Back on Campus

Science, student services, and sustainability at the U

COVER: SCIENCE TEACHING AND STUDENT SERVICES CENTER, PAGE 18
Five Reasons to Choose Wood for Your Next Project

Wood provides more value—in terms of its beauty, design flexibility and environmental attributes—for less cost than other major building materials, all while meeting fire, safety and other code requirements.

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2. **Wood performs well in earthquakes and high winds** – Because wood-frame buildings are lighter and have more repetition and ductility than structures built with other materials, they are very effective at resisting lateral and uplift forces.

3. **Wood structures can be designed for safety and code acceptance** – The International Building Code offers a wide range of options for designing wood schools, offices, multi-family residences, commercial and institutional structures, and other non-residential building types.

4. **Wood buildings are adaptable** – In North America, buildings are often demolished long before the end of their useful service lives because of changing needs and increasing land values as opposed to performance issues. When one considers the embodied energy in these structures and issues related to disposal, the adaptability of wood structures and building systems, either through renovation or deconstruction and reuse, is a significant advantage.

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By Camille LeFevre

The University District Alliance is gaining ground in its campaign to catalyze the enhancement of the neighborhoods surrounding the U's Twin Cities campus. "The Alliance's overall approach," writes Camille LeFevre, "is to get the district's stakeholders—residents, businesses, neighborhood groups, hospitals and clinics, developers, the university, the city, and the county—to collaborate on creating a livable, sustainable community that builds on existing assets. From the university's intellectual capital to the neighborhoods' adjacency to the Mississippi River to the eventual arrival of light-rail transit, the district has tremendous potential to become a unique laboratory for modeling urban livability solutions."
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www.architecturemn.com/videotect

Why a photograph of a skyway at the outset of an issue on new collegiate architecture? It's because we have some big news to share: Architecture Minnesota is launching a video competition this winter that will explore the skyway's influence on urban life. It's called Videotect, but don't let the name fool you: You needn't be a camera, a computer, and a point of view.

We've designed Videotect to be a month-long event in which readers of all ages and backgrounds assemble creative, thought-provoking video commentary on our chosen architectural topic. And what a ripe-for-comment subject it is. Immortalized in song by legendary Minnesota rockers The Replacements and firmly lodged in the American mind as a symbol of the Twin Cities, the skyway has had enormous impact on the way we experience our largest cities. Does it drain vitality from the sidewalks below? Or is it a healthy, functional solution to our winter climate, one that can foster a street life of its own?

These questions and others like them resonate with the George Heinrich photograph above. Skyways do indeed diminish sidewalk traffic and obstruct views; some even do an aesthetic disservice to the buildings they connect. But they can also enrich our cities—especially when you turn one into an art gallery, as artist Nancy Ann Coyne and Forecast Public Art did in 2008 with Speaking of Home, a photography installation on the immigrant experience in Minnesota (shown here).

We'll post the full set of guidelines, including the entry categories, on the Videotect website on January 24, when registration begins. In the meantime, we can give you the basics: Videos should be between two and four minutes in length and may use any combination of moving images, stills, drawings, graphics, voice-over, music, live action, animation, or subtitles; entrants may work individually or in teams of any size; and submissions will be judged on their ability to stir, persuade, or entertain—not on the quality of their production.

Judged by whom, you ask? An all-star jury from Minnesota’s film and architecture communities. But you'll be the judge, too: Shortly after the February 25 deadline, we'll post all of the submissions on our website for public viewing and voting. The top vote getters will be the finalists for the Viewers' Choice Award, which will be determined by a final round of voting at our screening party in March. Stay tuned to the website for more on the jury and the big-screen event—and the prize money we're offering.

Leading up to the launch, we'll also post a new video clip each week to spur your imagination. We created these ourselves; they're clearly not the work of Fellini or Truffaut. That we barely qualify as novice videographers is illustrated by the fact that the nine-year-old daughter of one of the Videotect planners helped assemble the first clip. So to all of you who've never given iMovie a whirl: Trust us, you can do this. Come join the fun.

Christopher Hudson
hudson@aia-mn.org
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University of Minnesota Duluth
Tweed Museum of Art
February 8 and 15
Duluth-area residents can catch the Tweed Museum of Art's Visual Culture Lecture Series. First up, on February 8, is Dan Goods, a sculptor and a "visual strategist" for NASA's Jet Propulsion Laboratory. Goods creates wondrous visual experiences injected with a healthy dose of science; attending his lecture is a sure-fire way to kick your mind into gear. Check back in on February 15 when furniture designer John Christakos, founder and president of Minneapolis-based Blu Dot, presents the Real Good Experiment (pictured here). www.tweedmuseum.org

Hibernating through winter?
In need of some rousing intellectual fare?
It's never a bad idea to head
BACK TO SCHOOL

St. Olaf College
St. Olaf Choir
February 13
The home finale of St. Olaf Choir's annual national tour is a can't-miss event for choral-music lovers across the region. This year's 16-stop circuit, preceded by a weekend hop in Denver, heads south through Iowa, Kansas, and Nebraska before hitting the musical meccas of Austin, Memphis, and St. Louis. The closing performance takes place at Boe Memorial Chapel in Northfield on February 13. The choir's sacred-choral repertoire encompasses canonical classics but also delves into recent works by St. Olaf faculty and alumni, as well as folk hymns and spirituals. www.stolaf.edu/music/stolaf_choir

University of Minnesota
Goldstein Museum of Design
Through January 9
The late Ralph Rapson, designer of modern chairs, houses, and embassies, was also a master of the architectural drawing. If you've never perused a book of Rapson's illustrations, and especially if you have, come out and see the originals in "The Importance of Drawing: Ralph Rapson's Legacy" at the Goldstein Museum of Design. Every rendering is infused with personality; it'll grab you and pull you into Rapson's world. In addition to capturing some of Europe's ancient architecture, Rapson's sketches document architectural sites from Iran to Ecuador and from Cambodia to the U.S., including some in Minnesota. The exhibition runs through January 9. www.goldstein.design.umn.edu

Winona State University
Paul Watkins Gallery
January 12-February 2
Winona's historic downtown boasts a variety of Romanesque, Italianate, and Prairie School buildings adorned with local stained glass, including Purcell & Elmslie's breathtaking Merchants National Bank. And just a few blocks away is HGA's much-talked-about new addition to the Winona County Historical Society Museum. It's no surprise, then, that the arts have a strong presence in the island city. From January 12 through February 2, Winona State's Paul Watkins Gallery, not far from downtown, will showcase the work of experimental graphics artist Nathaniel Stem. www.winona.edu

—Sarah Bremer, Assoc. AIA
Tom Kaldenberg is a Power Thinker who has played a crucial role in implementing Kirkwood Community College's (KCC) energy-efficiency plan. During the last three years, KCC has used Alliant Energy's Commercial New Construction (CNC) program to complete five projects and has saved over 2,300,000 kilowatt hours (kWh) of electricity, $172,000 in annual energy costs and received $327,000 in incentives. At Alliant Energy, we’re Power Thinkers, too – always looking for ways to help our business customers save energy and work smarter. CNC provides free energy design analysis to help your customers select a package of cost-effective, energy-efficient strategies for new construction projects.

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Tom Kaldenberg
Kirkwood Community College Executive Director – Facilities

Landscape Architects

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A new book sheds light on a Northwoods winter tradition formerly shrouded in steam

THE OPPOSITE OF COLD: THE NORTHWOODS FINNISH SAUNA TRADITION
By Michael Nordskog, with photography by Aaron Hautala
University of Minnesota Press, 2010

By far the biggest misconception Americans have about the Finnish tradition of the sauna is how to pronounce it. Nothing grates on a true Finno-American more than the flat and wimpy-sounding sah-nah perpetuated in the mass media and criminally endorsed by Merriam-Webster. Sitting naked in a wood box with a pile of rocks heated to 180 degrees Fahrenheit, gasping for breath in a cloud of steam, requires the much more forceful, and linguistically correct, SOW-na.

However people pronounce it, the tradition and architecture of the sauna is ingrained in the Northwoods culture of upper Minnesota, Wisconsin, and Michigan. Its status as a cultural touchstone matched only by the legend of Paul Bunyan, wild rice soup, and the wreck of the Edmund Fitzgerald. And yet public nakedness and jumping into icy lakes do not square with the Puntaan values upon which the American ethos was founded. So outside of jokes and tales of heroic endurance of heat, the tradition of the Finnish sauna gets little serious discussion, and the story of its origins goes largely untold.

Just in time to hone your knowledge of the sauna tradition before the snow piles up, the University of Minnesota Press' *The Opposite of Cold* offers a refreshingly up-to-date, non-jokey, and comprehensive treatment of the subject. Authored by Michael Nordskog with photography by Aaron Hautala, this compendium on the history of the sauna covers a lot of territory, from the sauna's ancient origins to construction techniques, water-bucket etiquette, and the evolution from open-hearth fires to electric stoves.

Opening with a foreword by master sauna architect David Salmela, FAIA, *The Opposite of Cold* tracks the importation of the sauna tradition to the Great Lakes, starting with the mass immigration of Finnish farmers at the end of the 19th century. Often the first structure built on a new homestead, the sauna was a central and multifunctional building in the life of the farm, used for bathing (via sweating), drying grain, and even delivering babies. Salmela's own father, we learn on page one, was born in a sauna.

The text, organized into a half-dozen chapters, is generously seasoned with stunning photography, literary excerpts, historical postcards and posters, archival images of Iron Range communal steam baths, and (spoiler alert!) several candid snapshots of pasty-white sauna revelers doing what they do best—sweating profusely and running naked through the snow. Which all helps make this book about a curious Finnish institution worthy of a prominent place on any Northwoods coffee table, right next to the Paul Bunyan coasters and the *Wild Rice for All Seasons Cookbook."

—Phillip Glenn Koski, AIA
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A lot of what you need to know about James Dayton, AIA—the architect of Minneapolis’ MacPhail Center for Music and the Minnetonka Center for the Arts, among other notable buildings—is plainly evident in the location and design of his Northeast Minneapolis warehouse studio. But when we sat down with him in October, we still had some pressing questions.

Describe your studio space or culture in three words or less. Innovation, exploration, material

If you had $5,000 for office improvements, what changes would you make? Throw a good Christmas party.

$500,000? Pay my staff the salaries they deserve.

