewable resource and advocates for marketplace solutions that promote responsible forest management.

This spring, Brinkema spoke with *Architecture MN* about the ways that architects and the building industry play a part in saving forests—and reducing the impact of climate change.

**What does the Forest Stewardship Council do?**

Our primary role is operating a certification system that rewards responsible forest management in the market. FSC created a checklist of requirements—I think now we're up to about 70 criteria in our latest revision. They range from legal requirements to sustainable harvesting to land ownership and community rights. Our most visible mark is a tree and checkmark with the FSC abbreviation. When you see that mark, you can have confidence that that product is promoting responsible forest

management. More than 80 countries have FSC-certified forests, about 500 million acres around the world, including 160 million acres in the U.S. and Canada.

**Minnesota has 16 million acres of forestland. Is it well managed?**

Definitely. The Minnesota DNR is actually our single largest certificate holder in the U.S., with a total of five million FSC-certified acres. One of the very first FSC certificate holders in America was Aitkin County, and Carlton and Koochiching counties are certified.

Minnesota is also home to some very prominent companies that either produce or sell forest products every day. Target Corporation has been a leader in responsible purchasing, both domestically as well as globally. A smaller company I'd call out is Certified Wood Products, in Maple Lake. It was essentially founded on providing responsibly sourced wood to the building industry, and they're a go-to for FSC-certified building products.

**What economic tools do you use to get owners to manage forests sustainably?**

For years, the US Green Building Council's LEED rating system was a major market driver for FSC certification and the production of FSC building products. Thousands of LEED-certified projects got points by using FSC-certified wood in their buildings, and producers were able to get a premium for their products.

Recently, however, that standard has gotten diluted. Now, the greatest driver in the building sector is the leadership of large corporations who are concerned about their environmental footprint and are willing to foot the extra cost to do something about it.

>> continued on page 46





# TREE AGENT

Saving the world's vanishing forests means slowing climate change. Forest Stewardship Council US president **Corey Brinkema** says architects play a vital role in promoting forest health and conservation.

*Photograph by Chad Holder*



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# The Optimism of Midcentury Concrete

**No, really.**

ARTICLE AND SKETCH  
BY ANDY STURDEVANT

Last summer, I had a long-term writing project that required me to sit down at my laptop and focus intently for a few hours a day. My unfinished attic was getting hot, and I had worn out my welcome at most of my neighborhood coffee shops after a few weeks.

As many of you working on deadline know, you need a particular type of atmosphere to focus effectively. For me, it's somewhere quiet, elegant but utilitarian, with a little bit of bustle to keep me engaged, but also—and not to get too cosmic here—possessing an indefinable quality that speaks to an aspirational, democratic vision of shared civic life. You know, if that's not too much to ask.

For me, this means that I need to be surrounded by concrete.

My appreciation for midcentury concrete isn't universal, I know. I remember people of my parents' generation *hated* concrete when I was growing up in the 1980s. Many unfairly compared midcentury concrete buildings to old Richardsonian brick piles. The central library in my hometown, for example, paired a Beaux Arts building with a three-story brutalist addition, and people complained about "the new side" endlessly.

I loved it, though. The old side felt pleasant and safely historical, but I liked studying in the new side, inside those exposed concrete walls and under those waffle-form ceilings; there, I felt like I was part of a futuristic society that *worked*. As I grew older, I discovered that others in my generation had similarly developed an admiration for the brutalism they'd grown up with.

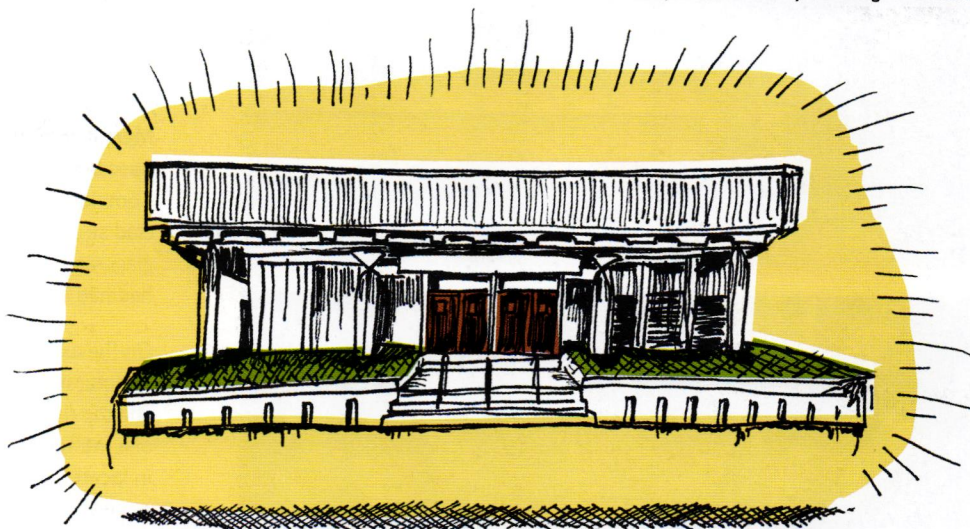
Where did I go to make headway on my writing project? Well, I put together a list of every library in the Metropolitan Library Service agency

(MELSA) system built between 1960 and 1980. Over several weeks, I parked myself at a table or in a quiet room at each of them, from New Prague (1962, clerestory windows) to Hayden Heights (1979, white glazed bricks, circular skylights). I've never had a happier month, at least in terms of my architectural surroundings.

It might have been even more enjoyable had I been able to visit one of the true gems in the Hennepin County Library system: Ralph Rapson's 1964 Arvonne Fraser Library (page 22), a former bank-turned-community-hub near the University of Minnesota, where Rapson led the School of Architecture for 30 years. Formerly known as the Southeast Library, the single-story building was being renovated all of last summer.

The Arvonne Fraser renovation, completed in February, was part of a larger Hennepin County Library effort to retool four midcentury and late-midcentury branch libraries with improved accessibility, functionality, and technology. In shaping these updates for Arvonne Fraser, library officials and their designers—MacDonald & Mack Architects and Quinn Evans Architects—were keen to preserve the highly distinctive, character-defining features of Rapson's design.

**ARVONNE FRASER LIBRARY** in Minneapolis' Dinkytown neighborhood reopened this past winter after a character-preserving renovation.



**Community libraries of Arvonne Fraser's character and vintage manifest a confidence in scale and technique, and transparency in how they were built.**

The interior experience, in particular, is defined by concrete, with Rapson having interspersed skylights of various sizes in the expansive waffle-slab ceiling in a way that manages to be both dignified and playful. The irregular grid pattern overhead dramatizes the scale of the interior. It must have seemed vaguely space-age to its early visitors; like much science fiction from that era, it still feels, more than a half-century later, expressive of a promising future yet to come.

"The forms and shapes show Rapson taking advantage of the unique spatial quality you can create with reinforced concrete," says MacDonald & Mack partner Todd Grover, AIA.

The renovation included the replacement of 1960s lighting with contemporary fixtures that better reveal the dimension and varied textures in the concrete forms. That's an important

>> continued on page 47



Below: The Beinecke sits on a plaza with a sunken sculpture court (foreground right) featuring Isamu Noguchi's *The Garden* (Pyramid, Sun, and Cube).



## Marble Marvel

"It's the only building I've been involved in that has an emotional impact," said Skidmore, Owings & Merrill architect Gordon Bunshaft of the Beinecke Rare Book & Manuscript Library at Yale University<sup>1</sup>. Completed in 1963, the distinctive marble-and-granite-clad structure was a seeming detour from the glass-and-steel corporate modernism that Bunshaft had had a leading role in shaping in the 1950s.

On the exterior, the drama derives from the building's structural expression and visually textured materials. The top five floors of the six-level box are composed of a framework of gridded steel trusses sheathed in faceted granite and infilled with Vermont marble panels. The stony shell rests on pyramid-shaped granite feet at the corners, which allowed the architects to wrap the recessed main level in floor-to-ceiling glass.

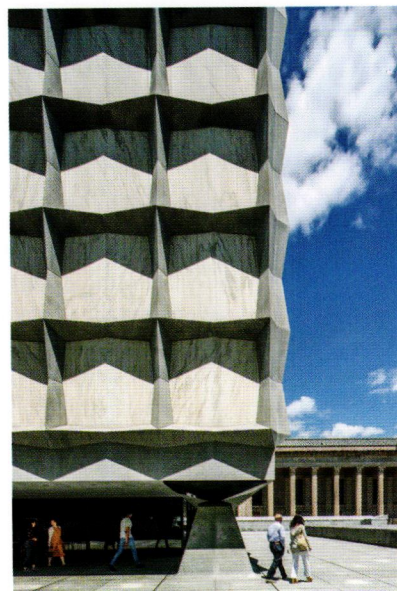
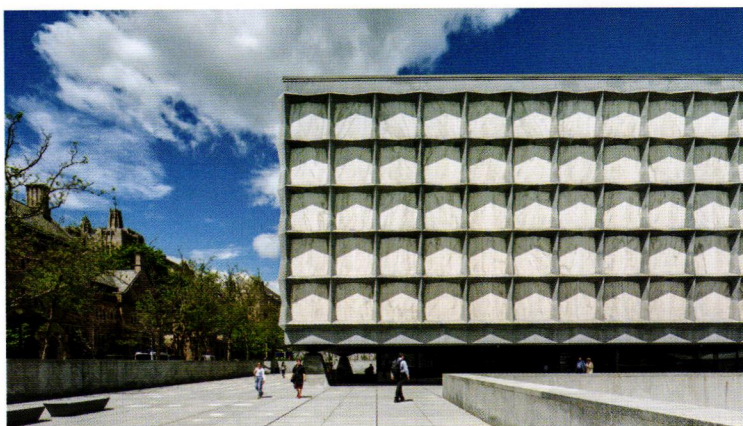
The aura of the building only grows as visitors pass through the revolving entry door, then ascend one of two symmetrical open stairs to the mezzanine. In that handful of seconds, a glass-encased tower of bookstacks—a kind of building-within-a-building—comes into full view, soaring to within just a few feet of the coffered ceiling. Whereas the library's exterior is nearly monochrome, the interior is warm with the colors of the illuminated book spines in the stacks and, on sunny days, with natural light filtering through the inch-and-a-quarter-thick marble panels. Few visitors ever forget their first experience.

—Christopher Hudson

### BEINECKE RARE BOOK & MANUSCRIPT LIBRARY

📍 121 Wall Street, New Haven, Connecticut  
Mon 10 A.M.–7 P.M., Tues–Thurs 9 A.M.–7 P.M.,  
Fri 9 A.M.–5 P.M.

While the Beinecke is a popular architectural attraction, it is first and foremost a research library with a world-class collection of literary artifacts. Collection highlights include a 15th-century Gutenberg Bible, one of the first volumes printed using movable metal type in Europe. For more information on the library's archives and architecture, visit [beinecke.library.yale.edu](http://beinecke.library.yale.edu).







*The glass-encased interior tower can accommodate roughly 180,000 volumes. Display cases containing collection highlights ring the mezzanine.*

*“I was riveted by the geometry of the space. The coffered ceiling, the warm, glowing marble panels, and the glass book tower create fascinating parallel and converging lines.”*

—PHOTOGRAPHER MORGAN SHEFF

<sup>1</sup>Carol Herselle Krinsky, Gordon Bunshaft of Skidmore, Owings and Merrill (Cambridge, Massachusetts: The MIT Press, 1988), 146.



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PETER J. SIEGER

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- Rapson Revival  
Page 26



PAUL CROSBY

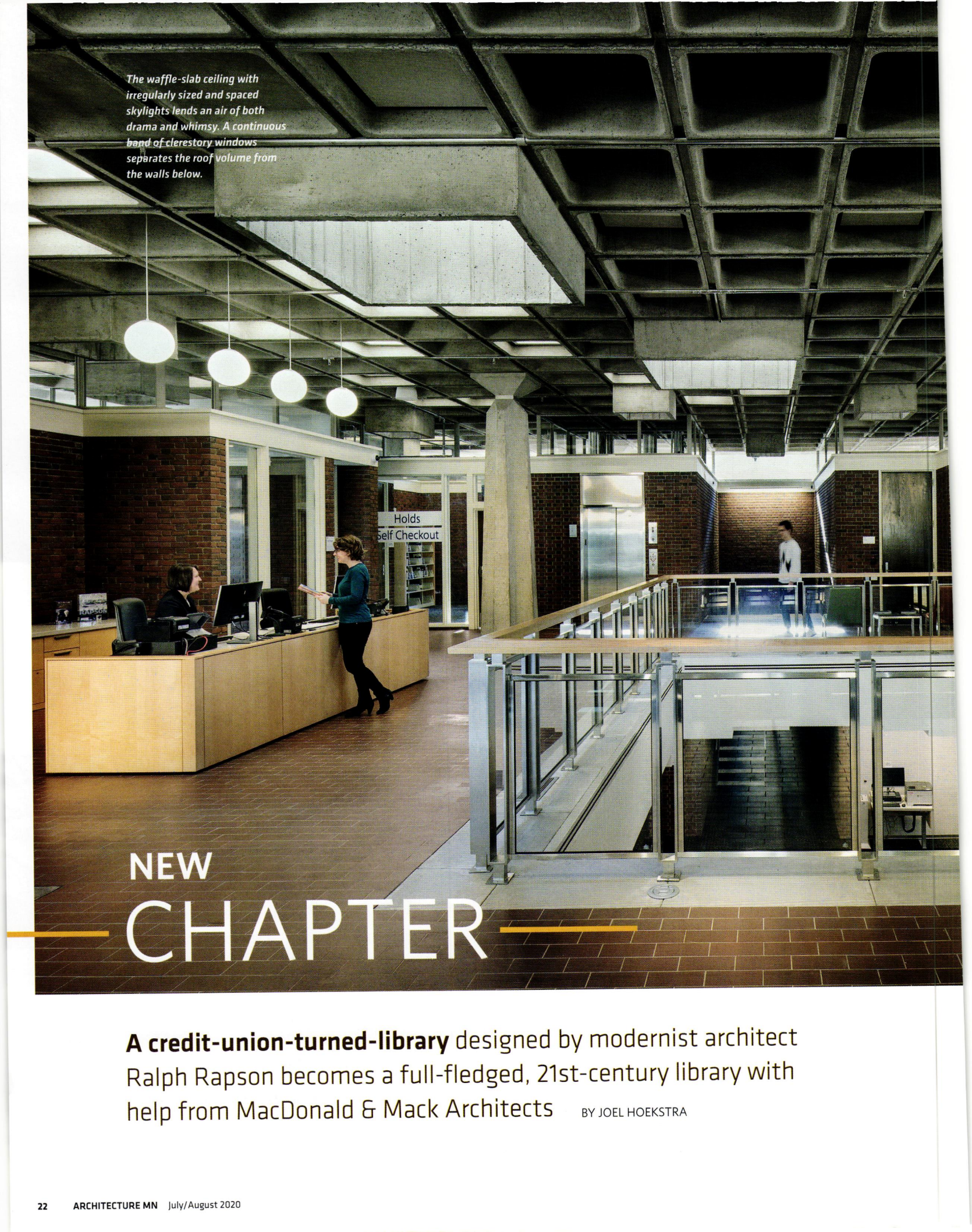
A 1960s BRANCH LIBRARY AND A SMALL 1970s HOUSE DESIGNED BY RALPH RAPSON (1914–2008), Minnesota's preeminent modernist architect, are dramatically renewed to extend their lives well into the mid-21st century. In both renovations, the architects preserved character-defining features and honored overall design intent while introducing notable updates that accommodate the way the structures need to live and function today.