How does your location reflect or reinforce your values and interests as a firm? We have an open, honest, rough-and-tumble space with great daylight and a wood shop.

Favorite hangout in walking distance: Northeast Social

Employee with the most interesting extracurricular: Peter Aamoth, staff DJ

What activities or events have you hosted in your space? Board meetings, pinewood derby races, cocktail parties

Favorite Beatle: Pete Best

Favorite social media tool: A handshake

Least favorite buzzword: Modernity

Recent brush with celebrity: Coffee with Renzo Piano in L.A.

What efforts has your firm made to work with underserved individuals or communities? We’re always working with teachers and artists to improve their ability to work and teach kids.

Casual Friday? Never

Casual every day? Always

The biggest misconception about architects: We’re expensive divas.

Favorite Minnesota building not designed by your firm: IDS Center

Dream project: The next one
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GIMME SHELTER

AIA Minnesota's annual SEARCH FOR SHELTER charrette brings volunteer architects, designers, and students together to assist nonprofit housing organizations with design needs on proposed building projects.

On most weekends, the atrium of the University of Minnesota's Rapson Hall—the town square for the College of Design—quiets down considerably from its weekday bustle. The students who on Friday had been sitting on courtyard benches with their laptops open or congregating in threes and fours around pinned-up drawings on the balconies have mostly dispersed. But every February, the atrium's weekday energy carries into a weekend, thanks to an influx of architects, landscape architects, interior designers, and students participating in an annual volunteer design event. The only difference, outside of an increase in the average age of the courtyard occupants, is the addition of several tables strewn with paper coffee cups and boxed lunches.

The event, sponsored by AIA Minnesota's Housing Advocacy Committee, is called Search for Shelter, and it benefits local nonprofit housing organizations that need help getting building projects started but lack the funds to hire an architect. Over the second weekend of February, the program will mark its 25th year by adhering to a tried-and-true schedule: On Friday evening, the volunteers will be given an overview of the needs of the five or six participating nonprofits and then gather in teams to meet with the representatives of the project they're assigned to. Site visits will take place Saturday morning, after which teams will spend all afternoon and evening developing a schematic design (general views of the building and site that show the components and the scale of the project). On Sunday, at a program that's open to the public, the volunteers will present their drawings and supporting materials to the organizations.

These design diagrams are valuable tools; nonprofits use them to explain their housing mission to various audiences or jumpstart a fundraising campaign. In some cases, the proposed design solutions become the basis for an actual project. At the 2008 Search for Shelter, for example, Minneapolis' YouthLink, an organization serving homeless young people, sought ideas on how to enhance and better utilize its 30,000-square-foot facility on North 12th Street. Three of the volunteers who worked on the scheme—architect Tim Bicknell, AIA, and students Emma Pachuta and Kevin Ellingson—continued to donate services to YouthLink after the charrette, aiding the center in its quest to raise public and private dollars for the renovation. Bicknell's employer, Ellerbe Becket, an AECOM company, was eventually hired for the project and performed a portion of the work pro bono.

Today, the building boasts a new entrance and a transformed interior that takes better advantage of natural light—improvements that can all be traced back to the Search for Shelter boards.

—Joseph Conti, AIA
When it comes to renovating 72-year-old landmarks, you'd better perform at historic levels.

Originally built in 1924, as a 125,000 sq. ft. science research library, the University of Minnesota's famed Walter Library recently underwent massive renovation and expansion to bring the library's aging resources into the present while leaving the classic and historic beauty right where it was.

With a well-schooled respect for the surroundings, and a skillful, adept construction delivery method, Egan provided total electrical replacement in the original space while bringing full electrical service, wiring, fixtures and equipment to the expanded area.

The project required extensive demolition and a massive effort in trade coordination to bring everything together efficiently and with minimal disruption to campus life.

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"As the long-term owners of buildings, universities have an opportunity—and a responsibility—to construct greener structures than what the private sector might consider," writes Thomas Fisher, Assoc. AIA, in his profile of the University of Minnesota Duluth’s new LEED-Platinum Bagley Nature Area Classroom Building (page 32). If the six freshly minted campus icons showcased in the following pages are any indication, Minnesota’s leading colleges and universities have taken Fisher’s admonition to heart. In fact, with five of the buildings racking up or attempting to rack up enough LEED points to earn Gold or Platinum certification (the sixth project pursued Minnesota’s own B3 standards instead), and with one of the campuses achieving carbon neutrality in 2010, this class of new buildings may be the greenest we’ve ever had in a single issue of Architecture Minnesota. These schools have enriched the endeavor of higher learning by not only imparting knowledge but also seeking it out themselves in the classroom of sustainable design and construction. Their students and faculty and surrounding communities will reap the benefits for decades to come. —CHRISTOPHER HUDSON
The Confluence

Science, student services, and sustainability come together in the University of Minnesota’s newest architectural icon

BY LINDA MACK
Can one building change the student experience at the University of Minnesota? The answer is yes, if the building is the striking new Science Teaching and Student Services (STSS) Center at the Washington Avenue bridgehead. Designed by Kohn Pedersen Fox (KPF) of New York with HGA, the ovoid glass pavilion is a stately counterpart to Frank Gehry's landmark Weisman Art Museum.

"The Weisman is about art. We're about science," says KPF's William Pedersen, FAIA, an alumnus of the U's architecture school. Like the Weisman, the building combines a brick-box fronting on the campus with a curving façade on the river side. But the new building's Euclidean curve offers a quieter, left-brain architecture to the Weisman's right-brain gymnastics. The two form a memorable gateway to the East Bank campus.

What's most revolutionary about the building is what's inside. The brainchild of U president Robert Bruininks, it combines two distinct functions—science teaching and student services—into an inviting magnet for an often unwelcoming campus. When he took office in 2002, Bruininks was eager to get rid of the unfinished Soviet-style Science Classroom Building that stood on the gateway site. And he "was very strong on the river and new teaching methods," says Orlyn Miller, the university's director of capital planning. "He wanted to make a statement that students are important."
UNIVERSITY OF MINNESOTA
SCIENCE TEACHING AND
STUDENT SERVICES CENTER

Location:
Minneapolis,
Minnesota

Client:
University of
Minnesota

Design architect:
KPF
www.kpf.com

Architect of record:
HGA Architects
and Engineers
www.hga.com

Design principal:
William Pedersen,
FAIA

Principals-in-charge:
Michael Greene, AIA
(KPF); Rebecca Greco,
AIA (HGA)

Senior designers:
Jeni Smith;
Andrew Klare

Project manager:
Phillip White, AIA

Energy design
assistance:
The Weidt Group
www.twgi.com

General contractor:
McGough
Construction

Development
manager:
Hines

Size:
115,000 square feet

Cost:
$51,750,000

Completion date:
August 2010

Photographer:
Tim Griffith

Client: University of Minnesota
Design architect: KPF
Architect of record: HGA Architects and Engineers
Design principal: William Pedersen
Principals-in-charge: Michael Greene, AIA (KPF); Rebecca Greco, AIA (HGA)
Senior designers: Jeni Smith; Andrew Klare
Project manager: Phillip White, AIA
Energy design assistance: The Weidt Group
General contractor: McGough Construction
Development manager: Hines
Size: 115,000 square feet
Cost: $51,750,000
Completion date: August 2010
Photographer: Tim Griffith
HGA principal Rebecca Greco, AIA, says the design supports the latest pedagogy, in which teachers guide rather than lecture. "The U was testing these 'active learning' classrooms," she says. STSS became the place to institute them. The five-story building contains two traditional tiered lecture rooms. The rest are classrooms where students sit around tables with computers in the middle, multiple screens offer images, and the teacher directs the interactive learning.

Although the focus was space for the foundational sciences—science, technology, engineering, and math—the classrooms are open to all disciplines. More than 100 classes meet in the 13 classrooms, which are stacked on the building's campus side.

Student services is housed in the other 40 percent of the building—the side facing the Mississippi River. It's a perfect place for this function, which was long squirreled away in a nearby building.

Students pour off the Washington Avenue Bridge on bike or on foot right into the building's third floor, whose river-view corridor serves as an enclosed walkway. It's a brilliant move that activates the building and routes students by the One-Stop Student Services desk.

Here they can take care of business that they can't do online. A concierge desk directs students to the right person. Orange, red, and purple Allermuir "pebble" stools offer short-term seating, and high-top tables make it easy to fill out forms. When the services desk closes, sliding doors close it off but leave the sitting areas open.
Classrooms, in turquoise, occupy the half of the building facing Northrop Mall. Only two are traditional tiered lecture rooms; the rest are interactive. Student services are grouped on the curving, river side of the building. Generous open spaces provide sought-after study spots.
The new building's Euclidean curve offers a quieter, left-brain architecture to the Weisman's right-brain gymnastics. The two form a memorable gateway to the East Bank campus.

Indeed, STSS's open study areas are as important as the classrooms and student services. "Trays" on each floor at the Washington Avenue end offer low- and high-back lounge chairs, low tables for laptops or coffee, and occasional high-top tables and bar seating. Students have taken to them like fish to water.

It's easy to see why: The building's almost mask-like exterior conceals a dynamic interior. The five-story atrium curves inside the glass-and-stainless-steel façade. Exposed concrete floors, also curving and carved away to minimize the use of material, animate the space. A sinuous cantilevered stairway serves as a visual and social centerpiece. It winds around an intriguing five-story sculpture by St. Paul artist Alexander Tylevich that catches light in panels of dichroic glass and reflects it in rainbow-like patches.

All this aesthetically pleasing and highly functional space is contained in a sustainable structure poised to earn LEED Gold certification. Never has design worn green so elegantly on its sleeve. The building's geometrical shape is compact: It has little exterior surface for its volume, Pedersen points out. The efficient displacement ventilation brings warm air in through the floor and vents it naturally, out the top of the atrium.

The signature west wall, with its rhythm of stainless piers and glass, may look simple, but it's intricately designed for optimal solar gain. The piers provide the needed 40-percent solidity.
THE UNIVERSITY OF MINNESOTA MORRIS CAMPUS IS JUST A LITTLE MISUNDERSTOOD.

Too many people dismiss it because of its location on the far western prairies of Minnesota, assuming it's a podunk "Moo U."

But this campus is quietly drawing students from far-flung places with the promise of a world-class education at a unique, incredibly progressive institution. Morris prepares its students to lead
in a changing world, and the school practices what it preaches, with a campus-wide goal of carbon neutrality and energy self-sufficiency.