## RE-MODERNIZING RAPSON



GAYLA LINDT



A photograph of a modern library interior. The ceiling is a prominent feature, made of a grid of concrete waffle slabs with irregularly sized and spaced skylights. A continuous band of clerestory windows runs along the upper level, separating the roof volume from the walls below. The space is open and airy, with a mix of materials including brick, wood, and concrete. In the foreground, a woman in a blue top and black pants stands near a long wooden service counter. Behind the counter, another person is seated at a computer. To the right, a glass-enclosed staircase leads down to a lower level. In the background, a sign reads "Holds Self Checkout".

The waffle-slab ceiling with irregularly sized and spaced skylights lends an air of both drama and whimsy. A continuous band of clerestory windows separates the roof volume from the walls below.

## NEW CHAPTER

**A credit-union-turned-library** designed by modernist architect Ralph Rapson becomes a full-fledged, 21st-century library with help from MacDonald & Mack Architects

BY JOEL HOEKSTRA





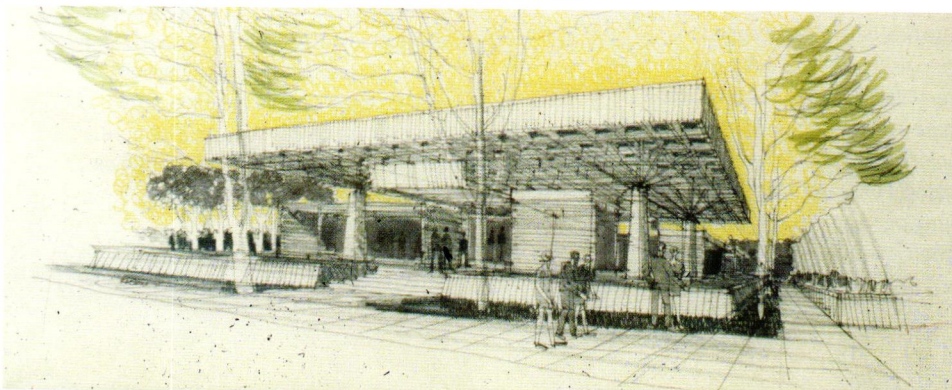
The renovation architects capped the height of the maple bookshelves to enhance sight lines to the gridded ceiling. Below: A Ralph Rapson sketch of the building.



**Are brutalist buildings worth saving? It's a debated question in many communities.** Four years ago, Hennepin County officials answered "yes" when they voted to renovate rather than replace the 1964 Ralph Rapson-designed, brick-and-concrete structure that had housed, for a half-century, the Hennepin County Library's Southeast Library in Minneapolis. The remodeled facility, freshened up on the exterior and retooled on the inside to meet the needs of today's patrons, opened this past winter. The library was also renamed, after women's rights advocate Arvonne Fraser.

Originally designed to house a credit union, the one-story Dinkytown building sits up on a quarry-tile-topped plinth above the street and is best known for its imposing waffle-slab roof—so named because of the gridded pattern of the concrete ribs on the underside of the roof. The humongous lid is supported by 16 cross-shaped pillars, which allowed the architect to top the exterior walls with continuous clerestory windows.

From the start, the interior was mostly open and illuminated by two dozen skylights of varying sizes that pierced the waffle ceiling in a random pattern. The ceiling of the boardroom in the lower level featured several stalactite-like forms that Rapson dubbed "light scoops." In 1967, Rapson's firm was hired to convert the building to a library—a renovation that essentially just removed teller stations and added bookshelves. The bank vault remained intact. Lending changed—from bills to books.







THE CEILING OF THE KIDS' PLAY AREA IN THE LOWER LEVEL—ORIGINALLY A BOARDROOM—FEATURES SEVERAL STALACTITE-LIKE FORMS THAT RAPSON DUBBED “LIGHT SCOOPS.”

## A Playful Plan

The most recent renovation was overseen by MacDonald & Mack Architects, a Minneapolis firm that specializes in historic preservation, in partnership with Washington, D.C.-based Quinn Evans Architects and Minneapolis landscape architecture firm Damon Farber. MacDonald & Mack partner Todd Grover, AIA, says initial discussions with library staff highlighted the need for more flexible spaces, mechanical upgrades, and fresh finishes. Water damage had rendered the basement almost unusable. “The staff had completely abandoned it by the time we arrived,” says the architect.

But overall there was an appreciation for Rapson’s design (page 17). “There’s a playfulness to the building,” says Grover. “You can see where he was pushing and pulling the walls to create interior spaces. Sometimes he would connect walls to the clerestory windows, but not always.”

Nobody wanted to meddle much with Rapson’s creation, but Grover and his team soon realized that the only way to gain more square footage was to access the basement—a move that would double the building’s usable space. To make that dark, windowless space inviting would require a significant change: A section of concrete floor was cut out to create a 14-by-23-foot opening into the lower level. Daylight from the largest skylights now floods a new lower-level reading area, enticing patrons to head downstairs.

The main level features a computer room, study rooms, and staff offices. An elevator was integrated into the floor plan, and the old boardroom (with its playful “scoops”) was converted into a kids’ play area. Maple bookshelves were added, but their height was capped to allow better visual connections with the waffle-slab ceiling and to allow light to flow more evenly through the space. Contemporary furniture, including a few pieces modeled on Rapson designs, makes lounging, reading, and gathering more comfortable.



NORTHWEST ARCHITECTURAL ARCHIVES

**“The American psychologist Abraham Maslow observed that ‘almost all creativity involves purposeful play,’** which helps explain the appeal of Ralph Rapson’s architecture. Rapson established simple forms and then purposefully played with them: placing brick pavilions under a hovering roof, carving an entry out of a white-walled block, or surprising us with daylight at the centers of his buildings. The playfulness of Rapson’s architecture stirs our own creativity, prompting us to love and care for his buildings.”

—Thomas Fisher, Assoc. AIA,  
director of the Minnesota Design Center



*The concrete roof extends from the exterior walls to shelter outdoor walkways and seating areas.*

## Reading, Recycling, and Renewables

During the renovation, the architects and contractors sought to recycle waste materials whenever possible. All exterior windows were kept and brick from modified walls was cleaned and reused. Original doors were repaired and rehung. Demolition materials were recycled, even if it meant taking extra steps to sort the waste. "We were able to salvage a significant amount of material," says Grover.

Sustainability and energy efficiency were also project priorities. A new energy-efficient HVAC system and new LED lighting with daylighting controls were installed. Furniture, finishes, and carpeting were chosen with a preference for products made sustainably and from recycled or renewable materials. Plumbing fixtures with automatic sensors and metering controls reduce overall water use.

But it's the newly created volume of light and the bright furnishings throughout

that have enhanced the appeal of this brutalist landmark for new generations of users.

Hennepin County Property Services' Valerie Carr says the updated design is better able to meet the needs of the Dinkytown community. Unlike library facilities at the nearby University of Minnesota, the Arvonne Fraser Library caters to families with young kids and college students looking for an off-campus hangout. "This design is more welcoming to them," says Carr. "It feels more welcoming for everyone." **AMN**



### ARVONNE FRASER LIBRARY

**Location:** Minneapolis, Minnesota

**Client:** Hennepin County Library

**Architects:** MacDonald & Mack Architects (firm of record) with Quinn Evans Architects (collaborating firm)  
[www.mmarchltd.com](http://www.mmarchltd.com)  
[www.quinnevans.com](http://www.quinnevans.com)

**Design team:** See page 62

**Landscape architect:** Damon Farber  
[damonfarber.com](http://damonfarber.com)

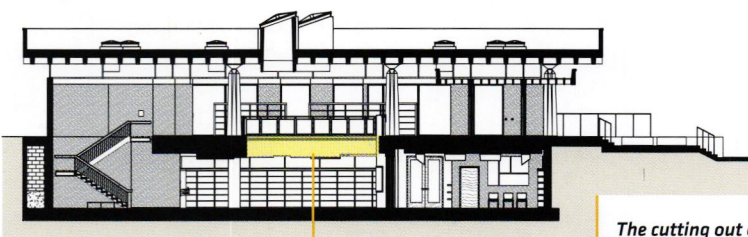
**General contractor:** Shaw-Lundquist Associates

**Size:** 13,186 gross square feet

**Cost:** \$12 million

**Completion:** February 2020

**Photographer:** Peter J. Sieger



*The cutting out of a 14-by-23-foot section of the concrete floor brought natural light into the lower level and integrated the two levels visually.*







STINSON ADMIRERED THE OVERALL GEOMETRY OF THE HOME. "IT'S NOT LARGE," HE SAYS. "IT'S DESIGNED LIKE A REALLY NICE SAILBOAT RATHER THAN A BARGE."



*The renovation of the home added a large deck off the main living spaces that looks out over a wooded ravine.*



# RAPSON

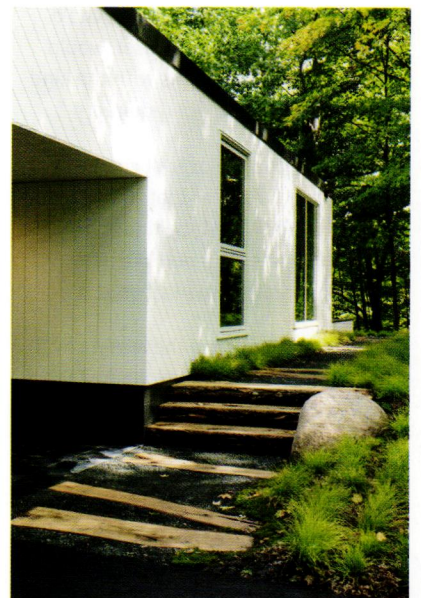
# REVIVAL

**A studio-residence** designed by modern master Ralph Rapson is revamped nearly a half-century later by one of Rapson's students BY JOEL HOEKSTRA

Many years ago, architect **Charles Stinson, AIA**, was invited to the architect-designed home of sculptor **Gloria Tew** for lunch with Tew and Charles Biederman, an artist famous for his cubist constructions. The conversation was lively and opinionated, Stinson recalls: "It was the sort of afternoon you never forget—lots of reflections on artistic endeavors and creative explorations."

Tew and her husband—Stinson's neighbors at the time—had commissioned Ralph Rapson, the architect of midcentury landmarks, including the original Guthrie Theater in Minneapolis, to design a studio-residence on a wooded lot in Minnetonka. The house had been completed in 1977, and Stinson, who studied architecture at the University of Minnesota, where Rapson served as chair of the architecture department, had seen sketches and photographs of the project. But the lunch was the first time he'd ever been inside the Tews' home.

Stinson was therefore delighted to get a call a few years ago from Alex and Matt Crnobrna, who had recently purchased the Tews' house. The 2,600-square-foot home was significantly smaller than the couple's previous residence in Eden Prairie, but the modernist style had been impossible to resist. What's more, Alex and her mother owned a photography business and saw the home's studio as a place where they could do occasional shoots. "It just has this amazing light, no matter what the weather or time of year," says Alex. "It's really an amazing place."







## RAPSON REVIVAL

**Location:** Minnetonka, Minnesota

**Clients:** Alex and Matt Crnobrna

**Architect:** Charles R. Stinson Architects  
[www.charlesrstinson.com](http://www.charlesrstinson.com)

**Design team:** See page 62

**Landscape architect:** Urban Ecosystems, Inc.  
[www.urbanecoystemsinc.com](http://www.urbanecoystemsinc.com)

**General contractor:** Stinson Builders, Inc.

**Size:** 2,600 square feet

**Completion:** Fall 2019

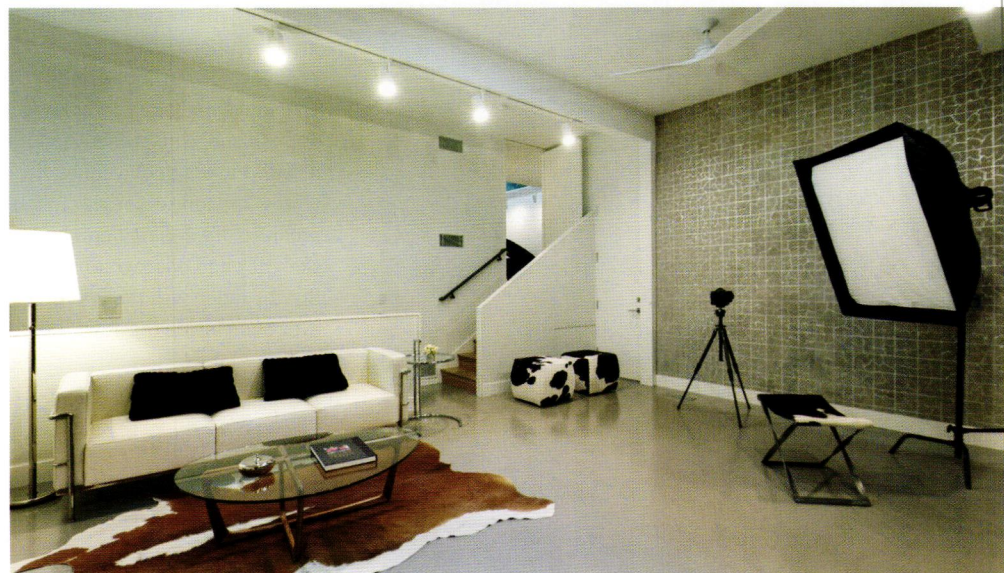
**Photographer:** Paul Crosby

**MOSTLY, THE CRNOBRNAS WANTED BRIGHTER FINISHES, A BETTER KITCHEN—THE ORIGINAL WAS A TINY PULLMAN-STYLE AFFAIR—AND, IF POSSIBLE, A WEE BIT MORE SQUARE FOOTAGE.**

Despite its age, the home was in remarkably good shape. The flat roof didn't leak, nor did several skylights or the light scoop at the center of the house. The wood exterior needed a fresh coat of paint but was rot-free except for a few boards. Mostly, the Crnobrnas wanted brighter finishes, a better kitchen—the original was a tiny Pullman-style affair—and, if possible, a wee bit more square footage. They felt that Stinson, who'd had Rapson as a thesis adviser, would approach such alterations with the kind of sensitivity the project required.

Stinson admired the overall geometry of the home. "It's clear that there was reflection and thought behind it," he says. "It's not large; it's designed like a really nice sailboat rather than a barge."

Eyeing ways to expand the home's livable square footage without expanding the overall footprint, Stinson recommended remaking several small porch spaces into interior spaces and adding a large deck. The original glass atrium was preserved and several windows were added to create a greater sense of openness.



*The architects opened up the kitchen to the living room (middle and top) and updated the studio (above), which owner Alex Crnobrna and her mother use for their photography business.*



THE ORIGINAL GLASS ATRIUM WAS PRESERVED  
AND SEVERAL WINDOWS WERE ADDED TO CREATE  
A GREATER SENSE OF OPENNESS.



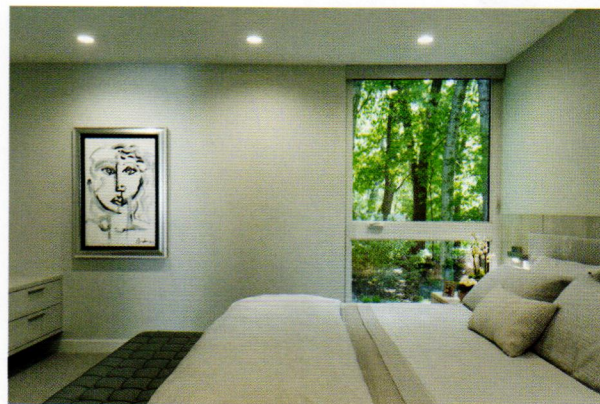
An interior wall that separated the kitchen and living room was removed and replaced with an island that now serves as a focal point and gathering space when the Crnobrnas entertain friends and family. A raft of new windows overlooks the new deck and the woods beyond. When darkness falls, a gas-burning fireplace takes center stage.

Kitchen cabinetry and appliances were upgraded and white penny tile in the bathroom was replaced with white subway tile; otherwise, most of the original details were retained or mirrored. Round skylights throughout the home were cleaned and resealed, and a new matching skylight was integrated into the kitchen design. "We kept asking

ourselves, 'How do you preserve the essence of what Rapson did while updating the design for modern living?'" says Stinson.

In the studio, soundproofing was added to the upper walls, and cork and metallic wallcovering was added as potential photography backdrop. Ceiling fans help circulate the air, and updated track lighting supplements the natural light that flows in through the skylights and large windows. Motorized shades allow the spaces to be fully open or closed as desired.

"It's definitely not a big house," says Alex Crnobrna. "But it's perfect. It's all we need." **AMN**



*Skylights and several new windows flood the interior of the home with natural light while immersing the owners in their wooded setting.*





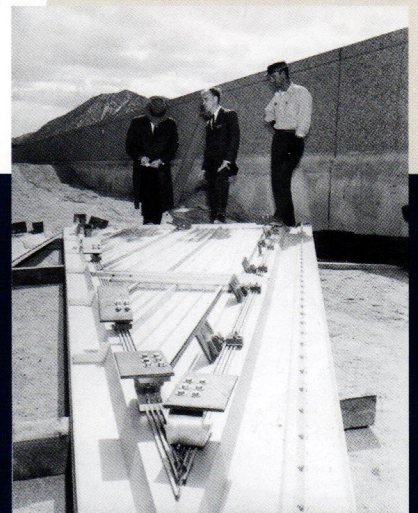
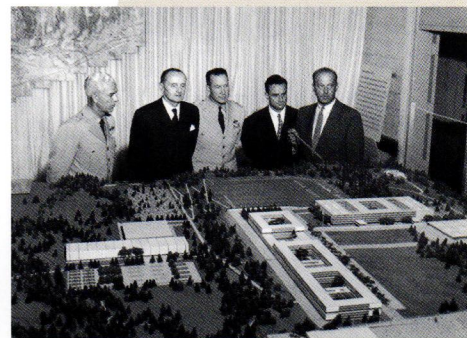
# AIR ERA

By Andy Sturdevant

*"Aluminum has grain," says JE Dunn's Jeff Callinan. "Its chemical makeup and how it's manufactured impacts how it reflects light."*



**The Minnesota architects involved in the four-year, \$158 million renovation of the U.S. Air Force Academy Cadet Chapel make a steep descent into the modern landmark's rich history**



*Left: The view from the southeast, before the campus added Sijan Hall (1968, cadet quarters) to the south of the chapel.*

*Top: Secretary of the Air Force Donald Quarles (left) and Arthur Witters, director of Air Force Academy construction (middle), present a model of the campus with Skidmore, Owings and Merrill leaders. Above: At the construction site in spring 1961.*

“Bean counters!” exclaims historic-preservation architect Michael Bjornberg, FAIA, when asked who the visionary driving force was behind one of the great landmarks of midcentury-modern architecture: the 1962 Air Force Academy Cadet Chapel in Colorado Springs, Colorado.

The centerpiece of the nation’s newest military academy, the dramatically angular chapel represented a clean break with the past, but it was also economical. (The U.S. Senate approved

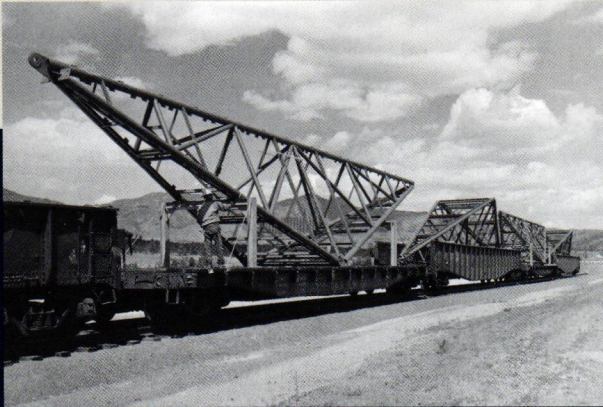
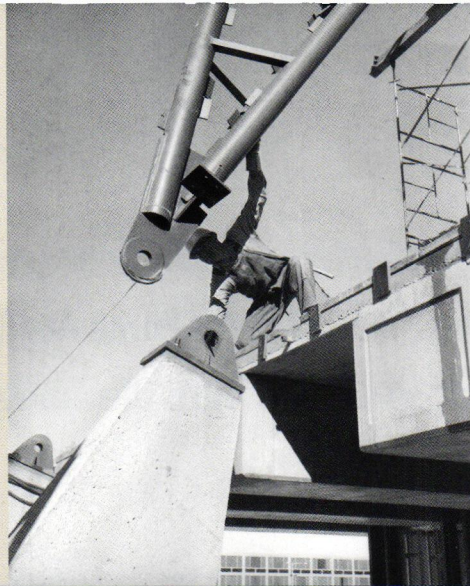
\$3 million for the shell of the structure and its surrounding grounds.) The fight over what it would look like and how much it would cost lasted for years, and it involved not just the bean counters and the architects but also the popular press, the architectural establishment, the public, and seemingly every elected official with an opinion about what an American building should look like.

“That’s the fun part,” says Bjornberg, from his home office in Minneapolis, thumbing through a copy of *On The Wings of Modernism*, a comprehensive study of the chapel’s creation. “The

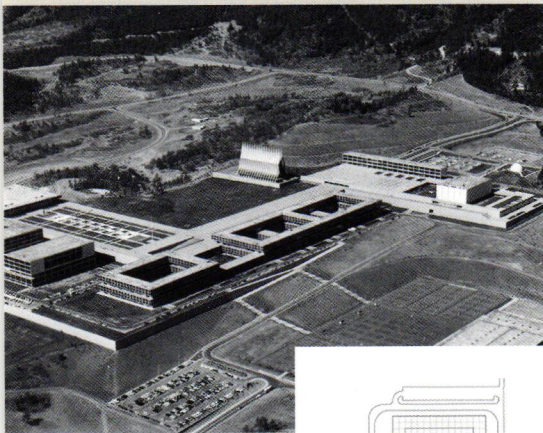
nitty-gritty details of the original controversies, and how it all came to look like this when it was completed.” Bjornberg and his colleagues at LEO A DALY have been working as historic treatment specialists for general contractor JE Dunn on a massive restoration of the modernist icon, now lauded as one of the great achievements of the era. The project’s architecture and engineering team (page 35) includes the Air Force Civil Engineering Center, AECOM, WJE, and Hartman-Cox Architects. The building closed for the four-year renovation late last summer.



While the chapel was among the first buildings in the world to be designed with the aid of computers, elements of its assembly will look familiar to just about everyone. Large pieces of the structure were transported to Colorado Springs by train.

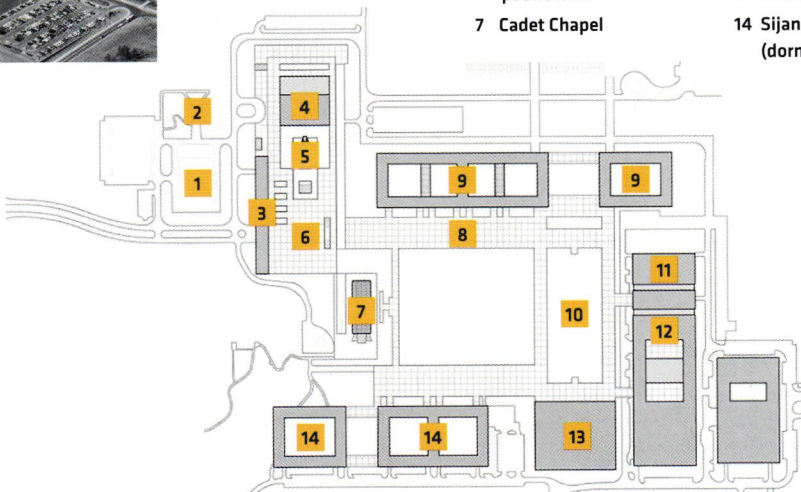


The construction of the chapel was exceptionally well documented, giving the restoration team a trove of process photographs to refer back to.