Last year was the campus' centennial, and it began with the reopening of the newly renovated Morris Welcome Center. Built in 1915 to house the school's engineering community (at that time, it was the West Central School of Agriculture), this brick building is on the National Register of Historic Places. "When history meets sustainability, those two things don't always get along," says Meyer, Scherer & Rockcastle's Josh Stowers, AIA, the lead designer of the Welcome Center.

MS&R took on a full restoration of the building with tight restrictions in place. It could not expand the building or alter the historic façade. Yet the renovation had to be green (the school wished to pursue entry-level LEED certification; the architects have the project on track for a Gold rating). It also had to serve the needs of eight different departments, including the Center for Small Towns, an outreach program. So, a tall order.

"We looked at it two ways," says Stowers. "First we restored the 'envelope,' the exterior. In the 1970s, during the energy crisis, their idea of making a building efficient was to brick in all the windows. The lower level had huge windows, because it..."
Natural light filled the main shop classroom for engineering students in 1915; electricity wasn't yet in use. In the 1970s, those vast windows were bricked over. Today, sunlight has been restored and employed as a passive solar light solution.

**ELECTRICITY FROM BIOMASS AND WIND**

**CHILLED BEAMS**

CHILLED-BEAM TECHNOLOGY IS INCREASINGLY COMMON IN EUROPE, BUT THE WELCOME CENTER IS THE FIRST MINNESOTA BUILDING—AND THE FIRST ENTIRE BUILDING ON THE NATIONAL REGISTER—TO USE IT.
"If you are a prospective student, this is your first stop on campus. But the building also needed to charm the socks off alumni. So we had to design to impress 18-year-olds and 80-year-olds."

—MS&R architect Josh Stowers, AIA

was built before electricity, and they needed that light for their machine shops.” Today, natural light is valued for passive solar and to reduce energy consumption, so the firm installed efficient windows and reopened the building to the sun.

Second, the restoration brought the interior firmly into the 21st century. The building still requires heating and cooling, but it’s powered by a power plant that employs a biomass facility (March/April 2010 issue, page 28) and wind turbines. MS&R also added chilled-beam technology: thin tubes that gracefully carry cold water across the ceilings, with a low volume of air blown over the tubes to cool the people below. Although the technology is increasingly common in Europe, the Welcome Center is the first Minnesota building—and the first entire building on the National Register—to use it.

“Everyone involved was incredibly supportive about trying new things in this building,” says Stowers. “They understood the benefits and just said.

'Go for it.'” The MS&R team worked closely with the school, from the chancellor to the janitors, to design a building that would function well for everyone. And the construction-management firm hired as many local people as possible to work on it. Area Amish craftspeople and the school’s carpenter crew finessed elements of the interior.

>>> continued on page 45
LARGE SCALE Learning Model

Sustainability Strategies
1. Scuppers that divert stormwater to a drain system for filtration and reuse
2. Cor-Ten cylinders filled with reclaimed waste rock from local mines to filter stormwater
3. Spectrally selective and low- emissivity glazing that reduces heat load and harmful UV rays
4. Reclaimed cypress wood sourced from regionally available pickle barrels
Inside and out, the University of Minnesota Duluth’s new James I. Swenson Civil Engineering Building puts the science of sustainable construction on dynamic display

By Ann Klefstad

On a rainy fall day, the LEED-Gold James I. Swenson Civil Engineering Building at the University of Minnesota Duluth was showing off: Its over-size rain scuppers were flinging waterfalls down into the huge Cor-Ten steel drums that feed the water into a massive French drain system.

Civil engineers make big things, and building systems such as water handling are their business. This building, the foundation of the university’s new civil engineering major and graduate program, demonstrates scale, construction techniques, and building systems in immensely pleasing ways—like the giant wood or concrete scuppers, the unfinished cast-concrete walls and floors, and the 15-ton gantry cranes that roll down the two-story main lab. It’s almost a cartoon of a building with its oversize details and plainly revealed construction. When people look at it, they smile.

The need for the building was clear. For years, industrial employers on the Iron Range had been asking the school to provide a region-specific
training program for civil engineers. The stars finally aligned when then-chancellor Kathryn Martin's campaign to grow the university's infrastructure (see sidebar below) found common cause with James Swenson's generous impulse toward his alma mater. Chicago firm Ross Barney Architects, teamed with SJA of Duluth as the local liaison, competed for the commission and won it.

It was the architects who wanted to make the building a demonstration model of structural engineering and building systems—and an ode to Iron Range materials. To this end, the building's large-scale details—the scuppers and Cor-Ten rain catchments, ore-filled gabion-basket walls, a cantilevered, 11-ton bifold door that opens for large structures entering the two-story-high lab areas—are visible both inside and outside the building.

The more subtle details of this 35,000-square-foot textbook for aspiring civil engineers are equally important. These include the glass walls of the main lab, which allow those passing through the building to witness the pouring of huge concrete beams or the load testing or destruction of these members. (There are many such passers-through: The building is the first available entrance to the linked buildings of the campus from the main parking lot.) A small glass-floored overhang jutting from the main stairway offers another excellent sightline to the lab.

The design team understood transparency in other ways too: The precast concrete walls of the main labs are joined in a puzzle pattern, and the galvanized props and kickers used to assemble these large walls have been left...
35,000-SQUARE-FOOT TEXTBOOK FOR ASPIRING CIVIL ENGINEERS

2000
LIBRARY
Architect: Stanlius Johnson (now SJA Architects)

2001
ROBERT W. BRIDGES GROUNDS/FLEET BUILDING
Architect: Architects IV

2002
WEBER MUSIC HALL
Architect: Cesar Pelli & Associates
GRIGGS HALL STUDENT RESIDENCE ADDITION
Design-build team: Oscar J. Boldt Construction and LHB

2003
KIRBY PLAZA
Architect: Krech Ojard & Associates

2005
JAMES L. SWENSON SCIENCE BUILDING
Architect: Ross Barney Architects; Stanlius Johnson (now SJA Architects)
Lab design: Kornberg Associates Architects

2006
SPORTS AND HEALTH CENTER
Architect: RDC Sports

2007
LIFE SCIENCE BUILDING RENOVATION
LEED certification: Silver
Architect: LHB

2008
LABOVITZ SCHOOL OF BUSINESS AND ECONOMICS
LEED certification: Gold
Architect: Perkins+Will
JAMES S. MALOSKY STADIUM
Builder: Kraus Anderson Construction

2009
JAMES L. SWENSON CIVIL ENGINEERING BUILDING
LEED certification: Gold
Design architect: Ross Barney Architects
Architect of record: SJA Architects

2010
BAGLEY NATURE AREA CLASSROOM BUILDING
LEED certification: Platinum
Architect: Salmela Architect

January/February 2011 ARCHITECTURE MINNESOTA 31
Back to Nature

The University of Minnesota Duluth’s Bagley Nature Area Classroom Building embodies a lesson in advanced sustainability

By Thomas Fisher, Assoc. AIA

As the long-term owners of buildings, universities have an opportunity—and a responsibility—to construct greener structures than what the private sector might consider. David Salmela’s design for the Bagley Nature Area Classroom Building at the University of Minnesota Duluth shows how far universities can go to demonstrate the best of green building. Located in a clearing in the woods overlooking Rock Pond, the educational center consists of a large single-story teaching space adjacent to a two-story service zone containing toilets, storage, and a mechanical room. The simplicity of the structure helped reduce its cost and ease construction.

But the building, largely constructed by the university’s facilities staff, was designed to earn a LEED Platinum as well as a Passive House rating. “We know of no other public building in the U.S. certified in both,” says Salmela. Built with recycled timbers, the structure has 16-inch structural-insulated-panel (SIP) walls and high-performance windows, oiled concrete floors and unfinished basswood finishes on its interior, recycled zinc and Skalite panels on its exterior, recycled granite pavers and recycled wood benches in the landscape, and exterior louvered shades, a planted roof, and photovoltaic panels along the south elevation. “We wanted the building to be a learning facility,” says Salmela. “It took an immense amount of time, but it will be worth it.”

The building provides an outdoor teaching space, defined by an outdoor fireplace and benches, as well as a demonstration of how green building technology and sustainable design practices can lead to a compelling work of architecture.
The small building overlooks Rock Pond on the University of Minnesota Duluth campus. Its green roof and photovoltaic panels (top right) reinforce the building's role as an example of environmental stewardship. The classroom (middle and bottom right), with its recycled materials, durable finishes, and interior flexibility, carries that same ethic inside.

**Press Credentials**
This article is an early excerpt from Thomas Fisher's *The Invisible Element of Place: The Architecture of David Salmela*, his second book on Salmela's work for the University of Minnesota Press. The first, *Salmela Architect* (2005), enjoys pride of place on coffee tables and bookshelves across the Upper Midwest and beyond. The new volume, available this spring, promises to be equally captivating. www.upress.umn.edu

**Bagley Nature Area**

**Classroom Building**

**Location:** Duluth, Minnesota

**Client:** University of Minnesota Duluth

**Architect:** Salmela Architect

**www.salmelaarchitect.com**

**Principal and designer:** David Salmela, FAIA

**Project architect:** Carly Coulson, AIA

**General contractor:** University of Minnesota Duluth Facilities Management

**Size:** 2,000 square feet

**Cost:** $1 million

**Completion date:** June 2010

**Photographer:** Paul Crosby

---

**Green Roof**

**Photovoltaic Panels**

**Louvered Shades**

**SIP Walls**

**Recycled Concrete Pavers**

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January/February 2011  ARCHITECTURE MINNESOTA 33
THE U'S NEW WALLIN MEDICAL BIOSCIENCES BUILDING ESTABLISHES THE GROWING BIOMEDICAL DISCOVERY DISTRICT AS A THRIVING, CUTTING-EDGE DESTINATION FOR LEADING MEDICAL RESEARCHERS.
Beyond the University of Minnesota's new football stadium, a whole new campus is rising. When built out, the 54-acre Biomedical Discovery District will surpass the West Bank campus in size. Its purpose: to provide state-of-the-art facilities to support high-level research that can be translated into medical innovations.

"These research labs speed the translation of promising discoveries into new treatments for clinical patients, shortening the 'bench-to-bedside' duration," says Perkins+Will's Bob Novak, AIA. Novak was project director for the latest addition to the research campus, the Winston and Maxine Wallin Medical Biosciences Building. The 115,000-square-foot building opened in December 2009, soon after its giant neighbor, TCF Bank Stadium, was unveiled.