#### AIR FORCE ACADEMY SITE PLAN

- |   |                               |
|---|-------------------------------|
| 1 Visitor parking                                 | 8 "The Terrazzo," cadet level |
| 2 Planetarium                                     | 9 Vandenburg Hall (dormitory) |
| 3 Harmon Hall                                     | 10 Air Garden                 |
| 4 Arnold Hall (social center)                     | 11 Library                    |
| 5 Center for Character and Leadership Development | 12 Fairchild Hall (academics) |
| 6 "Court of Honor," public level                  | 13 Mitchell Hall (dining)     |
| 7 Cadet Chapel                                    | 14 Sijan Hall (dormitory)     |

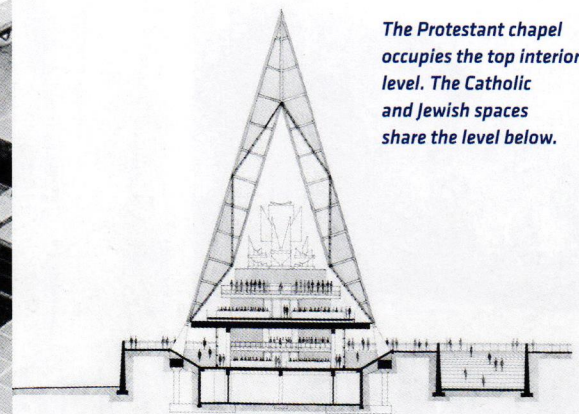
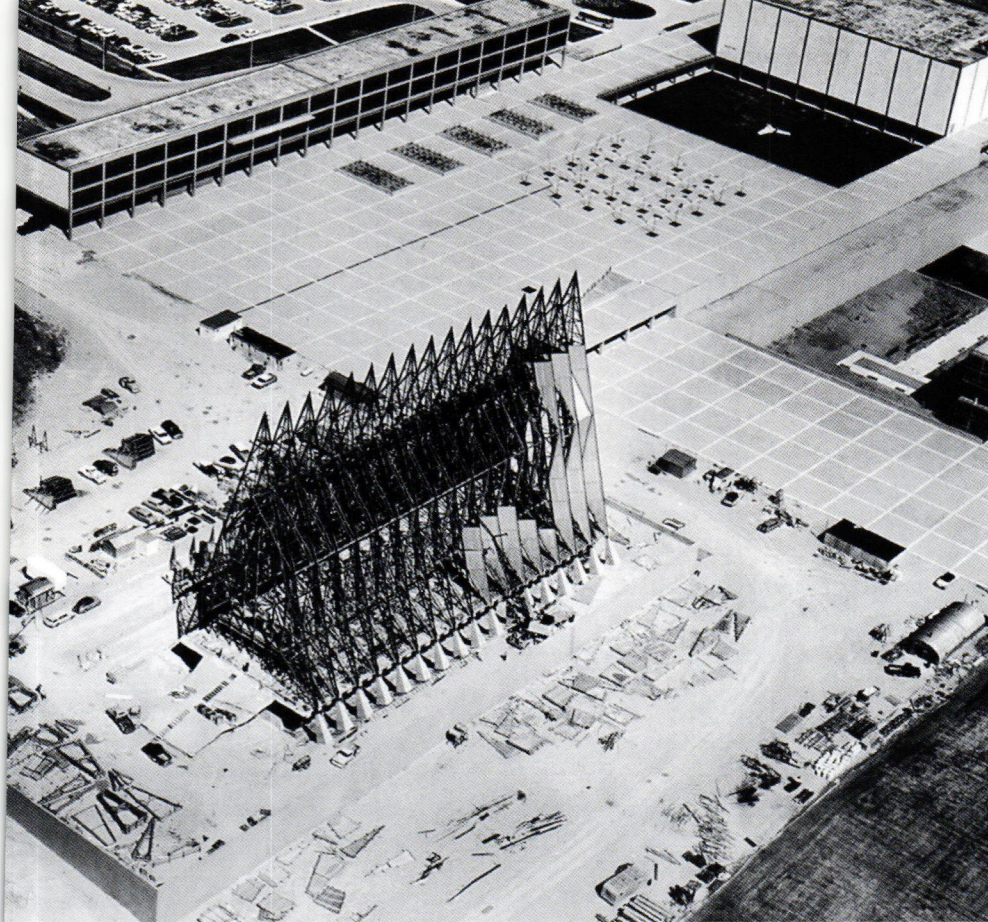


#### Innovations and Flaws

Opened in 1958 at the base of the Rocky Mountain foothills, the Air Force Academy, designed by Skidmore, Owings & Merrill (SOM), was more corporate than collegiate, the new face of warfare in an era where combat was waged not just by soldiers and sailors but also by Air Force navigators who used celestial, radar, and grid navigation techniques to guide bombers carrying nuclear warheads for thousands of miles. In the way that the Gothic Revival West Point reflected the traditions of the Army and the Beaux Arts Naval Academy represented those of the Navy, the Air Force Academy Cadet Chapel was shaped to reflect high-tech modernity.

Designed by SOM's Walter Netsch, the chapel is composed of a line of 17 tetrahedron spires reminiscent of the gleaming wings of an early fighter jet. While the building houses separate chapel spaces for Protestant, Catholic, Jewish, Buddhist, and Muslim cadets, plus an All Faiths room, it's notably





*The Protestant chapel occupies the top interior level. The Catholic and Jewish spaces share the level below.*

*An aerial view from spring 1961. Campus residents got an up-close daily view of the assembly of what would become a world landmark.*

free of identifying markers of any faith tradition on its aluminum and glass exterior. It featured innovations in glazing and heating, ventilation, and air-conditioning (HVAC), and was among the first wave of building projects to employ computer-aided design.

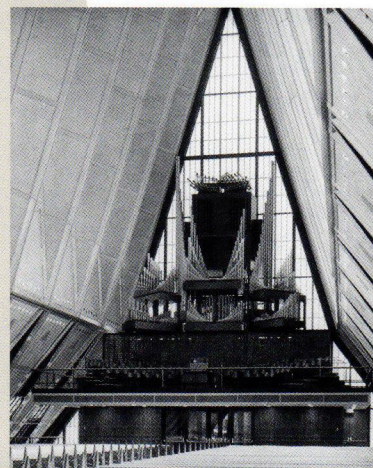
It also had its flaws. The original design called for a system of integrated water-diverting rain gutters, but cost-cutting measures stripped it out. As a result, the building has carried a reputation since the 1960s for having a damp microclimate inside, evident in the water-damaged wooden pews. In order to address this ongoing issue, the chapel's aluminum cladding will need to be dismantled piece by piece and replaced with an improved water-mitigating skin system.

Other celebrated elements of the design will be disassembled and cleaned up as well. Every panel of *dalle de verre* stained glass—a glass-art technique in which colored glass is hammered or cut into

Designed by SOM's Walter Netsch, the chapel is composed of a line of 17 tetrahedron spires reminiscent of the gleaming wings of an early fighter jet.



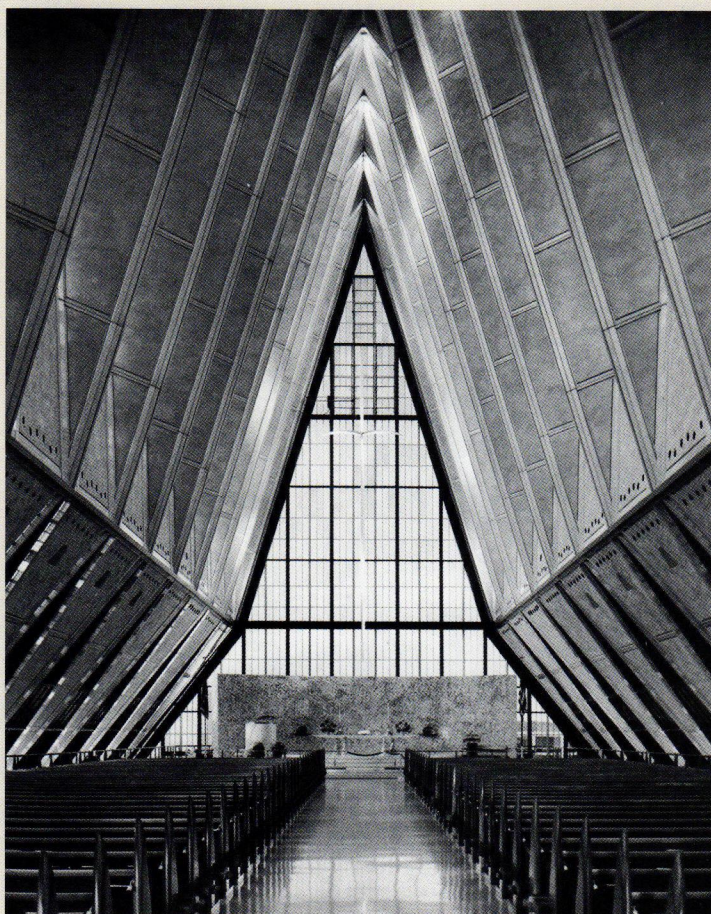




Every panel of *dalle de verre* stained glass and the thousands of pipes that make up the Walter Holtkamp-designed organ will be carefully restored.

Above: The Protestant chapel's M.P. Moller Company pipe organ, designed by Walter Holtkamp.

Three photos, top left: Workers craft, assemble, and install the chapel's famed panels of *dalle de verre* stained glass.

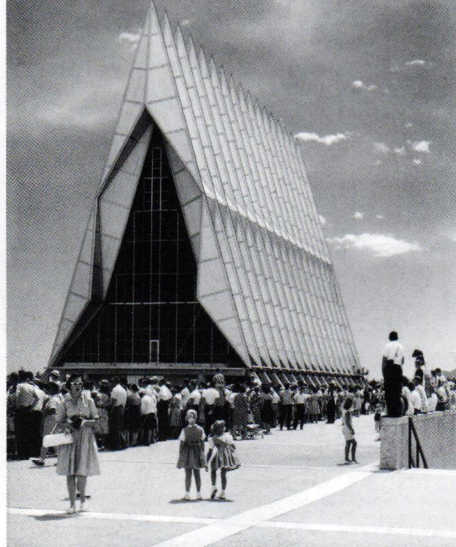
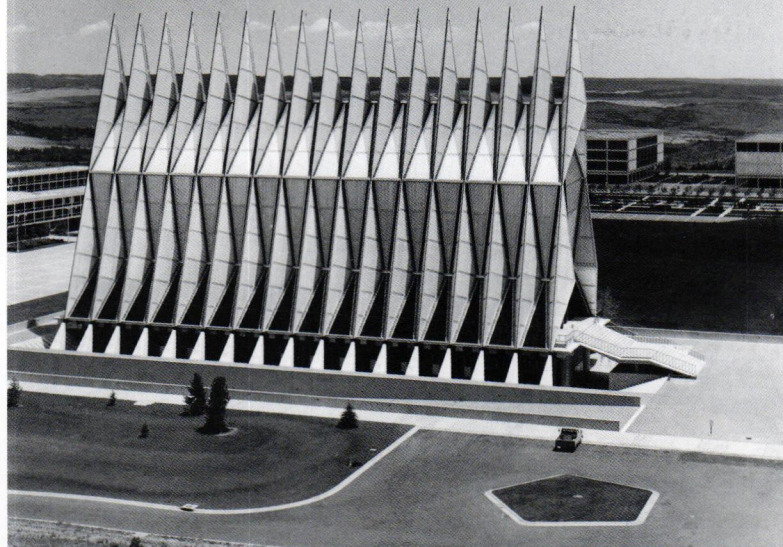


The view from inside the entry to the Protestant chapel. The M.P. Moller Company pipe organ sits above the entry.

pieces, then arranged as a mosaic in a slab of concrete and epoxy resin—will be cleaned, repaired, and reinstalled. The thousands of pipes that make up the Walter Holtkamp-designed organ, built by M.P. Moller Pipe Organ Company, will be taken off-site for restoration. Over the course of the renovation, the 150-foot-tall chapel will be stripped down to its tubular-steel framing, appearing much like it did when under construction in the early 1960s—except this time, it will be shrouded.

"Up in the Rocky Mountains, wind is a big factor, and we've got these 17 airplane wings standing up in the air," says JE Dunn's Jeff Callinan, project principal in the firm's Minneapolis office. "How do you disassemble the structure safely, and then reassemble it with quality and efficiency in mind? We designed a complete building enclosure around the building, and it does a lot of things: It protects us from the elements, and it integrates four bridge cranes within the structure, so we can be focused on four places at once and closer visually to the work."





*The chapel and surrounding grounds upon completion of the project in 1962. The building's futuristic design drew the attention of a wide public audience.*

**U.S. AIR FORCE  
ACADEMY  
CADET CHAPEL  
RESTORATION  
AND REPAIR**

**Architecture and  
Engineering Restoration**

**Architect and engineer  
of record:** AECOM

**Preservation architect:**  
Hartman-Cox Architects

**Structural engineer  
and enclosure architect:**

Wiss, Janney, Elstner  
Associates (WJE)

**Organ consultant:**  
Bynum Petty

**Construction**

**Contractor:** JE Dunn

**Historic treatment  
specialist:** LEO A DALY

**Organ restoration:**  
AE Schlueter Pipe Organ  
Company

**Curtain wall replication:**

Alliance Glazing  
Technologies

**Interior ceiling panel  
replication:**

EverGreene  
Architectural Arts

**Dalles de verre glass  
restoration and repair:**  
Judson Studios

**Pew restoration:**  
Woodwork Restoration

**Aluminum exterior panels:**  
A Zahner Company

U.S. Representative John E. Fogarty of Rhode Island called the design “not American in conception” and “unworthy of the traditions of this nation.” For Fogarty, the “traditions of this nation” were laid in brick—like West Point, or Annapolis.

**From New to Old**

In the years it took to *prepare for* the restoration, the architects, engineers, and consultants spent hours poring over original plans, microfiche cards, correspondence, interviews, and construction photos to understand the evolution of the design and construction, because they knew changes had been made during construction to attempt to address the leakage problem. Bjornberg relished the opportunity to learn how the building had come together—physically and politically.

One of his favorite early criticisms of the design for the U.S. government’s first modernist commission came from

U.S. Representative John E. Fogarty of Rhode Island. A former bricklayer and president of Local 1 of the Rhode Island Bricklayers Union, Fogarty called the design “not American in conception” and “unworthy of the traditions of this nation.” For Fogarty, the “traditions of this nation” were laid in brick—like West Point, or Annapolis.

Of course, the whole point of the Air Force Academy Cadet Chapel was to make a decisive break with tradition. And in doing so, it had a part in shaping a new tradition of modern buildings constructed of concrete, glass, steel,

>> *continued on page 50*





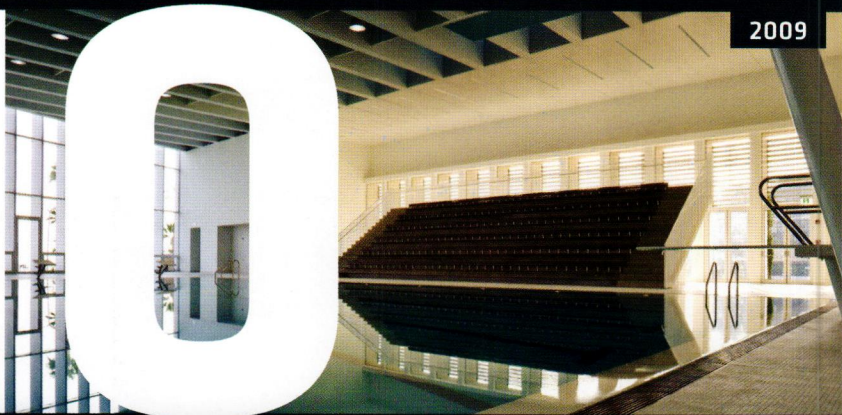
A LOOK BACK AT THE 10  
BUILDINGS DESIGNED BY  
MINNESOTA ARCHITECTS  
THAT HAVE WON AN  
**AIA COTE TOP TEN AWARD**,  
THE MOST PRESTIGIOUS  
HONOR IN THE COUNTRY  
FOR SUSTAINABLE DESIGN  
EXCELLENCE



2019



2000



2009



2014



2002



2009



2013



2008



2012



2000



*"The COTE Top Ten Awards are the perfect blend of science and art, recognizing architecture that meets our profession's highest ideals through its 10 metrics and representing the highest level of design excellence. In terms of architecture awards, it is the highest bar we have as a profession. Its winners point our way forward."*

Julie Snow, FAIA | Snow Kreilich Architects  
COTE Advisory Group member

# The Ten Ten

Launched in 1997, the American Institute of Architects' COTE Top Ten Awards celebrates the integration of design excellence with advanced environmental performance. The *ten* represents both the number of design and performance measures against which the submissions are judged (see sidebar) and the number of awarded buildings each year.

With the selection of the Minnesota Landscape Arboretum's Tashjian Bee and Pollinator Discovery Center in 2019, Minnesota architecture firms have now brought home a total of 10 COTE Top Ten Awards. Not surprisingly, six of the awarded projects are learning centers. LHB was the first Minnesota architecture firm to receive the honor twice, and VJAA matched that achievement in 2009. The University of Minnesota Duluth is the lone two-time winner among Minnesota building owners.

In the following pages, *Architecture MN* revisits all 10 projects, highlighting what they were designed to be, how they achieved an elite level of building performance and sustainability, and why the owners and architects were motivated to create leading-edge facilities.

## FRAMEWORK FOR DESIGN EXCELLENCE

When AIA National established the COTE (Committee on the Environment) Top Ten criteria in the 1990s, sustainable design was largely considered a specialized pursuit. Today, the organization views sustainable design and quality design as one and the same, and so it has evolved the COTE Top Ten into a more universal Framework for Design Excellence. The framework breaks the 10 measures down in the following way:

### • Designing for Integration

What is the big idea behind this project—and how did the approach toward sustainability inform the design concept?

### • Designing for Equitable Communities

How does this project contribute to creating a walkable, human-scaled community inside and outside the property line?

### • Designing for Ecology

In what ways does the design respond to the ecology of this place?

### • Designing for Water

Sustainable design conserves and improves the quality of water as a precious resource.

### • Designing for Economy

Providing abundance while living within our means is a fundamental challenge of sustainability.

### • Designing for Energy

Sustainable design conserves energy while improving building performance, function, comfort, and enjoyment.

### • Designing for Wellness

Sustainable design supports comfort, health, and wellness for the people who inhabit or visit buildings.

### • Designing for Resources

Sustainable design includes the informed selection of materials and products to reduce product-cycle environmental impacts while enhancing building performance.

### • Designing for Change

Reuse, adaptability, and resilience are essential to sustainable design, which seeks to maintain and enhance usability, functionality, and value over time.

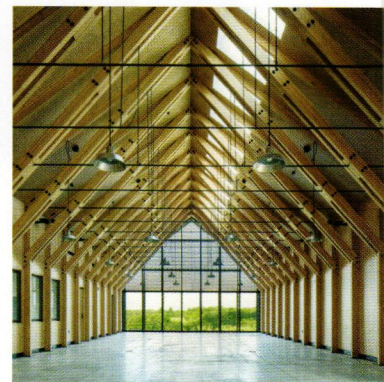
### • Designing for Discovery

Has the building performed in ways that matched expectations during design?





*Left: Landscape architecture firm Damon Farber designed the site's wildflower meadow and bee and pollinator gardens. Below: The exhibit hall's truss work was inspired by the arboretum's original Arts and Crafts-style building.*



2019

## MINNESOTA LANDSCAPE ARBORETUM TASHJIAN BEE AND POLLINATOR DISCOVERY CENTER

Chaska, Minnesota

MSR Design, 2016

**What:** The Minnesota Landscape Arboretum's 7,530-square-foot Tashjian Bee and Pollinator Discovery Center provides interactive learning opportunities about bees and other pollinators, their agricultural and ecological importance, the essential ways human lives intersect with theirs, and the alarming decline in the health of pollinator populations. The design connects each interior program space to demonstration pollinator gardens, beehives, and future food-production plots outdoors. The bee center serves as exemplar of its program's urgent call for conversations on and best practices in our natural environment by inviting visitors to deepen their understanding of, and connection to, the natural world around them.

**How:** The practical beauty of traditional farm buildings inspired the bee center's simple forms, siting, material selections, and sustainability strategies (including a robust envelope, radiant systems, a geothermal field, and photovoltaics), which deliver thermal comfort and advanced energy performance. The project is designed to be net-zero with the future expansion of a roof-mounted, one-kilowatt photovoltaic array. One hundred percent of the stormwater is managed onsite, and on-site wetlands supply irrigation for the demonstration gardens' native plantings. The design team collaborated on a year of post-occupancy research and analyzed real-world performance through three interrelated lenses: people, space, and systems.

**Why:** "The project team chose a simple, authentic, experientially rich approach to sustainable design as a natural extension of the project's core mission to connect visitors to the surrounding environment," says designer Chris Wingate, Assoc. AIA. "Minnesota's B3 (Buildings, Benchmarks and Beyond) sustainability program also helped galvanize the client and design team to work toward achieving progressive performance metrics from day one."

*The glassy west facade with its light-filtering wood screen opens the exhibit hall up to a hilltop view of the arboretum.*







*Left: Giant reclaimed wood scuppers divert stormwater to a drain system for filtration and reuse. Below: The structural and hydraulic labs accommodate two 15-ton gantry cranes. Bottom: An 11-ton bifold door enables access for large structures and equipment.*



2013

## UNIVERSITY OF MINNESOTA DULUTH SWENSON CIVIL ENGINEERING BUILDING

Duluth, Minnesota

Ross Barney Architects (design architect)  
and TKDA (architect of record), 2009

**What:** The architects started by asking, "What do engineers need to learn, and what forces do they need to control?" The University of Minnesota Duluth's 35,300-square-foot Swenson Civil Engineering Building was designed to teach students about materials, how they go together, how they age, and how they resist forces inherent in nature.

Engineers create structure to move water, retain earth, and span long distances. Duluth's engineers are particularly occupied with mining taconite in Minnesota's Iron Range. This professional focus and the special features of the region inspired a design that could not be anywhere else, for any other discipline.

**How:** The building exterior uses rusting steel, precast and poured-in-place concrete, and reclaimed wood to create a place for designing, constructing, and testing structure. Taconite-filled drums collect stormwater for experimentation in laboratory flumes. Excess rainwater is carried by taconite rock drains to onsite retention or absorbed by the vegetated roof.

The south wall is a puzzle of interlocking precast-concrete panels. Steel kickers used for temporary support during installation remain to demonstrate the construction process.

*The exterior uses rusting steel, precast and poured-in-place concrete, and reclaimed wood to create a place for designing, constructing, and testing structure. Taconite-filled drums collect stormwater for experimentation in laboratory flumes.*

Wood scuppers made from recycled pickle barrels teach reuse of salvaged materials. On rainy days, the building demonstrates hydraulics and kinetic energy, as water pours from the scuppers.

Teaching continues inside with exposed mechanical and architectural systems. Structural glass partitions and clerestories allow daylighting and views to laboratories. Precast-concrete weld connectors are exposed; gabion walls of taconite separate the corridor from laboratories; a glass floor landing overlooks the labs, demonstrating the strength of glass.

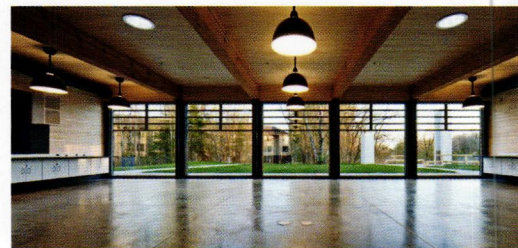
**Why:** "Sustainable principles were an integral design impetus," says Ross Barney Architects' Carol Ross Barney, FAIA. "With an educational facility whose curriculum directly impacts the natural environment, this notion of building as pedagogical tool became a guiding concept. Designed to display building systems as a teaching tool, the building showcases structural and mechanical processes and stormwater-management techniques. It acts as a working classroom where design plays an integral educational role and civil engineering processes are illuminated."







*The building provides an indoor and an outdoor teaching space, as well as clear evidence that green building technology and sustainable design practices can yield a compelling work of architecture.*



BAGLEY PHOTOS BY PAUL CROSBY

2012

## UNIVERSITY OF MINNESOTA DULUTH BAGLEY NATURE AREA CLASSROOM BUILDING

Duluth, Minnesota  
Salmela Architect, 2010

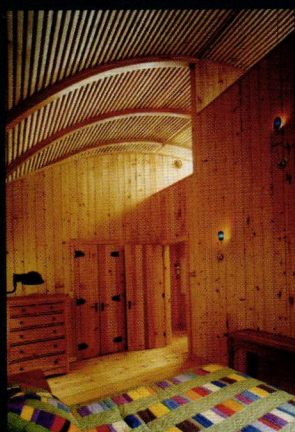
**What:** A 2,000-square-foot teaching facility for UMD's 59-acre nature preserve. Perched on a hilltop clearing above Rock Pond, the building is composed of a low classroom volume backed by a narrower, two-story service zone housing mechanicals and storage. The teaching and gathering space looks out through a wall of glass to a patio of recycled granite pavers with

a fireplace and recycled-wood benches. A solar array and a vegetated roof signal the building's environmental intentions.

**How:** The design combined a series of passive and active strategies to meet the school's ambitious environmental goals for the project. Energy demand is reduced with high-R-value continuous insulation, high-performance windows, and airtight building construction, allowing the grid-connected photovoltaic panels to produce more energy than the building uses. The large south-facing windows maximize direct solar gain in winter, while operable windows on the east and west sides provide cross-ventilation in the

warmer months. Solar tubes bring daylight into the middle of the classroom, and electric lighting is controlled by motion sensors and photocells. A heat-recovery ventilation system distributes fresh air evenly within the building and recovers 85 percent of the heat before venting the air.

**Why:** "UMD staff and our team saw an opportunity to advance public awareness of sustainability with this unique project," says David Salmela, FAIA. "The building received LEED-Platinum certification and a COTE Top Ten Award, but its greatest success can be seen in how often it is used by students and faculty from across the university, as well as the general public."



A 2016 AIA COTE Top Ten report titled "Lessons from the Leading Edge" cited the Tofte Cabin as one of the few award winners to be monitored as net-zero.



TOFTE CABIN PHOTOS BY: PETER BASTIANELLI-KERZE

2002

## TOFTE CABIN

Tofte, Minnesota  
Sarah Nettleton Architects, 2000

**What:** "In summer 1997, Medora Woods purchased 5.7 acres of woods with a small 50-year-old summer cabin on the North Shore of Lake Superior," wrote Camille LeFevre in the March/April 2001 issue of *Architecture MN*. "A Jungian analyst who studies Americans' increasing psychic and physical disconnection from community, place, and nature, Woods wanted to renovate the cabin for year-round use without the materials waste, site destruction, ongoing maintenance, and energy consumption such projects usually generate." Working with



2009

## GREAT RIVER ENERGY HEADQUARTERS

Maple Grove, Minnesota  
Perkins and Will, 2008

**What:** Great River Energy (GRE) is a not-for-profit, member-owned electric utility cooperative and Minnesota's second-largest electric wholesale supplier. GRE's headquarters is housed in a 166,000-square-foot, four-story office building with a concrete frame and glass curtain walls. The project, which opened on Earth Day 2008, was Minnesota's first LEED-Platinum-certified building.

The complex anchors Elm Creek Boulevard, a major thoroughfare in suburban Maple Grove, Minnesota, and overlooks Arbor Lake, a man-made lake resulting from gravel excavation. The 12.5-acre site was designed to link GRE with Main Street, the Arbor Lakes Retail District, and a metro-wide transit terminal. It can accommodate expansion and a future parking deck over the surface lot without reducing green space, increasing runoff, or reducing existing bioswale capacity.

**How:** GRE's new office environment was designed to showcase workplace productivity, energy-efficient technologies, and a collaborative culture. The facility cuts fossil-fuel use by 75 percent, carbon emissions by 60 percent, and water use by 90 percent—all while providing abundant daylight and outdoor views, exceptional indoor air quality, and a superior work environment within

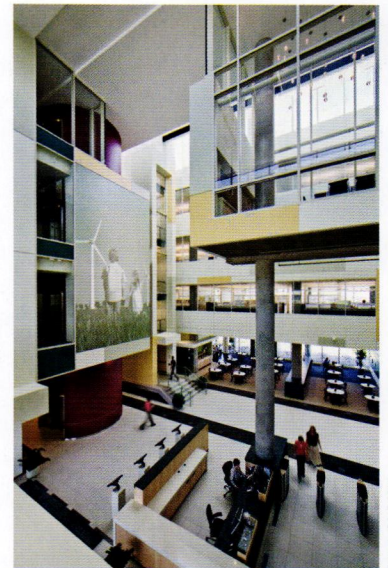


PAUL CROSBY

a reasonable budget—demonstrating that green design can be efficient, affordable, comfortable, and healthy.