Like the earlier buildings along the curving new stretch of Sixth Street Southeast—the Lions Research Building/McGuire Translational Research Facility and the Center for Magnetic Resonance Research—the WMBB, as it is known, was designed to serve the U's top researchers and to attract new ones. That means the labs are outfitted with the latest technology and are flexible enough to accommodate the changing needs of cutting-edge science.

The WMBB was also designed to link with adjacent lab buildings so that researchers can talk to each other and share support functions rather than remain isolated in their proverbial academic silos. A skyway connects to the Center for Magnetic Resonance Research, which houses the world's largest imaging magnet, and a future skyway will lead to the next Biomedical Discovery District building: the $200 million Cancer and Cardiovascular Center. "We're trying to develop a research district, not a series of stand-alone research buildings," says Rick Johnson, the U's project director for the Biomedical Discovery District.
Generous walkways and cascading stairs facilitate spontaneous conversations, while two-story mini-atriums offer getaway space for lunches and informal meetings.
The drive for casual interaction between researchers shaped the layout of the biosciences building. Three disciplines share the building: immunology, the Center for Memory Research and Care, and integrative translational neuroscience, which addresses such conditions as muscular dystrophy and ataxia. "The problems in research have become much more challenging, and interdisciplinary approaches work better," says Novak. "The building is designed to foster that interaction. You run into people instead of scheduling meetings two weeks out. It also fosters mentoring of graduate students."

Generous walkways and cascading stairs facilitate those spontaneous conversations, while two-story mini-atriums offer getaway space for lunches and informal meetings. The all-important labs are stacked in the back two-thirds of the five-story building; the front third is a glassy porch-like space, says WMBB lead designer David Dimond, AIA. Researchers’ offices project out to the street. The building’s glass-walled face activates and humanizes a totally secure environment: While the offices, corridors, skyways, and even the first-floor coffee shop require key-card access, their visual openness softens what could be a fortress.

Perkins+Will employed the same interior-arcade concept when designing the McGuire Translational Research Facility, which opened in 2005. Along with the rain gardens and bioswales designed by Close Landscape Architecture, the glassy fronts create an inviting environment for the new campus.
Students find quiet space in Cassat Hall’s nine dedicated study rooms—a welcome alternative to a January walk to the library.

Carleton College has always been progressive in its educational approaches, academic standards, and political outlook. Unsurprisingly, the Northfield liberal-arts college is forward-thinking in its orientation toward energy use and conservation as well. The campus has a wind turbine that generates electricity, and the president signed the American College and University Presidents Climate Commitment, which includes committing to LEED Silver as a minimum standard for new construction.

So when the decision was made to build two new residence halls, the first to be built since 1967, the college aimed even higher. “For our first construction project since adopting the ACUPCC standard, we decided to go beyond our commitment and achieve LEED Gold instead,” says director of facilities Steve Spehn. The two new buildings, Cassat Hall and Memorial Hall, are the first residence halls in Minnesota to be certified LEED-NC (New Construction) Gold.

Designed by LHB in the Collegiate Gothic style to blend in with existing campus buildings, the four-story stone-and-brick halls, completed in 2009, house 230 students. More than half of those students, freshmen through seniors, reside in traditional singles and doubles in Cassat Hall; another 100 live in suites in Memorial Hall. An underground tunnel connects the two buildings, which total 82,000 square feet.

To conserve energy from the get-go, LHB constructed the building envelopes of insulated concrete forms (ICFs) for increased thermal performance. A solar thermal hot-water system on Cassat and photovoltaic panels on Memorial add to the renewable energy generated by the wind turbine. Both buildings have radiant in-floor heating systems and high-efficiency lighting with daylight and occupancy sensors.

“Through design and construction we eliminated one-third of the buildings’ energy use,” says Kim
The addition of Cassat Hall (left) and Memorial Hall (right) creates a new residential quad on campus. The style and massing of the two buildings take their cues from neighboring Nourse Hall (far right), an older residence hall.

For their energy, heating, and cooling strategies, Cassat Hall and Memorial Hall earned the great majority of LEED points available in the categories of Indoor Environmental Quality (14 out of 15) and Innovation in Design (4 out of 5).
The University District Alliance, a relatively new group composed of stakeholders in and around the University of Minnesota’s Twin Cities campus, strives to harness the district’s leading assets—intellectual capital, downtown proximity, and the coming LRT line, among others—to address the unintended adverse effects the university has had on the four surrounding neighborhoods. The goal? To create a national model for sustainable urban revitalization.

**BY CAMILLE LEFEVRE**

Heavier traffic than usual on game days. Marching-band practice at 6:00 A.M. on Saturdays. Whoopin’ and hollerin’ on nearby streets after a Golden Gophers win. When the Minnesota State Legislature commissioned a report in 2006 on the impact of the University of Minnesota on the surrounding community as part of the law funding the new on-campus TCF Bank Stadium, it learned that these repercussions weren’t an issue for area residents and business owners. Instead, respondents called out the long-term impacts of living near the university. Chief among their concerns were the decrease in owner-occupied homes and the increase in deteriorating student housing, which were contributing to neighborhood decline.

In response, a year later, the legislature authorized and funded the formation of the University District Alliance, a consortium of diverse stakeholders led by a 17-person steering committee. “The legislature recognized there are special planning problems in our neighborhoods,” says architect Richard Gilyard, FAIA, who lives in Prospect Park and chairs the Alliance’s Vision and Planning Committee. The other neighborhoods in the district are West Bank/Cedar-Riverside, Marcy-Holmes, and Southeast Como.

The housing situation “was an unintended consequence of the U’s decision to bring most of its undergrads onto campus in their first year,” Gilyard explains. According to research conducted by other universities, requiring freshmen to live on campus results in higher graduation rates. The university decided to follow suit. “The U’s decision was successful,” Gilyard continues, “but in their second year, students mostly move off campus into one of the nearby neighborhoods, which are, due to losses in home ownership, increasingly full of low-level rentals with absentee landlords.”

The impetus for organizing the Alliance was “to stop the erosion,” says Gilyard, in part by “nudging student housing closer to campus with projects like the Dinkytown Apartments and Lofts, to make the core of the neighborhoods

**THE ALLIANCE** is composed of stakeholders in and around the University of Minnesota’s Twin Cities campus—including residents and neighborhood groups, the university, the City of Minneapolis and Hennepin County, hospitals and clinics, developers, and businesses.
ORGANIZING

DISTRICT-WIDE WEB
For more on the Alliance's various efforts, visit these three sites:
www.community.umn.edu/alliance
www.livenearyourwork.net
www.designcenter.umn.edu
“The four neighborhoods have been operating on their own for a long time. We're trying to build connectivity that reinforces shared elements, and encouraging them to think as part of a district with shared issues, problems, and opportunities.”

—ALLIANCE VISION AND PLANNING COMMITTEE CHAIR RICHARD GILYARD, FAIA

**MARCY-HOLMES**

Strategies include:
1) focusing growth at neighborhood edges,
2) designing Granary Road as a pedestrian and cycling path,
3) establishing a district and neighborhood gateway at the I-35W intersection, and
4) reconnecting the neighborhood across I-35W.

**PROSPECT PARK**

Strategies include:
5) developing a lively LRT station area,
6) focusing high-density uses between the Prospect Park/29th Avenue LRT station and the East Gateway,
7) reconnecting the street grid, and
8) maximizing open-space opportunities and connections.

**WEST BANK/cedar-riverside**

Strategies include:
9) reconnecting the neighborhood across the Washington Avenue trench and reclaiming adjacent land,
10) improving connections between Cedar Avenue and the new LRT station, and
11) enhancing the physical relationship between the U and the neighborhood.
principally owner-occupied housing.” At the same
time, he continues, the Alliance needs to “figure
out how to make our neighborhoods more
attractive to faculty, administrators, and hospital
staff, as well as to the folks who want to live
close to, but not in, downtown Minneapolis.”

But Gilyard’s also pushing the Alliance to aim
even higher: “I want the district to be a cool
place to live, not just a convenient place to live.”

SMALL STEPS TO THE BIG PICTURE
The Alliance’s overall approach is to get the
district’s stakeholders—residents, businesses,
neighborhood groups, hospitals and clinics,
developers, the university, the city, and the county—to collaborate on creating a livable, sustainable
community that builds on existing assets. From
the university’s intellectual capital (including
the sustainable-design thinking at work in the
College of Design) to the neighborhoods’ adjacency
to the Mississippi River to the eventual arrival
of light-rail transit, the district has tremendous
potential to become a unique laboratory
for modeling urban livability solutions.

One early accomplishment was the University
District Home Buyer Incentive Program. The
Alliance program offered qualified borrowers
low-interest loans of up to $10,000 for use toward
the purchase of a home in the district; the loan
is forgivable over five years if the buyer lives in
the home. The Alliance’s next move was to conduct
a workshop during which each neighborhood
presented its revitalization efforts.

“The four neighborhoods have been operating
on their own for a long time,” Gilyard explains.
“in the last 20 years, the Minneapolis Neighborhood
Revitalization Program had the unintended
consequence of putting each neighborhood
in a silo, to face shared challenges separately,
with limited resources.” The Alliance will continue
to preserve the architectural character and
distinctiveness of each neighborhood, he adds,
“but we’re also trying to build connectivity that
reinforces shared elements, and encouraging
them to think as part of a district with shared
issues, problems, and opportunities.”

The Alliance organized a series of COMMUNITY WORKSHOPS in which each neighborhood
presented its revitalization efforts and identified a transformational neighborhood project. Local architecture firm Cuningham Group worked with each group to develop its ideas,
which resulted in the renderings shown below and opposite.
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The Confluence
<< continued from page 23

The ceramic frit baked onto the glass is graduated to filter the right amount of daylight. Windows vary in size depending on their location.

On the outside, the 70-foot-tall stainless piers are brushed at the lower level but polished above to enliven the façade. Inside, slivers of mirrored stainless frame a stainless-steel cap, picking up the movement of people to subtly animate the atrium. They also dematerialize the piers, says KPF project manager Phillip White, AIA.

STSS is a delight, from these well-crafted details to the urban sitting—you can get outside on three levels, including to a stormwater retention garden on the East River Parkway and a piazza off the second floor. It’s a campus landmark—in more than just visual terms. “This was to be the finest science learning structure in the U.S.,” says Pedersen.

“When you have that as a point of departure, and you have the finest site, not just on the campus but in the Twin Cities, it’s pretty potent.” AMN

Prairie Star
<< continued from page 27

"We wanted everyone to be a part of the project, because this building is incredibly important to the campus community," says Stowers. "If you are a prospective student, this is your first stop on campus. But the building also needed to charm the socks off alumni. And people come from all over to visit the Center for Small Towns. So we had to design to impress 18-year-olds and 80-year-olds."

The thoroughly modern design scheme does just that. Real wheatgrass is embedded in the translucent panels used as partitions, evoking the rural landscape that surrounds the campus. The sustainable interface carpet, in a dune palette, suggests the patchwork of farm fields as seen from a plane. Exposed mechanicals show off the building’s smarts, and an energy kiosk in the lobby measures in real time how the building—and campus—is performing.

But the true mark of the Welcome Center’s performance can be seen in visitors’ facial expressions. "This is not just another college admin building," says Stowers. "You can see the reactions right away. This is the new heart of the school." AMN
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Large-Scale Learning Model

<< continued from page 30

in place along one outside wall. Inside these walls, the holes that gave holds to cranes, enabling the cranes to lift the many-ton panels into place, remain, unfilled and unhidden. Any student can plainly see how the wall was built.

Department chair Andrea Schokker smiles as she speaks of seeing clusters of students, sent by their professors, wandering the halls of the building to study the details of its construction: "There's an I-beam, and that's cast-in-place concrete..." SJA Architects principal Brian Morse, AIA, concurs: "There's real satisfaction in watching people use the facility, hearing the excitement faculty members have for it."

The daily display of the large-scale doings in the building may be the reason Dr. Schokker has filled the department's classes twice over, from about 30 students per class to 60. A major that's a little lacking in glamour in most locales here has plenty of cachet, thanks to the strikingly appealing building that houses the program. AMN

A DULUTH DOZEN

<< continued from page 30

and Applied Arts and Pelli had received his master's degree. The two often spoke of performance-hall design, so Martin knew whom to call when the project began to materialize. With donors Ron and Maryanne Weber enthusiastic about Pelli's involvement, the architect eventually won the commission.

The pace of construction continued with nine more new buildings or major renovations. Most recently, in 2010, the Bagley Nature Center Classroom Building (page 32), designed by celebrated Duluth architect David Salmela, FAIA, and built by the school's facilities staff, made news with LEED-Platinum certification.

In all, the building campaign enabled the expansion of the student body from roughly 7,500 to more than 11,000. Says Martin, with pride: "Our increasingly attractive campus has made possible the recruitment of excellent students and faculty who otherwise might not have considered UMD." AMN
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Biodynamic

<< continued from page 37

district. The Harvard brick and precast concrete used on the exteriors recall the U's brick-and-limestone vernacular. "The U was concerned that there be a familial relationship," says Dimond.

For the building's occupants, the labs hold their life's work. Twenty-foot-long benches with epoxy tops are designed for ultimate flexibility, says David Lee, the U's longtime manager of medical facilities. They can be raised or lowered to serve as desks or hold equipment, and can quickly be reconfigured for a new team of researchers. Electricity, vacuum, and telecommunications are delivered from the ceiling; equipment that generates noise and heat is housed in linear equipment rooms in back of the labs.

In most buildings of this sort, the labs are lined up in one long stretch. But neuroscientist Dr. Harry Orr wanted to avoid the assembly-line feel of that configuration, so labs were broken into five smaller units and flip-flopped in orientation. One is flooded with north light. The next receives filtered light from the front of the building through clerestory windows. In both cases, says Dimond, the researchers enjoy 25-foot candles of natural light, enough to carry on most of their work unaided by artificial light.

In this and numerous other ways, the building exceeds Minnesota's B3 (Buildings, Benchmarks, and Beyond) standards for sustainable design, which are comparable to LEED Silver. Once the location of a creosote-soaked rail yard, the Medical Biosciences Building now fosters research that will advance medical care. Dr. Karen Ashe, for example, is researching a cure for Alzheimer's. Dr. Matthew Mescher studies how the body mobilizes immune-system cells to fight invaders, research crucial to breakthroughs in treatment for cancer, infectious disease, and autoimmune disorders. Dr. Harry Orr, director of the U's Institute for Translational Neuroscience, is examining the role of genetic mutations in neurodegenerative diseases.

"I can't do this research, but I can do my part by supporting it," says Novak, who serves on the scientific and technical review board of the National Institutes of Health. "Just to see someone's life improved or extended—I take great satisfaction in that." AMN
Practice What You Teach

Brethaim, AIA, leader of LHB's housing studio. "But another one-third of the energy use is what kids plug into the walls." How do you address with students the impact of their individual decision-making and lifestyle choices related to energy use? One way is to demonstrate the impact.

LHB installed real-time electricity-use meters on every floor in Cassat Hall and in every suite in Memorial Hall to help students better understand their use of natural resources. "We also created information panels in the entries to each building that monitor energy production and use from the solar hot-water system and the photovoltaic panels," adds Brethaim.

Because the residence halls are in use for only nine months out of the year, they don't have air-conditioning—except for the head-resident apartments and data closets for communication equipment. (Ceiling fans and double-hung operable windows that improve air circulation keep the rest of the spaces comfortable.) Nevertheless, no LEED points were forthcoming for this energy-saving strategy. "LEED assumes a building is in use all the time," Brethaim explains, "so if you choose not to include air-conditioning, you don't get any extra points."

LEED points were acquired for the projects' use of regionally manufactured materials and materials manufactured with high recycled content. More than 90 percent of construction waste was diverted from landfills, and the trees removed from the site were milled into much of the wood trim in the buildings. Rooms were designed to take advantage of natural light and views, and the design team specified low-flow plumbing fixtures and low-VOC (volatile organic compound) materials.

To foster community in the residence halls, LHB grouped both the one- and two-person rooms and the suites into pods or neighborhoods. Each floor has its own identity reinforced by lounges and study rooms. The main lounge with full kitchen on the first floor of Cassat can accommodate the entire population of the building, and students from both halls can access each other via the underground tunnel.

One year after opening, Cassat and Memorial residence halls "are second on the list of desired housing options," says Spehn, "just behind our townhouses, which are extremely popular with seniors." Moreover, he adds, "The new residence halls showcase how important sustainability is to Carleton College and to our students."
Designing a Bright Future Together

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Community Organizing

At a second workshop, participants presented lists of their neighborhoods' most treasured assets, as well as ideas for new projects that would significantly stabilize and transform their area while contributing to the district's larger vision. The Alliance hired architecture firm Cuningham Group to lead that process and visualize each project.

"We worked feverishly with the neighborhood groups and Alliance representatives on putting all this together," says Mike Lamb, who heads Cuningham Group's Urban Design Studio. For West Bank/Cedar-Riverside, the design group envisioned the neighborhood reconnected with Seven Corners across the Washington Avenue trench via a variety of mixed-use "ribbon buildings" and pedestrian-friendly walkways along the Cedar Avenue bridge.

In Marcy-Holmes, the transformation included larger-scale, higher-density development at the neighborhood's edges (while preserving smaller-scale housing at the core); mixed-use buildings fronting a new pedestrian- and cyclist-friendly Cranary Road; and architecturally significant gateway buildings at the I-35W intersection. Prospect Park received a vision for a new LRT station at 29th Avenue with a plaza and sustainably designed, high-density, mixed-use development.

Southeast Como identified the need for a high-quality 15th Avenue streetscape, especially along Van Cleve Park. The design team envisioned such improvements as wide, inviting sidewalks for walkers and bicyclists, extending the park farther into the neighborhood with a community garden, and high-density residential buildings that could house professionals as well as seniors who wish to remain in the area.

A common theme for the neighborhoods was celebrating University Avenue as a boulevard, promenade, and gateway. "The neighborhoods also organized around the river," says Lamb, "so we provided them with an aerial view that shows different locations and possibilities for development, as well as a consolidated district."

Concurrently, Ignacio San Martin, director of the U's Metropolitan Design Center, has been working on the first phase of an urban-design framework for the district. The framework identifies critical areas of intervention and involvement, and proposes opportunities for restructuring the
Community Organizing
<< continued from page 51

district into a model sustainable community.
San Martin says the design center's work has
been guided by several questions:

• Can the fragmented district be transformed into
  a cohesive network of well-integrated sustainable
  and livable communities?

• Can the Mississippi River again perform
  a regenerative role in the transformation
  of the district?

• What are the critical obstacles preventing the
  advancement of a substantive urban-design
  framework to guide this transformative process?

• Are there other ways to effect difficult urban
  transformations outside of, or prior to, the typical
  master-planning process?

In November, San Martin presented the first phase
of the work to district residents and to the City
of Minneapolis' Community Planning and Economic
Development office.

PREPARING FOR OPPORTUNITY
"We’ve developed a common voice that’s recognized
by City Hall," says Gilyard of the Alliance’s efforts
thus far. "We’ve created a standing with the
development community, which is interested
in what the Alliance is thinking. So now we’re
developing positions on questions about broader
planning concepts in terms of land use."

Those questions range from how to incorporate
urban agriculture into the district to how to create
better access to the river. They also include how
to craft a planning process and a governance
structure that bring the four neighborhood entities
together. Finally, Gilyard asks, "How can the City
of Minneapolis and the University of Minnesota
work in concert with four neighborhoods in a way
they haven’t before?"

“It’s a challenging time, because the university
is changing its leadership, and we’re still in the
midst of an economic recession," says Gilyard.
But taking on these projects now has given us
more time to get organized and do some planning,
because the area around the U is a magnet for
future concentrated development. We want
to ensure that new development in the district
sets new standards in terms of quality and
sustainability. So when the economy breaks
loose and development picks up again, we’ll
be ready." AMN
AET is an employee-owned corporation founded in 1971 providing environmental, geotechnical, materials and forensic consulting and laboratory services. AET engineers, geologists, scientists, and certified technicians analyze, monitor and test in order to document and improve the design and construction process.