Key design strategies included creating quality space rather than quantity of space; design for daylight; a first-ever combination of lake geothermal heat pumps and low-velocity, under-floor ventilation; and a commercial-scale, onsite urban wind turbine. Within two years of opening, the project attracted almost 15,000 visitors from nearly every continent on the planet.

**Why:** "The project continues to demonstrate that comfort, workplace productivity, and energy efficiency are 110 percent compatible," says Perkins and Will's Doug Pierce, AIA. "While some of the technology could be updated, the design for daylight, views, and modular flexibility are timeless. And the low-velocity displacement ventilation can do an amazing job of delivering fresh air and removing floating contaminants from the workspace. That's priceless."



PAUL CROSBY

*Top: Berms and plantings in front of the building collect rainwater and shield views of solar panels. Above: Work areas, offices, and a conference center are organized around a soaring atria.*

Sarah Nettleton Architects, Woods revamped the 942-square-foot retreat to be a demonstration of sustainable design for architects, builders, and other visitors from around the world.

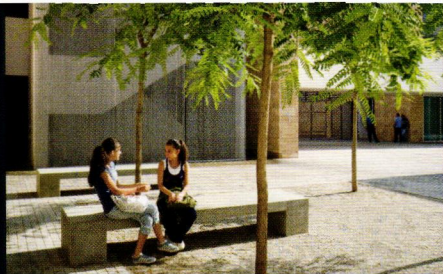
**How:** A diverse team of local and national experts applied a systems approach of ecological sustainability based on in-depth research of options in 2000, when there were few standards and no accepted rating system. Renewable-energy features include an array of photovoltaic panels on the garage roof, a wind-powered generator, and a ground-source heat pump for in-floor heating. Daylighting strategies bring

light deep into the home during winter while minimizing heat gain in summer. Materials and finishes range from recycled and sustainably harvested pine and a copper roof to low or no-VOC paints.

**Why:** "The infrastructure was not in place [at the time] to support a lot of this sustainable-design approach," says Sarah Nettleton, FAIA. "Because of Medora's willingness to commit to her ideas in realizing this approach to design and construction, she supported my research and our deep look at reinventing the process of sustainable design."

*Working with Sarah Nettleton Architects, Medora Woods revamped the 942-square-foot retreat to be a demonstration of sustainable design for architects, builders, and other visitors from around the world.*





2009

## AMERICAN UNIVERSITY OF BEIRUT CHARLES HOSTLER STUDENT CENTER

Beirut, Lebanon

VJAA, 2008

**What:** Perched on an incline rising from Beirut's coastal Corniche (pedestrian promenade), the 204,000-square-foot student center arranges sports facilities, a theater, an amphitheater, a café, and underground parking into multiple building volumes woven together on many levels by courtyards, circulation paths, and spectator areas. The resulting design synthesizes architecture and landscape, including rooftop gardens, into interconnected, environmentally diverse spaces for people to gather in, as students and faculty seek shade during the day and Mediterranean breezes at night.

**How:** "Evoking the masonry-bearing wall construction of traditional Lebanese buildings, VJAA organized the center into a series of roughly parallel, sandstone-clad, concrete-framed 'strong walls' that shade outdoor spaces and control temperature swings inside the buildings," wrote Thomas Fisher, Assoc. AIA, in our November/December 2008 issue. "The walls play a part in a series of sustainability strategies, including rooftop solar collectors to heat water for the pool and showers, radiant and displacement cooling, operable skylights to induce stack-effect ventilation, precast and aluminum louvers sized to keep glass areas in shade, green roofs to reduce the heat-island effect, and vine-covered trellises and water walls to cool exterior spaces."

**Why:** "The university was interested in developing a model for sustainable design that was specific to the traditions and cultural context of the region while introducing 21st-century techniques and technologies," says VJAA's Jennifer Yoos, FAIA. "We visited the campus again this past December and found the building in heavy use. The environmental strategies and social programming around the building's microclimates have yielded a much-valued building."



*Above: Building volumes were shaped and arranged to provide shading during midday heat.  
Below: Rooftop gardens offer breakout spaces with Mediterranean views for evening use.*







*The dramatic undersides of the inspection-area canopies make passing through this border station a warm, uplifting experience for travelers. "We inflected these structures to give officers 360-degree views of the site, while masking the security barriers," says Snow Kreilich's Julie Snow, FAIA.*

2014

**WARROAD**  
**U.S. LAND PORT OF ENTRY**  
 Warroad, Minnesota  
 Snow Kreilich Architects, 2010

**What:** A product of the U.S. General Services Administration's (GSA) Design Excellence program, this border station is composed of three low buildings (office, commercial inspection, and secondary inspection) connected by canopies. Its two-tone wood exterior reflects the area's long history of wood-based industry and craft: The outer shell is stained the dark gray of tree bark to anchor the building in the vast northern Minnesota landscape, while the portals are lined in warm heartwood to convey welcome to those entering the U.S. from Canada. Building volumes are inflected, widening sightlines for U.S. Customs and Border Protection officers and easing the turns required to move traffic through the port. "The facility's flexibility and functionality are extraordinary," says GSA regional chief architect Robert Theel, FAIA.

**How:** The site, on the southern edge of a tamarack bog with uninterrupted winter winds from the north and west, allowed for the project's most sustainable features. The supersaturated soils provided ideal thermal transfer for a ground-source heating and cooling system, a first for the U.S. Land Port of Entry program. The site design took care to collect, move, and filter stormwater runoff from the port's vehicular traffic areas before returning it to the surrounding bog.

Plantings of tall trees and canopies over outdoor inspection areas create a more comfortable microclimate for border-station staff.

**Why:** "We share with the leaders of the General Services Administration the imperative that we reduce the energy usage and resource consumption of our nation's buildings as we provide safe, efficient, comfortable, and healthy workspaces for federal employees," says Snow Kreilich Architects' Julie Snow, FAIA.

*The site, on the southern edge of a tamarack bog, allowed for the project's most sustainable features. The supersaturated soils provided ideal thermal transfer for a ground-source heating and cooling system.*

PHOTOS THIS PAGE: PAUL CROSBY





2008

# **TULANE UNIVERSITY LAVIN-BERNICK CENTER**

New Orleans, Louisiana  
VJAA, 2007

**What:** A 1950s student center—a modernist bubble that was rigidly compartmentalized on the inside and mechanically cooled on even the most temperate days—was transformed into a dynamic university hub that responds to its climate and cultural context. The 150,000-square-foot project reused and expanded the existing concrete structure and foundation and reprogrammed the building to integrate microclimates with social activity. The renovation, which was 50 percent complete at the time of Hurricane Katrina, continues to serve as a model for sustainable design that is appropriate to New Orleans.

**How:** The new building creates healthy spaces that emphasize natural light year-round and natural ventilation, especially during spring and fall. The envelope allows the center to remain open to daylight and to natural cooling and fresh air when possible, while tempering the effects of solar gain with shading and low-E (low-emissivity) glazing. The building is divided into thermal zones related to the particular requirements of offices, gathering spaces,

and retail. Radiant-cooling surfaces, solar chimneys and large moving fans, and water walls provide air turbulence and radiant conditioning for spaces and increase thermal comfort where needed. The project was launched prior to the widespread availability of sustainability guidelines, so the architects worked with German climate engineer Matthias Schuler of Transsolar to develop innovative systems and strategies for energy performance.

**Why:** “We believe in a fusion of modern technology and an understanding of traditional methods of passive design that are inspired by local contexts and traditions,” says VJAA principal Vincent James, FAIA. “By working this way, sustainability has an added value: It helps the building resonate with local traditions and represent a particular place and culture.”

*The envelope allows the center to remain open to daylight and to natural cooling and fresh air when possible, while tempering the effects of solar gain with shading and low-E (low-emissivity) glazing.*

*Taking its cues from the environmental adaptations of New Orleans' vernacular architecture, VJAA wrapped the building with shading devices—trellised porches, horizontal louvers, canopies, and deep-set balconies.*





2000

## NORTHLAND COLLEGE MCLEAN ENVIRONMENTAL LIVING AND LEARNING CENTER

Ashland, Wisconsin

LHB (architect of record and environmental consultants)  
and HGA (design architect), 1998



**What:** Located on the southern shores of Lake Superior, Northland College has focused on the environment and sustainability for decades. The 40,000-square-foot McLean Environmental Living and Learning Center is used in curriculum for 114 residents learning about energy performance, materials, building life cycles, and sustainability. The primary goals for the project were developed as a collaborative process between the design team, students, staff, and the broader college community. A memorandum of understanding included in the construction documents listed the measurable sustainability goals; it was signed by all major stakeholders, including the contractor, to ensure the established goals were met.

**How:** One of the project goals included being 40 percent more energy-efficient than code required. Estimates generated by energy modeling software predicted a likely 50 percent reduction based on analysis of more than 30 strategies.

Computers monitor the building's renewable systems, including a 20-kilowatt Jacobs Wind Electric Company turbine, a solar domestic hot water system, and three photovoltaic arrays. Other sustainability features include operable windows instead of air-conditioning, indoor-air-quality monitors, low-flow showers and toilet fixtures, composting toilets, an energy recovery unit, high-efficiency gas boilers, and sensor-controlled lighting. Resource efficiency was addressed with recycled-content materials, biocomposite counter surfaces, low-maintenance masonry, and regionally harvested wood.

**Why:** "Northland College set out to create a new residence hall to meet the needs and interests of its students, model its environmental mission, and provide a living and learning lab for environmental studies," says LHB CEO Rick Carter, FAIA. "The end result supports teaching, learning, living, working, and outreach, all while incorporating environmental practices."

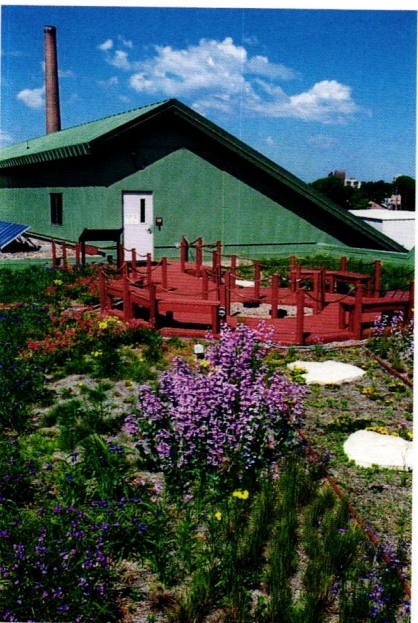
2000

## THE GREEN INSTITUTE'S PHILLIPS ECO-ENTERPRISE CENTER

(now Greenway Office Building)

Minneapolis, Minnesota

LHB, 1999



**What:** The Phillips Eco-Enterprise Center (PEEC) was created to connect an under-employed labor force to employers in ecologically sound businesses. Rooted in community resistance to the county's plans to construct a solid-waste transfer station at this site, local activists succeeded in building a base for better employment opportunities. The PEEC, a multi-tenant office/manufacturing building on a brownfield site, was seen as an expression of the Green Institute's mission, which is to "create community-based models to protect and nurture our natural and urban environment through education and sustainable economic development." The project was the first in Minnesota to use LEED Pilot in design.

*One of the PEEC's most unique environmental measures is its use of operable windows. Very few commercial office buildings in Minnesota have been built with operable windows over the past quarter-century.*

**How:** Design features relative to energy performance include energy reduction by 50 percent through solar orientation, sun-tracking daylighting, advanced glazing, shared common space, ground-source heat-pumps, an air-to-air heat exchanger, efficient lighting, and controls. Resource conservation measures include the use of recycled materials and construction materials (such as steel joists, wood, and brick) derived from salvaged sources. Minimizing use of interior finish materials was emphasized, and finishes were selected based on their long life span, low off-gassing, and potential for disassembly and reuse. Locally produced materials and an aggressive construction-site recycling program were utilized. Features to reduce the impact on ecology included a roof garden, native landscaping, rainwater harvesting, and gray-water use.

**Why:** "The Green Institute's mission and the vision of longtime Minneapolis Park and Recreation Board commissioner Annie Young pointed the institute in the direction of creating the most sustainable building in Minnesota," says LHB CEO Rick Carter, FAIA. "LHB had been working on the Material Reuse Center for the same client. We were 'pushed' by this client in a way we never had been before, and it made us better architects." **AMN**





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## Tree Agent

<< continued from page 14

### **The LEED standard was diluted? How?**

For many, many years, the US Green Building Council [USGBC] was attacked by conventional industry because of its exclusive recognition of FSC as a symbol for responsible wood. They wanted their industry-developed standard, which is referred to as Sustainable Forestry Initiative, to be equally recognized. The USGBC membership voted it down several times. When that approach failed, industry representatives lobbied states around the country and essentially got LEED banned from use by various public agencies.

In response, the USGBC revised LEED and effectively eliminated the credit that promoted use of FSC-certified wood. Installed in its place was a series of credits around responsible materials, and FSC is just one way of contributing to this group, which also includes recycled content and salvage material. That's fine, but it doesn't result in the level of forest conservation that FSC requires.

### **How can architects play a part in preserving forests?**

We need to pay attention to the impact that design decisions have—from the choice of materials and construction through the life of the building and even demolition. Roughly 11 percent of all carbon emissions comes from the production of construction materials. That's a significant contribution to greenhouse gases.

Wood naturally stores carbon and is a renewable resource when it's harvested sustainably. We'd like to see more and more substitution of wood for concrete and steel, especially as a structural material. Architects really can lead in this area. Their decisions make a lasting difference.

### **What percentage of wood currently used in construction is FSC-certified?**

Accurate numbers are hard to get, because of the vast number of players in the industry. We're probably at five percent in terms of the total purchase of construction products. In the retail market, Home Depot alone sells around \$600 million a year of FSC-certified wood products, but that's still a pretty small fraction of their overall wood sales. Lowe's is also working hard to grow their share of FSC products.

>> continued on page 56

**SEE STRUCTURE.**

STRUCTURE IS ALL AROUND US, IN THE NATURAL WORLD AND THE WORLD WE MAKE. LARGE OR SMALL, SIMPLE OR COMPLICATED, YOUR PROJECT HAS OUR COMPLETE FOCUS.

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GREEN BAY  
DULUTH  
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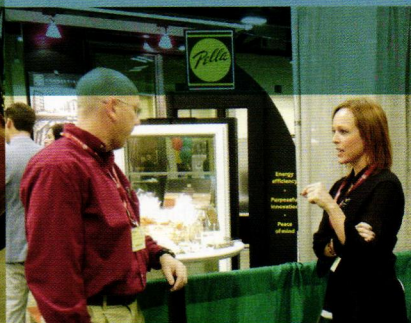
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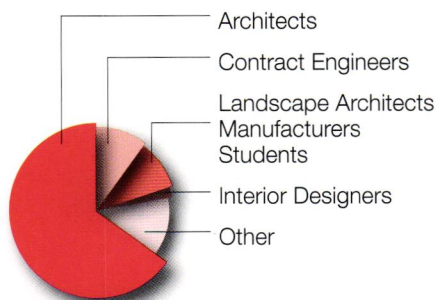
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## Who attends?



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**AIA**  
Minnesota



## RENOVATION, REMODELING, RESTORATION

The firms advertising on the following pages include design professionals who are members of the American Institute of Architects Minnesota (AIA Minnesota). These firms have a wealth of experience in the areas of renovation, remodeling and restoration. Contact them to discuss your specific project needs!

For information on all AIA Minnesota firms, please visit our website, [www.aia-mn.org](http://www.aia-mn.org).

### Legend

|               |   |
|---------------|---|
| AIA           | Registered Member, American Institute of Architects   |
| Associate AIA | Associate Member, American Institute of Architects (not registered)                                   |
| ASID          | American Society of Interior Designers  |
| CCS           | Certified Construction Specifier  |
| CID           | Certified Interior Designer   |
| FAIA          | Fellow, American Institute of Architects  |
| IIDA          | International Interior Design Association   |
| LEED AP       | Leadership in Energy and Environmental Design, Accredited Professional                                |
| LEED AP BD+C  | Leadership in Energy and Environmental Design, Accredited Professional Building Design + Construction |
| PE            | Professional Engineer   |
| REFP          | Recognized Educational Facility Professional  |

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2800 Lyndale Avenue South, Ste. 220  
Minneapolis, MN 55408  
Tel: (612) 823-0233  
Email: [queries@aharchitecture.com](mailto:queries@aharchitecture.com)  
[www.aharchitecture.com](http://www.aharchitecture.com)  
Contact: Christine Albertsson,  
(612) 823-0233

### Firm Principals

Christine Albertsson, AIA, CID, NCARB  
Todd Hansen, AIA, CID  
Mark Tambornino, AIA, CID, NCARB  
Ian McLellan, AIA

Thoughtful Design. Delightful Living. Founded in 2000, Albertsson Hansen creates residential architecture for clients who value beautiful, functional design. We take pride in being able to subtly transform traditional details and sources with a clean, modern sensibility. Our goal is to honor and serve our clients through transformative and meaningful design. We offer a full spectrum of work – from small remodeling projects and additions, to new houses, retreat houses, cabins, outbuildings, and barns.

*Big Sand Lake Retreat, Park Rapids, MN;  
Lowry Hill Revival, Minneapolis, MN; North Woods Lake Home, Grand Rapids, MN;  
Warehouse Loft Remodeling, Minneapolis, MN; Crocus Hill Residence, St. Paul, MN;  
Island Haven, Madeline Island, WI;  
Minnetrista Residence, Minnetrista, MN;  
Deephaven Up-Down, Minnetonka, MN*

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Minneapolis, MN 55403  
Tel: (612) 874-4100  
Email: [info@alliance.us](mailto:info@alliance.us)  
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Contact: Tom Hysell, (612) 874-4191

### Firm Principals

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Carey Brendalen, AIA, LEED AP  
Tom DeAngelo, FAIA, LEED AP  
Tom Hysell, FAIA, LEED AP BD+C  
Mamie Harvey, AIA, LEED AP BD+C  
Ken Sheehan, AIA, LEED AP  
April Meyer, NCIDQ, LEED AP  
Ross Naylor, AIA, LEED AP BD+C

Alliance is a group of individuals with specialized expertise who work with clients to realize their goals. We are planners, architects, and interior designers skilled in the art of creative problem-solving and knowledgeable about every step it takes to achieve it. Since 1970, we have solved real-world problems with design that is inspiring, innovative, responsive, and sustainable. Our clients rely on us to provide innovative solutions for aviation, business, civic, entertainment, learning, and science environment renovations.

*Minneapolis-St. Paul International Airport, multiple projects, St. Paul, MN; Milwaukee Mitchell International Airport Terminal Redevelopment, Milwaukee, WI; Ecolab Global Headquarters & Schuman Campus, St. Paul and Eagan, MN; Boston Scientific, Minnetonka, MN; Hennepin County Public Works Facility Update, Medina, MN; Center for Performing Arts Addition and Renovation, Minneapolis, MN; Medtronic Rice Creek Campus, Fridley, MN; Butler Square Atrium Renovation, Minneapolis, MN*

## ANDERSON SUSTAINABLE ARCHITECTURE



Anderson  
Sustainable  
Architecture

752 Holly Avenue  
St. Paul, MN 55104  
Tel: (651) 472-4847  
Email: [mark@asustainablearchitecture.com](mailto:mark@asustainablearchitecture.com)  
[www.asustainablearchitecture.com](http://www.asustainablearchitecture.com)  
Contact: Mark Carsten Anderson, AIA, CPHC, (651) 472-2827

### Firm Principal

Mark Carsten Anderson, AIA, CPHC

By thoroughly understanding our clients living and working goals, we create great places that are also organized to align with sustainability principles. This naturally provides more healthy buildings with better sunlight, fresh filtered air and access to outdoor views and living areas. We design highly livable, functional, healthy, comfortable, exciting, energy efficient, durable, resilient, lower maintenance, yet economical buildings. Designing building remodeling to be better, healthier, energy saving places to live and work.

*Historic Preservation Residence-LEED Net Energy Passive House, Saint Paul, MN; Sky View Farm Residence - Net Energy Passive House, Northfield, MN; Sunset Residence - Net Energy Passive House, Somerset WI; Saint Andrew Lutheran Church, East Bethel, MN; Saint Therese of Deephaven, Wayzata, MN; Youth Center, Lackland AFB, TX; General Dynamics Supercomputer Manufacturing, MPLS, MN*



**BENTZ/THOMPSON/  
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Minneapolis, MN 55402  
Tel: (612) 332-1234  
Email: info@btr-architects.com  
www.btr-architects.com  
Contact: Ann Voda or Randy Moe,  
(612) 332-1234

**Firm Principals**

Ann Voda, AIA, CID  
Randy Moe, AIA, CID, NCARB  
Robert Zimmerman, AIA, CID

We help clients realize the full value of their renewed spaces from small office workplace environments to repurposing of whole buildings. Renovation projects bring exciting opportunities to improve and extend the life of building resources, increase energy efficiency and optimize performance, all the while enhancing the lives of the people who use them. Revitalizing existing environments is a good investment with immediate returns. We collaborate with our clients through the full cycle of the property from pre-planning through design and occupancy.

*Minnesota Department of Education Space Design Study, St. Paul, MN; Memorial & Plaza Hall Addition & Renovation, Rochester Community & Technical College, Rochester, MN; Main Building Academic Renovation, College of St. Benedict, St. Joseph, MN; Fergus Falls Public Library, Fergus Falls, MN; Hennepin County North Regional Library, Minneapolis, MN; Edina Community Lutheran Church, Edina, MN; Schoenecker Commons, College of St. Benedict, St. Joseph, MN; Andersen Special Collections Resource Center and Rare Books, University of Minnesota*

**BKV GROUP**

222 North Second Street, Ste. 101  
Minneapolis, MN 55401  
Tel: (612) 339-3752  
Email: kqueen@bkgvgroup.com  
www.bkgvgroup.com  
Contact: Kyler Queen, (612) 373-9122

**Firm Principals**

Jack Boardman, AIA  
Michael Krych, AIA  
Kelly Naylor, CID, LEED AP  
Bruce Schwartzman, AIA  
Chad Kurdi, PE  
Mathew Nugent, AIA  
Tom Daszkiewicz, Assoc. AIA  
Christopher Palkowitsch, AIA

BKV Group is a holistic design firm providing a full complement of architecture, engineering, interior design, landscape architecture, and construction administration services. Our core belief is that regardless of project type, design has a profound impact on the community, and our responsibility as a multidisciplinary firm is to enhance the economic, aesthetic, social, and environmental context of the communities we shape and design.

*Duffey Flats, Minneapolis, MN; Custom House, St. Paul, MN; Pillsbury A-Mill Artist Lofts, Minneapolis, MN; Arme' at Meridian Hill, Washington DC (Meridian Hill Hall); Colonial Warehouse, Minneapolis, MN; Arkadia West Loop Apartments, Chicago, IL; Pennington County Justice Center, Thief River Falls, MN; City of Rochester North Service Center & Police Station, Rochester, MN*

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ARCHITECTURE, INC.**

1600 Marshall Street NE  
Minneapolis, MN 55413  
Tel: (612) 331-2222  
Email: info@blumentals.com  
www.blumentals.com  
Contact: Jim Moy, (612) 331-2222

**Firm Principals**

James Moy, AIA, CID  
Andy Swartz, AIA, CID

continued next column

Blumentals/Architecture believes that almost every existing building can be rejuvenated through the thoughtful renovation of existing spaces, additions, and/or changing the use of facility. Reuse of buildings, with or without historical significance, reduces the amount of waste and need for new building materials, and is an excellent opportunity and important strategy for sustainable design. We have expertise from over 700 Renovation/ Historic Preservation projects covering approximately 3,500,000 SF.

*Minnesota National Guard Armory, St. Cloud, MN; Riverside Homes Renovation and Stabilization, Minneapolis, MN; 800 W Broadway Career and Education Center, Minneapolis, MN; Laurel Apartments Historical Renovation, Minneapolis, MN; Stonehouse Square Apartments Historical Renovation, Minneapolis, MN; Hennepin County Government Center - Elections Relocation, Minneapolis, MN; Market BBQ, NE Minneapolis MN; C-Axis, Inc., Contract Manufacturing, New Hope, MN*

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Tel: (218) 722-1060  
Email: cheryl@cfdesignltd.com  
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Contact: Cheryl Fosdick, (218) 343-0983

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Residential and small commercial full design, prescriptive services, construction observation, and timely product procurement. Work focused on strong site and building relationships, durable materials, energy efficient, well-detailed and tactile projects, using regionally sourced and practical materials. Client-derived solutions based in culture, his/her-story, budget, clear analysis of existing conditions, the pursuit of beauty, maintainability and longevity. We work with you and we listen.

continued next column

*The Palisades, North Shore Lake Superior; The Shorestead, North Shore Lake Superior; We Rise, South Shore Lake Superior; Flight Pattern, Duluth, MN; La Ferme, Superior, WI; Woodland Retreat, Grant Township, MN; The Highlands, Bayfield WI; Island Restyle, Madeline island, WI*

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Minneapolis, MN 55414  
Tel: (612) 379-3400  
Email: hello@cunningham.com  
www.cunningham.com  
Contact: Bridget Blank, 612-379-3400

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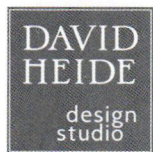
Timothy Dufault, FAIA  
Brian Tempas, AIA  
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Cunningham Group transcends tradition with architecture, interior design, landscape architecture, urban design and planning services for a diverse mix of client and project types. The firm's client-centered, collaborative approach incorporates trend-setting architecture and environmental responsiveness to create projects that weave seamlessly into the urban fabric. Founded in 1968, the firm has grown to over 320 employees in eight offices.

*Minnehaha Academy Upper School, Minneapolis, MN; TCF Banks, Multiple Locations; University of Minnesota Fieldhouse, Minneapolis, MN; Grand Casino Hinckley, Hinckley, MN; Prince of Peace Lutheran Church, Burnsville, MN; Saint Paul Public Schools, Saint Paul, MN; Minnesota State Fair - North End, Saint Paul, MN*



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Email: info@dhdstudio.com  
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Contact: Rachele Krivichi, (612) 337-5060

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David Heide Design Studio is a full-service architecture, interior design, and historic restoration firm. Our designs for new homes, additions, and remodels blend elements of timeliness residential architecture with amenities for modern living.

*EL Powers House Kitchen Remodel, Minneapolis, MN; Clarence Johnston House kitchen revival in Summit Hill, Saint Paul, MN; Northeast cottage entire house remodel, Minneapolis, MN; Townhouse remodel and interior design, Lilydale, MN; Historic cottage entire house remodel and interior design, Minnetonka, MN; Lake house new construction, Tomahawk, WI*

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Tel: (612) 339-5508  
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Contact: Terry Gruenhagen, (612) 373-4656

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Robert Loken, LEED AP  
Burt Coffin, AIA, LEED AP

The environments created by ESG transform lives, communicate the spirit of living, support and enhance our daily activities and set clients' projects apart in the marketplace.

*continued next column*

Our designers bring years of combined experience to every project and with that shared knowledge we generate ideas, pool our vast resources and deliver unparalleled service. ESG's designers create experiential environments in which space is shaped, responses are stimulated, feelings are evoked and programs developed. They solve problems, generate synergies, design for sustainability and longevity, and merge the tactile, the visual and the sensory to create vibrant urban places in which to live, work and play.