Foley Public School (additions and alterations), Foley, MN: Osseo Area Schools (re-commissioning and mechanical/electrical facilities study), Osseo, MN; New Richmond High School to Middle School (conversion), New Richmond, WI; Anoka and Blaine High Schools (substation and feeder replacement projects). Anoka and Blaine, MN: New Richmond High School. New Richmond, WI: MCF Fairbault Energy (engineering investigation), Fairbault, MN

BKBM ENGINEERS, INC.
5930 Brooklyn Boulevard
Minneapolis, MN 55429
Tel: (763) 843-0420
Fax: (763) 843-0421
Email: bkbm@bkbm.com
www.bkbm.com
Established 1967
Total MN Office: 23
Other Office: Cedar Rapids
Total Other Office: 2
Contact: Ronald J. LaMere, (763) 843-0420

ATSER PLANNERS/ARCHITECTS/ENGINEERS
8051 Center, Saint Paul, MN 55114
Tel: (651) 228-9999
Fax: (651) 228-9998
Email: info@atser.com
www.atser.com
Established 1994
Total in MN: 64
Contact: Paul W. Erickson, (763) 545-3731

Firm Principals
Paul W. Erickson, AIA, NCARB, REFP
James T. Lange, PE
Gaylord Melby, PE
Terry L. Stofferahn, PE

ATSER is a multi-disciplined architectural/engineering firm providing mechanical and electrical engineering for educational facilities, churches, and public buildings. We also offer site design, stormwater management, and technical design for video, voice, data, and security systems. Our specialized designs for energy conservation measures include passive solar, heat recovery systems, thermal storage (ice), variable air volume, displacement ventilation, and energy management systems.

continued next column

American Engineering Testing
550 Cleveland Avenue North
Saint Paul, MN 55114
Tel: (651) 659-9001
Fax: (651) 659-1379
Email: info@amgentest.com
www.amgentest.com
Established 1971
Total in MN: 225
Other MN Offices: Crosby, Duluth, International Falls, Mankato, Marshall, Rochester, Rogers
Total in Other Offices: 30
Other Offices: Bonita Springs, Palatka, Baton Rouge, Beresford, Pierre, Rapid City, Sioux Falls, Chippewa Falls, Eau Claire, Menomonie, Schofield
Contact: Robert Struwe, PE, (651) 659-1342

Firm Principals
Terrance Swoos, PE
Daniel Larson, PE
Jeffery Voyer, PE
Michael Schmidt, PE
Robert Kiser
Robert Krogsadaard

continued next column

DIRECTORY OF CONSULTING ENGINEERING FIRMS

Architecture Minnesota presents the 18th directory of Minnesota firms providing consulting engineering services. Principals of these firms are members of the American Council of Engineering Companies of Minnesota, AIA Minnesota or firms not aligned with either organization.

Engineers provide those critical design skills that enable our entire built environment to be structurally safe, comfortably warm, well lit, and environmentally friendly. They also design our highways and bridges, water treatment facilities and power generation plants.

In Minnesota, you will find there is a wealth of engineering talent available for your next project. Study this directory and call either the American Council of Engineering Companies of Minnesota (ACEC) at (952) 593-5533 or the American Institute of Architects Minnesota (AIA Minnesota) at (612) 338-6763 for additional information and assistance.

LEGEND
PE Professional Engineer
PG Professional Geologist
AIA American Institute of Architects (Registered)
ACP American Institute of Certified Planners
CCM Certified Construction Manager
CID Certified Interior Designer
CHI Certified Industrial Hygienist
CCA Certified Commissioning Authority
ASLA American Society of Landscape Architects
PLS Professional Land Surveyor (registered)
RA Registered Architect
RCDD Registered Communications Distribution Designer
RLS Registered Land Surveyor
LS Land Surveyor (registered)
SE Structural Engineer (Certified)
BONESTROO
2335 West Highway 36
St. Paul, MN 55113
Tel: (651) 636-4600
Fax: (651) 636-1311
Email: info@bonestroo.com
www.bonestroo.com
Established 1956
Other MN Offices: Rochester, St. Cloud
Total MN Offices: 239
Other Offices: Milwaukee, Crivitz, Eikhorn,
Green Bay, and Park Falls, WI; Libertyville,
IL; Houghton, MI, Fargo, ND
Total Other Offices: 88
Contact: Steve Alm, (651) 636-4600

Firm Principals
Jerry Bourdon, PE
Tom Palansky, PE
Steve Alm, PE, LEED AP
Stuart Krahn, RLA, LEED AP
Lee Mann, PE
Phil Caswell, PE

Bonestroo is a full-service engineering, planning, and environmental science firm that plans, designs, and implements innovative, practical solutions for the government, private, energy, and industrial markets. Service areas include structural, mechanical, electrical, environmental, and civil engineering; surveying and construction services; water and natural resources; transportation, planning, development, and redevelopment; landscape architecture; and recreation. Bonestroo has 12 offices located across the Midwest.

St. Louis Park Fire Stations (MEP and structural engineering), St. Louis Park, MN; Metro Transit (parking structures at 35W and County Road C and Kentrick Avenue, Roseville and Lakeville, MN; Century College (parking lot expansion), Maplewood, MN; Wayzata Water Treatment Plant, Wayzata, MN; Minnesota Zoo Black Bear Exhibit (landscape architecture, structural and civil engineering), Apple Valley, MN; Minneapolis Warehouse District Heritage Street Plan, Minneapolis, MN

BRAUN INTERTEC CORPORATION
11001 Hampshire Avenue South
Minneapolis, MN 55438
Tel: (952) 995-3000
Fax: (952) 995-2020
Email: info@braunintertec.com
www.braunintertec.com
Established 1957
Other in MN Offices: St. Paul, St. Cloud,
Rochester, Mankato, Hibbing, Duluth
Total MN Office: 351
Other Offices: Fargo, Bismarck, La Crosse,
Cedar Rapids, Milwaukee
Total Other Offices: 94

Firm Principals
Jon A. Carlson, PE
Robert J. Janssen, PE
George D. Kluempke, PE
Charles R. Brenner, PE
Michael M. Heuer, PE
Steven J. Flaten, AIA

Serving as an engineering, consulting and testing firm providing solutions for property development, re-development, facilities management and infrastructure-related issues. Provides services during each stage of development from the pre-project geo-technical and environmental evaluations through materials evaluation during construction and property management issues. Provides services nationally and internationally.

MP Battalion Barracks (commissioning), Fort Leavenworth, KS; University of Minnesota Student Teaching & Student Services Building (inspection services), Minneapolis, MN; Rough Rider Wind Farm, Dickey County, ND; Central Corridor Light Rail Transit, St. Paul and Minneapolis, MN; Minnesota Twins Ballpark, Minneapolis, MN; Lowry Avenue Bridge, Minneapolis, MN

CAIN DUSE ASSOCIATES, INC.
1310 East Highway 96
White Bear Lake, MN 55110
Tel: (651) 426-9549
Fax: (651) 426-5048
Email: jcain@cainouse.com
www.cainouse.com
Established 1983
Total in MN Office: 13
Contact: Jay J. Cain, PE, (651) 426-9549

Firm Principals
Jay J. Cain, PE
Wallace M. Ouse, PE
Scott D. Thomas, PE, LEED AP
Allan V. Theisen, PE

We are a mechanical and electrical engineering firm specializing in cost-effective energy-conscious design on a wide variety of project types, including healthcare, hospitality, housing, retail, transportation, public works, office, education, worship, recreational and industrial. Design specialties include specialized lighting, energy conservation and renewable energy, while project types range from specialized communications systems to casino entertainment venues.

Sholom Home East Assisted Living and Skilled Nursing, St. Paul, MN; Public Works Facility, North St. Paul, MN; Minnesota State Capitol Complex (lighting assessment), St. Paul, MN; Main Street and Downtown (lighting enhancements), Anoka, MN; Wooddale Pointe Assisted Living, St. Louis Park, MN; St. Paul, MN; Stearns County West Side Service Center, Waite Park, MN

BURNS & MCDONNELL ENGINEERING COMPANY, INC.
8201 Norman Center Drive, Suite 300
Bloomington, MN 55437
Tel: (952) 656-6003
Fax: (952) 229-2923
Email: gsieve@burnsmcd.com
www.burnsmcd.com
Established 1898
Total MN Office: 31
Other Offices: Kansas City, Chicago, Denver,
St. Louis, Dallas, Houston, Los Angeles,
Atlanta, Phoenix, Omaha, Miami
Total Other Offices: 2950
Contact: Gene Sieve, (952) 656-6003

Continued next column

CLARK ENGINEERING CORP.
621 Lilac Drive North
Minneapolis, MN 55422
Tel: (763) 545-9196
Fax: (763) 541-0056
Email: info@clark-eng.com
www.clark-eng.com
Established: 1938
Total in MN Office: 36
Other Offices: Aberdeen, Brookings, Sioux
Falls, Abu Dhabi
Total Other Offices: 24
Contact: Tom Capinske
tcapinske@clark-eng.com, (763) 545-9196

Firm Principals
Cory Casperson, PE
Tim LaBissoniere, PE
Abi Assadi, PhD, PE
Donald Weigel, PE
Kevin Goff, PE

Clark Engineering Corporation provides structural engineering, civil engineering and surveying for commercial, educational, industrial, hospitality, and public sectors for new and existing facilities world-wide. Clark also offers a wide-range of specialty services, including 24/7 emergency response, 3D laser scanning, restoration, sustainable design, and vibration and blast-resistant structures. Our civil engineers specialize in site development and storm water management.

Woodbury Public Safety Building, Woodbury, MN; York Gardens Senior Living, Edina, MN; Vadnais Heights Sports Complex, Vadnais Heights, MN; Multiple Minnetonka Schools (remodels and additions), Minnetonka, MN; Westfields Hospital (campus site design), New Richmond, WI; Des Plaines Casino, Des Plaines, IL

ARCHITECTURE MINNESOTA January/February 2011
DARG BOLCREAN MENK, INC.

7575 Golden Valley Road, Suite 210
Golden Valley, MN 55427
Tel: (763) 544-8456
Fax: (763) 544-8914
Email: info@dbm-inc.com
www.dbm-inc.com
Established 1966
Total in MN Office: 7
Contact: Harry D. Menk, PE, (763) 544-8456

Firm Principals
Gene Bolcrean, PE
Harry D. Menk, PE

Complete structural engineering services for commercial/retail, office/warehouse, academic, industrial, governmental, medical/health, housing, religious and parking facilities. With expertise in steel, concrete, masonry and wood, DBM has engineered new construction, additions and renovations/restorations on over 7,000 projects in 21 states.