*The Last Hotel, St. Louis, MO; Hewing Hotel, (Historic Jackson Building Renovation) Minneapolis, MN; Lora Hotel, Stillwater, MN; Embassy Suites (Historic Plymouth Building Renovation) Minneapolis, MN; Renaissance Minneapolis Hotel, The Depot, Minneapolis, MN; The Lexington Restaurant, St. Paul, MN; The Woodrow Apartments, Fargo, ND; Osborn370, St. Paul, MN*

## HGA



420 North 5th Street, Ste. 100  
Minneapolis, MN 55401  
Tel: (612) 758-4000  
Email: info@hga.com  
www.hga.com  
Contact: Mark Spencer, (612) 758-4393

**Firm Principals**

Mia Blanchett, AIA, LEED AP  
Josh Stowers, AIA  
Tim Carl, FAIA, LEED AP  
John Cook, FAIA  
Nancy Blankfard, AIA, LEED AP  
Virginia Lackovic, AIA  
Hal Henderson, AIA  
Paula Storsteen, NCIDQ, LEED AP

HGA has been entrusted with some of the State's most prized historic resources and is committed to the preservation, restoration, and rehabilitation of our cultural heritage. Our services include understanding the historic regulatory processes, initial building assessments, developing project priorities, program development, project concepts, development of construction documents, and construction administration.

*continued next column*

HGA's staff actively participates on local, state and national historic preservation committees and trade organizations, and also teaches at the University of Minnesota.

*Minnesota State Capitol, St. Paul, MN; Minneapolis City Hall, Minneapolis, MN; Union Depot, St. Paul, MN; Ford Center, Minneapolis, MN; American Swedish Institute, Minneapolis, MN; Pantages Theater, Minneapolis, MN; Mayowood Historic Mansion, Rochester, MN; Winona Historical Society, Winona, MN*

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400 South Fourth Street, Ste. 712  
Minneapolis, MN 55415  
Tel: (612) 341-4051  
Email: info@mmarchltd.com  
www.mmarchltd.com  
Contact: Angela Wolf Scott, (612) 341-4051

**Firm Principals**

Angela Wolf Scott, AIA  
Todd Grover, AIA

MacDonald & Mack Architects was founded in 1976 and received the AIA Minnesota Firm Award in 2011. We specialize in the preservation, restoration, and adaptive reuse of existing properties of all ages, whether they're 100, 50, or 10 years old. We provide full architectural and consultation services to investigate, analyze, and design for a building's next era. Because of our proven expertise, our projects routinely receive approval without question from Heritage Preservation Commissions and other governing bodies.

*Arvonne Fraser Library Renovation, Minneapolis, MN; Mill City Museum Courtyard Walls, Minneapolis, MN; Waterworks Pavilion - Historical Consultant, Minneapolis, MN; James J Hill House Fire, Security, and Elevator Systems, St. Paul, MN; Hotel Sacred Heart Rehabilitation, Sacred Heart, MN; Mount Olive Lutheran Church Geothermal and Preservation, Minneapolis, MN; Municipal Building Clock Restoration, Minneapolis, MN; Pioneer Mine Documentation, Ely, MN*

## MILLER DUNWIDDIE



Miller  
Dunwiddie

100 Washington Avenue South, Ste. 500  
Minneapolis, MN 55401  
Tel: (612) 337-0000  
Email: info@millerdunwiddie.com  
www.millerdunwiddie.com  
Contact: Monica Bettendorf Hartberg, (612) 337-0000

**Firm Principals**

Daniel Green, AIA  
Denita Lemmon, AIA  
Greg Hulne, AIA  
Joel Stromgren, AIA  
Katie Hunsley, CID, IIDA  
Monica Bettendorf Hartberg, AIA  
Paul May, AIA

Miller Dunwiddie is a full-service architecture firm with in-house experts in preservation, interior design, construction services, and building envelope science. Founded in 1963, our work and our employee-owners are recognized for creating places that span generations. Whether we are rehabilitating a small historic structure or crafting a new public space for millions of travelers, we are guided by the same core conviction: doing it right will make it last.

*First Universalist Church Renovations, Minneapolis, MN; St. Michael's Church Restoration, Stillwater, MN; Ramsey County Metro Square Curtainwall Rehabilitation, St. Paul, MN; Benilde-St. Margaret's School Center for Innovative Learning, St. Louis Park, MN; University of Minnesota Lab School/Child Development Center Unified Building, Minneapolis, MN; Holman Field Administration Building Rehabilitation, St. Paul, MN; Hennepin County Government Center Elevators and Escalators Modernization, Minneapolis, MN; Hennepin Masonic Temple Renovations; Minneapolis, MN*



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# Perkins&Will

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Minneapolis, MN 55402

Tel: (612) 851-5000

Email: [tony.layne@perkinswill.com](mailto:tony.layne@perkinswill.com)

[www.perkinswill.com](http://www.perkinswill.com)

Contact: Tony Layne, (612) 851-5113

### Firm Principals

Tony Layne, AIA, LEED AP BD+C

Dave Dimond, FAIA, CID, LEED AP

Lisa Pool, LEED AP

Jeff Ziebarth, AIA, LEED AP

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Since 1935, Perkins and Will has believed that design has the power to make the world a better place. We design healthy, happy places in which to live, learn, work, play, and heal. Passionate about human-centered design, we're committed to creating a positive impact in people's lives through sustainability, resilience, well-being, diversity, inclusion, and research. Our team of 2,500 creatives and critical thinkers provides worldwide interdisciplinary services in architecture, interior design, landscape architecture, and more.

801 Marquette Renovation, Minneapolis, MN; RSM Plaza Renovation, Minneapolis, MN; Mayo Clinic Health System, Mankato Hospital, Mankato, MN; Mayo Clinic Rochester, Methodist Hospital, Rochester, MN; Saint Louis Government Center Renovation, Duluth, MN; Saint Olaf Holland Hall Renovation, Northfield, MN; Health Sciences Education Center, UMN Twin City Campus, Minneapolis, MN; 3701 Wayzata Blvd. Renovation, Minneapolis, MN

## PETERSSSEN/KELLER ARCHITECTURE



2919 James Avenue South

Minneapolis, MN 55408

Tel: (612) 353-4920

Email: [info@pkarch.com](mailto:info@pkarch.com)

[www.pkarch.com](http://www.pkarch.com)

Contact: Gabriel Keller, (612) 353-4920

### Firm Principals

Lars Peterssen, AIA

Gabriel Keller, Associate AIA

Kristine Anderson, Associate AIA

At P/K, collaborating with our clients is one of the most exciting and rewarding aspects of every project. Our clients are entrepreneurs, artists, art collectors, designers, world travelers, and other intriguing individuals who appreciate great design and have a vision for how they want to live. Our collaborative and iterative design process is structured to reflect our clients' thoughts and ideas so that together, we can create a house that brings their story to life.

Lake Minnetonka Renovation, Wayzata, MN; Hudson River Astor Estate Renovation, Rhinebeck, NY; Mount Curve Renovation, Minneapolis, MN; Lake of the Isles Tudor Renovation/Addition, Minneapolis, MN; Summit Avenue Historic Restoration/Addition, St. Paul, MN; Historic Mid-Century Modern Renovation, Golden Valley, MN; Lake Harriet Historic Home Restoration/Renovation, Minneapolis, MN; Rolling Green Renovation, Edina, MN

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## REHKAMP LARSON ARCHITECTS

2732 West 43rd Street

Minneapolis, MN 55410

Tel: (612) 285-7275

Email: [info@rehkamplarson.com](mailto:info@rehkamplarson.com)

[www.rehkamlarson.com](http://www.rehkamlarson.com)

Contact: Mark Larson or Jean Rehkamp  
Larson, (612) 285-7275

### Firm Principals

Mark Larson, AIA

Jean Rehkamp Larson, AIA

We are great listeners, creative thinkers, and problem solvers who engage and explore with the homeowner to find the right balance of dreams and reality. We provide a full range of design services, partnering with our clients from conception through final punch list. Our design-focused projects include modest renovations, substantial additions, and grand new houses. Our design style is refined, energetic, and engaging. We bring warmth to modernism and a fresh eye to traditional design.

Vernacular Modern, Independence, MN; Rural Retreat, Southwest WI; South Seas, Naples, FL; Beach House, OR; Garden Expansion, Edina, MN; Hall's Cabins, Lake Okoboji, IA; Upton Revived, Minneapolis, MN; Summit Hill Addition, St. Paul, MN

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St. Paul, MN 55101

Tel: (651) 277-7773

Email: [mail@woldae.com](mailto:mail@woldae.com)

[www.woldae.com](http://www.woldae.com)

Contact: Vaughn Dierks, (651) 227-7773

### Firm Principals

R. Scott McQueen, AIA

Vaughn Dierks, AIA

Lynae Schoen, IIDA

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Matt Mooney, PE

Joel Dunning, AIA

Paul Aplikowski, AIA

Josh Ripplinger, AIA

Wold Architects and Engineers is a full-service design firm focused on sustainable architecture and engineering for education, government, healthcare, and senior living facilities. Since 1968, Wold is committed to delivering exceptional, long-term service to clients and their communities.

Shakopee High School Addition and Renovation, Shakopee, MN; Scott County Campus Addition and Renovation, Shakopee, MN; Lyngblomsten Care Center Renovation, St. Paul, MN; City of Minnetonka Public Safety Addition/Remodel, Minnetonka, MN; Hutchinson Health Inpatient Addition/Remodel, Hutchinson, MN; Richfield School District STEM Renovation, Richfield, MN; Pipestone County Medical Center Addition/Renovation, Pipestone, MN; Cook County LEC / Jail Renovation/Addition, Grand Marais, MN



## Arvonne Fraser Library

### Page 22

Location: Minneapolis, Minnesota  
 Client: Hennepin County Library  
 Architects: MacDonald & Mack Architects (firm of record) with Quinn Evans Architects (collaborating firm)  
 Principal-in-charge: Todd Grover, AIA  
 Project lead designers: Todd Grover, AIA; Tom Jester, FAIA  
 Project manager and project architect: Todd Grover, AIA  
 Project team: Amy Van Gessel, Assoc. AIA; Madelyn Sundberg, AIA; James Mumby, AIA; Lucy Moore, AIA; Chris Cho, AIA; Geraldine Drake  
 Landscape architect: Damon Farber  
 Landscape project team: Jean Garbarini; Andrew Montgomery  
 Structural engineer: Mattson Macdonald Young  
 Mechanical, electrical, and plumbing engineer: Nelson Rudie & Associates  
 Civil engineer: Anderson Engineering  
 Elevator consultant: Elevator Advisory Group  
 Technology: True North Consulting Group  
 Acoustics: Kvernstoen, Ronnholm & Associates  
 Lighting designer: Schuler Shook  
 Interior designers: MacDonald & Mack Architects with Quinn Evans Architects  
 General contractor: Shaw-Lundquist Associates  
 HVAC: Go Fetsch Mechanical  
 Electrical: Gunnar Electric, Inc.  
 Plumbing: Master Mechanical  
 Fire suppression: LifeSaver Fire Protection  
 Elevator: Schumacher Elevator Company  
 Masonry and concrete patching: ACME Tuckpointing & Restoration  
 Concrete work: Shaw-Lundquist Associates; Curb Masters, Inc.  
 Roofing: Camacho Contractors, Inc.  
 Tiling: Blackhawk Tile & Stone  
 Cabinetwork: Commercial Fixtures  
 Flooring systems/materials: Absolute Commercial Flooring  
 Window systems: Midland Glass  
 Architectural metal: TEK Steel Fabricators Inc.

Millwork: Shaw-Lundquist Associates  
 Waterproofing: Kremer Davis, Inc.  
 Door and hardware: Kendell Doors & Hardware  
 Gypsum and plaster: AE Conrad Co.  
 Acoustics: Acoustics Associates  
 Painting: Universal Painting & Drywall  
 Visual display units: Bartley Sales  
 Signage: Sign Source Inc.  
 Sitework: New Look Contracting  
 Paving: Northland Paving LLC  
 Children's interactive furniture: Kidzibits  
 Photographer: Peter J. Sieger

## Rapson Revival

### Page 26

Location: Minnetonka, Minnesota  
 Clients: Alex and Matt Crnobrna  
 Architect: Charles R. Stinson Architects  
 Principal-in-charge: Charles R. Stinson, AIA  
 Project lead designer: Charles R. Stinson, AIA  
 Project team: Chuck Thiss  
 Structural engineer: Bunkers & Associates  
 Interior designer: Kim Streeter  
 Landscape architect: Urban Ecosystems, Inc.  
 Landscape project team: Michael Keenan  
 General contractor: Stinson Builders, Inc.  
 Cabinetwork: Rust Brothers  
 Flooring systems/materials: WD Flooring  
 Window systems: Heritage Window & Door  
 Photographer: Paul Crosby



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Anchoring the university's West Bank Arts Quarter, the Rarig Center houses four theaters, including the 460-seat Stoll Thrust Theatre, which Rapson designed as a quarter-scale replica of his famed thrust stage in the original Guthrie Theater (1963).



A quick comparison of the 1964 Arvonne Fraser Library (cover and page 22) and the **1972 University of Minnesota Rarig Center** in Minneapolis reveals the same design hand at work in both buildings. In Minnesota, a brutalist structure with bold geometry, an oversize concrete lid, and walls that push in and out can only have been designed by the late modernist Ralph Rapson. The larger Rarig Center distinguishes itself by expressing a larger number of interior functions, including theater spaces and television and radio studios.

PHOTOGRAPH BY MORGAN SHEFF