Barselt Short Therapy (addition), Waverly IA; Seasons of Apple Valley Senior Housing, Apple Valley, MN; Public Works Addition, Minnetonka, MN; Recycling Facility, Tampa, FL; Martin Luther Manor, Bloomington, MN; Pioneer Care Center, Fergus Falls, MN

DOLEJS ASSOCIATES

1624 North Riverfront Drive
Mankato, MN 56001
Tel: (507) 625-7869
Fax: (507) 388-9225
Email: mdoles@dolejsinc.com
Established 1977
Other MN Office: Lakeville
Total MN Offices: 15
Contact: Mike Dolejs, PE, (507) 625-7869

Firm Principals
Mike Dolejs, PE, LEED AP
Chris Dolejs, PE

Dolejs Associates provides mechanical and electrical design services for the building industry. Building types include educational, recreational, churches, engineered housing, hotels, restaurants and public works. An experienced and stable staff provides expertise in HVAC, plumbing, fire protection, temperature control, lighting, power, communication and life safety systems.

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ERICKSEN ROED AND ASSOCIATES
2550 University Avenue West, Suite 201-S
St. Paul, MN 55114
Tel: (651) 251-7570
Fax: (651) 251-7578
Email: info@ericksenroed.com
www.ericksenroed.com
Established: 1985
Total in MN Office: 40
Other Office: Eau Claire, WI
Total Other Office: 3
Contact: Michael DeSutter or Kent Larson, (651) 251-7570

Firm Principals
Michael A. DeSutter, PE
James D. Roed, PE
William T. Buller, PE, SE
Robert J. Quinn, PE
Michael S. Steenson, PE

Ericksen Roed and Associates is a full-service, structural engineering firm that delivers innovative and economical design solutions. Our range of markets includes retail, commercial, medical, energy, multi-family hospitality, arts and educational, parking facilities, sports/recreation/entertainment, high-rise, remodeling and renovation projects. We are registered throughout the United States; utilize Revit/BIM software, and are the developers of the (Patented) ER-Post precast building system.

TCF Stadium, University of Minnesota
Twin Cities Campus, Minneapolis, MN
Helmsley and Johnson Law Office Building, Edina, MN
Target Stores Nationwide: Fort Lewis Washington – Army Air Force Exchange Service and Battlestar, Tacoma, WA
Life Time Fitness Facilities, Nationwide: Guthrie Theater and Parking Ramp, Minneapolis, MN

ESI Engineering, Inc. provides professional engineering services to A/E firms and industrial clients in the areas of structural dynamics, vibration control, noise control and isolation design for buildings and equipment. Established in 1970 as a Minnesota-based corporation, ESI specializes in solving challenging noise and vibration problems in precision manufacturing, research laboratory and hospital facilities.

US Army – ATC Roadway Simulator Building Foundation Design, Aberdeen, MD
Advanced Crash Simulator Foundation Design, Volvo Car Corporation, Gotemburg, Sweden
Strong Wall/Strong Floor Design, MAST Laboratory, University of Minnesota, Minneapolis, MN
Noise and Vibration Control, Regions Hospital Expansion, St. Paul, MN
Vibration Control, Basic Sciences and Biomedical Engineering Building, University of Minnesota, Minneapolis, MN
Noise and Vibration Control for the NDSU Center for Nano-scale Science and Engineering, Fargo, ND

FOSTER, JACOBs & JOHNSON, INC.
345 Canal Park Drive, Suite 200
Duluth, MN 55802
Tel: (218) 722-3060
Fax: (218) 722-1931
Email: mail@fj.com
www.fj.com
Established 1922
Total in MN Office: 11
Contact: James Johnson, (218) 722-3060

Firm Principals
James R. Johnson, PE
Charles F. Jacobs, PE

We offer full-service mechanical and electrical consulting services, including design and preparation of contract documents for fire protection, plumbing, HVAC, controls, lighting, power distributions, communications and life safety systems and construction administration.

Finland Community Center, Finland, MN
Grant Elementary School (miscellaneous improvements and additions), Duluth MN
Minnesota Air National Guard (fuel systems maintenance dock), Duluth, MN
Northeastern Regional Correctional Center (miscellaneous mechanical projects), Duluth, MN
National Park Service Headquarters, International Falls, MN
Itasca County Highway Department (maintenance facilities), Big Fork, Balsam and Squaw Lake, MN

GAUSMAN & MOORE ASSOCIATES, INC.
1700 West Highway 36
700 Rosedale Towers
Roseville, MN 55113
Tel: (651) 639-9606
Fax: (651) 639-9618
Email: mileutgeb@gausman.com
www.gausman.com
Established 1935
Other MN Offices: Duluth
Total in MN Offices: 70
Other Office: Los Angeles
Total in Other Offices: 15
Contact: Mark Leutgeb, Dir. Bus. Dev., LEED AP, (651) 604-3141

Firm Principals
Edward L. Studniski, PE, LEED AP
James A. Keller, PE, LEED AP
D. Lane Hersey, PE, LEED AP
Robert B. Full, PE
James D. Manning, PE, LEED AP
Dave T. Blume, PE, LEED AP

Gausman & Moore provides mechanical, electrical, fire protection, commissioning, and technology support engineering services. Areas of special expertise include sustainable design (LEED AP) mission critical power systems, forensic investigations, lighting design and healthcare.

University of Minnesota Duluth, Bagley Classroom (LEED Platinum Certified), Duluth, MN, UnitedHealth Group Katella Building, Cypress, CA, General Services Administration Offices at Norman Pointe II, Bloomington, MN, Community Memorial Hospital Phase II (addition and remodel), Cloquet, MN, The Aerospace Corporation, El Segundo, CA, Target Stores (new and remodel), Nationwide; U.S. Army Reserve (training and vehicle maintenance centers), Nationwide
HALLBERG ENGINEERING, INC.

1750 Commerce Court
White Bear Lake, MN 55110
Tel: (651) 748-1100
Fax: (651) 748-9370
Email: hei@hallbergenegineering.com
www.hallbergenegineering.com
Established 1979
Total MN Office: 45
Contact: Amy Anderson, (651) 748-4370

Firm Principal
Joseph Hallberg, PE

Hallberg Engineering, Inc. (HEI) is a mechanical and electrical consulting engineering firm. We specialize in the design of mechanical, electrical, and technology systems, along with building analysis and commissioning. Our services also include system upgrades and retrofits to improve indoor air quality and energy conservation. Hallberg is the Minnesota distributor of the Schools for Energy Efficiency (SEE) Program and the CLASS 5 Workplace product.

St. Olaf College Science Complex (LEED) Northfield, MN; Minnesota Sex Offender Program (MSOP), Moose Lake, MN; Chanhassen High School, Chanhassen, MN; UnitedHealth Group Corporate Office (LEED), Minnetonka, MN; REI Store (LEED) Chicago, IL; University of St. Thomas, St. Paul, MN

HGA has engineering expertise in the design of a broad range of facility types. In addition to traditional civil, mechanical, structural and electrical engineering, HGA has specialists in commissioning, clean environments, industrial processes, central plants, energy saving controls, utility infrastructure, facility assessments, telecommunications systems design, healthcare technology applications design, specialty lighting and sustainable design, as well as alternate delivery methods.

Daiikin McQuay, Applied Development Center, Plymouth, MN; Federal Government Agency Headquarters Building, GSA and Federal Agency Tenant, Brooklyn Park, MN; Target Field, Civil Site and Utility Work, Minneapolis, MN; Union Depot, St. Paul, MN; University of Minnesota Amplatz Children's Hospital, Minneapolis, MN; University of Minnesota Minneapolis, Science Teaching and Student Services Center, Minneapolis, MN

HAMMEL, GREEN AND ABRAMSON, INC. (HGA)

701 Washington Avenue North
Minneapolis, MN 55401
Tel: (612) 758-4000
Fax: (612) 758-4199
Email: info@hga.com
www.hga.com
Established 1953
Other MN Office: Rochester
Total MN Offices: 281
Other Offices: Milwaukee, Sacramento, Los Angeles, San Francisco
Total in Other Offices: 225
Contact: Julie Luers, Dir. Mktg., (612) 758-4613

Firm Principals
Chuck Cappellin, PE, LEED AP
Jeff Harris, PE, LEED AP
Leigh Harrison, PE, LEED AP
Kenny Horns, PE, LEED AP
Doug Maust, PE, LEED AP
Yan Shagav, PE, LEED AP

HDR is an employee-owned engineering, architecture and consulting firm that provides a total spectrum of services. Our professionals represent hundreds of disciplines and partner on blended teams worldwide to provide solutions beyond the scope of traditional A/E/C firms.

Completed projects in 50 states and 60 countries: Banner Health, Mesa, AZ; Hoover Dam Bypass, Boulder City, NV; Calgary Courts Center, Calgary, Alberta, CA; Gilroy Onions Advanced Energy Recovery System, Oxnard, CA; Constellation Energy, Brandon Shores Air Quality Control Retrofit, Baltimore, MD

HEYER ENGINEERING

123 - 3rd Street North, Suite 600
Minneapolis, MN 55401
Tel: (612) 238-3805
Fax: (612) 238-3806
Email: dave@heyer-eng.com
www.heyerengineering.com
Established 1983
Total in MN Office: 2
Other Office: Fargo
Contact: Dave Bruns, (612) 238-3805

Firm Principals
Jim Heyer, PE
Dave Bruns, PE

Heyer Engineering offers full-service structural engineering with offices in Minneapolis and Fargo. Jim Heyer, PE is licensed and has designed structures in 38 states. Over a 24-year period, more than 7,000 projects have been accomplished, including all types of occupancies and construction materials. Over the years, we have formed excellent relationships with our clients, who frequently use our services for the majority of their projects. This is the result of our dependability, quality designs, creativity and wealth of experience.

Chanhassen High School, Chanhassen, MN; Horizon Middle School, Moorhead, MN; Ralph Engelstad Arena, Grand Forks, ND; Northwest Aerospace Training Center, Eagan, MN; Jackson Place/Buff Block, Elk River, MN; Innovis Health Medical Center, Fargo, ND

HR GREEN

2550 University Avenue West, Suite 400N
St. Paul, MN 55114
Tel: (651) 644-4389
Fax: (651) 644-9446
Email: rrfroberg@hrgreen.com
www.hrgreen.com
Established 1913
Total in MN Office: 40
Other Offices: Iowa, Illinois, South Dakota, Missouri, Texas
Total in Other Offices: 370
Contact: Rick Froberg, (651) 655-7757

Firm Principals
Rick Froberg, AIA, RRC, LEED AP
Dave Raby, PE
Jack Broz, PE
Jonathon Kusa, PE, LEED AP

HRG offers a full range of engineering services, with expertise in all major building systems including structural, mechanical and electrical. HRG specializes in roof and green roof design and consulting, plaza waterproofing, masonry restoration, window replacement, site engineering and outdoor athletic facilities. Project types include educational, institutional, commercial, municipal, and industrial.

University of Minnesota (various engineering projects on the Minneapolis, St. Paul and Morris Campuses), MN; Minneapolis City Hall Courtyard (green roof waterproofing design), Minneapolis, MN; Rice County Courthouse (masonry restoration), Faribault, MN; Hopkins Public Schools (track restoration), Hopkins, MN; Metro Transit M.J. Ruter Bus Garage (HVAC retrofit), Brooklyn Center, MN; IBM (roof replacement projects), Rochester, MN, Tucson, AZ, Boulder, CO

January/February 2011 ARCHITECTURE MINNESOTA 57
INSPEC, INC.
5801 Duluth Street
Minneapolis, MN 55422
Tel: (612) 546-3434
Fax: (612) 546-8669
Email: fking@inspec.com
www.inspec.com
Established 1973
Total MN Office: 54
Other Offices: Milwaukee, Chicago
Total in Other Offices: 12
Contact: Fred King, (612) 546-3434

Firm Principals
Mike Remington, PE
Gary Patrick, AIA, RRC
Brent Boelter, PE
Dwight Benoy, PE
Dave Campbell, AIA, RWC, CRP
Gary Larson, AIA

INSPEC provides smart engineering for roofs, walls, windows, pavements, waterproofing, and other specialized services. Our services include: surveys, evaluations, failure investigations, design, consultation, expert witness testimony, construction administration/observation, on-site and laboratory testing, and customized facility management programs. We also specialize in historic buildings and outdoor athletic facilities.

Target Center (roof replacement – vegetated and non-vegetated), Minneapolis, MN; Minnesota State Community and Technical College (roof replacement), Wadena, MN; Hamline University, Old Main Building (window replacement), St. Paul, MN; Minneapolis/St. Paul International Airport (concourse expansion, tunnel/foundation waterproofing), Bloomington, MN; Iowa Hi-Rise (exterior re-cladding and window replacement), St. Paul MN; St. Thomas Academy (Synthec turf field construction), Mendota Heights, MN.

KIMLEY-HORN AND ASSOCIATES, INC.
2550 University Avenue West, Suite 238N
St. Paul, MN 55114-2006
Tel: (651) 645-4197
Fax: (651) 645-5166
Email: tom.lincoln@kimley-horn.com
www.kimley-horn.com
Established 1967
Total in MN Office: 70
Other Offices: Raleigh (Corporate), 56 offices nationwide
Total in Other Offices: 1,541
Contact: Thomas J. Lincoln, PE., (651) 643-0453

Firm Principals
Gary Ehret, PE
Jon Horn, PE
Mike Hermann, PE
Paul Danielson, PE
Jeanne Witzig, AICP
Steve Plipsen, PE

Kimley-Horn and Associates, Inc. is a national consulting engineering firm with a Twin Cities office that serves private and public clients across the Midwest. Our capabilities encompass all phases of a project from early planning through construction administration. Kimley-Horn effectively integrates engineering planning, transportation, and environmental services to efficiently meet our clients' objectives.

Central Corridor LRT, Minneapolis to St. Paul, MN; Metropolitan Airports Commission, MSP International Airport, MN; City of Maplewood Municipal Services, Maplewood, MN; Bloomington Central Station Development, Bloomington, MN; Penn and American Development, Bloomington, MN; Shingle Creek Crossing, Brooklyn Center, MN.

KRECH, O'BRIEN, MUELLER & ASSOCIATES
6115 Cahill Avenue
Inver Grove Heights, MN 55076
Tel: (651) 451-4605
Fax: (651) 451-0917
Email: jkrech@komainc.com
www.komainc.com
Established 1985
Total MN Office: 15
Contact: James Krech, (651) 789-4120

Firm Principals
James H. Krech, PE
Michael J. Lisowski, PE
Matthew J. Van Hoof, PE
Daniel J. O'Brien, AIA
Brady R. Mueller, AIA

KOMA offers structural engineering, architecture and interior design services. Registered as structural engineers in 31 states, typical projects include industrial, commercial, institutional, ecclesiastical, forensic, agricultural, blast resistance and hazardous waste confinement. Specialties include granular material storage, hazardous liquid containment, corrosive environments, blast resistance and aluminum green house design.

Allina Medical Clinic, Ramsey, MN; Longhorn Steakhouse, Nationwide; Savage Medical Building, Savage, MN; Newport Elementary School (renovations), Newport, MN; Lego Imagination Center at the Mall of America, Bloomington, MN; Steak N Shake, Nationwide.

LARSON ENGINEERING, INC.
3524 Labore Road
White Bear Lake, MN 55110
Tel: (651) 481-9120
Fax: (651) 481-9201
Email: info@larsonengr.com
www.larsonengr.com
Established 1979
Total in MN Office: 47
Other Offices: Scottsdale, Atlanta, Macom, Chicago, Omaha, St. Louis, Appleton, Milwaukee
Total in Other Offices: 110
Contact: Kesh Ramduler, PE, (651) 481-9120

Firm Principals
Lee Granquist, PE
Kesh Ramduler, PE
Henry Voth, PE
Roger Potta, PE

Founded in 1979 Larson Engineering provides structural, civil, mechanical and process engineering services. We excel in curtain wall design, pavement maintenance programs, athletic facilities, and commercial/industrial structures. As a member of the U.S. Green Building Council, we are especially proud of our work on alternative fuel, energy services and sustainable design projects.

Kennedy Community School, St. Joseph, MN; Army Aviation Support Facility, St. Cloud, MN; Target Stores PMP, Multiple U.S. Locations; Columbia Heights Public Safety Center, Columbia Heights, MN; Toyota Portals, Multiple U.S. Locations; Duke Energy Center, Charlotte, NC.

LKPB ENGINEERS, INC.
1935 West County Road B2, Suite 300
St. Paul, MN 55113
Tel: (651) 633-1223
Fax: (651) 633-1355
Email: karla.sampson@lkpb.com
www.lkpb.com
Established 1969
Total in MN Office: 42
Contact: Karla Sampson, (651) 288-8110

Firm Principals
Peter A. Potvin, PE
Gayand J. Bender, PE
John M. Killeen, PE
Michael A. Westemeier, PE

LKPB Engineers, Inc. (LKPB) is a mechanical and electrical consulting engineering firm founded in 1969. The firm provides services to clients in the education, healthcare, corporate, commercial, historical, recreational and government environments. Services include design phase, master planning, construction documentation, construction administration and commissioning.

TCF Bank Football Stadium, Minneapolis, MN; Carleton College Cassat and Memorial Residence Halls, Northfield, MN; Minnesota Army National Guard Army Aviation Support Facility, St. Cloud, MN; Como Zoo Polar Bear Odyssey, St. Paul, MN; Tettegouche State Park Visitors Center, Silver Bay, MN.
LOUCKS ASSOCIATES

7200 Hemlock Lane, Suite 300
Minneapolis, MN 55369
Tel: (763) 424-5505
Fax: (763) 424-5822
Email: home@loucksassociates.com
www.loucksassociates.com
Established 1976
Contact: Mike O'Brien, (763) 424-5505

Firm Principals
Jeffrey A. Shopek, PE
Paul J. McGinley, PLS
Michael J. St. Martin, PE
Paul A. Kangas, ASLA

Services include site layout, grading, storm water conveyance systems, water quality retention ponds, wetland mitigation, EAW/EIS documents, groundwater contamination, ALTA title surveys, site feasibility studies, comprehensive plan amendments, rezoning, permitting and approvals for industrial, commercial, retail, corporate campus, assisted living community, senior co-op, townhome and education facilities.

Beacon Bluff 3M Campus Re-development, St. Paul, MN; CVS Stores, Various MN
Locations; St. Jude Medical Campus, Little Canada, MN; Children's Hospital, Minneapolis, MN; University of Minnesota (education/sciences building), Minneapolis, MN; Coyuna Senior Housing, Crosby, MN

MATTSON MACDONALD YOUNG, INC.

7901 North 3rd Street, Suite 100
Minneapolis, MN 55401
Tel: (612) 827-7625
Fax: (612) 827-0805
Tel: (612) 827-0805
Fax: (612) 827-0805
www.mattsonmacdonald.com
Established 1983
Total in MN Office: 14
Contact: Stephanie Young, PE

Firm Principals
David H. Macdonald, PE
Stephanie J. Young, PE
Eric Bunkers, PE
Joe Cain, PE

Mattson Macdonald Young, Inc. provides structural engineering services for a wide range of building types and sizes. We provide analysis and design for new construction, adaptive reuse, renovation and expansion. We have provided services for multi-million dollar, high-rise construction and one-room porch additions. We strive to produce good work, and make sure our clients enjoy the experience of working with us.

The Chambers Hotel, Minneapolis, MN; The Humboldt Mill + Annex, Minneapolis, MN; St. Croix Lutheran High School Chapel, West Saint Paul, MN; Breck School Commons Addition, Golden Valley, MN; 7 of the 29 Homes by Architects 2009 Tour Residences, Various Locations, MN; Swedish Institute Solarium Restoration, Minneapolis, MN

MCCONKEY JOHNSON SOLTERMANN, INC.

241 Cleveland Avenue South, Suite B2
St. Paul, MN 55105
Tel: (651) 698-5626
Fax: (651) 698-5628
Email: rjohnson@mjs-inc.net
www.mjs-inc.net
Established 1978
Total in MN Office: 6
Contact: Richard W. Johnson, (651) 698-5626 x16

Firm Principals
Richard W. Johnson, PE
Christian Soltermann, PE

We offer structural engineering consulting services for commercial, industrial, institutional and residential projects; also structural assessments of existing structures. Design office that stresses cooperation, communication and a knowledgeable exchange of ideas. Licensed in 16 states.

PPMNS Health Care Center and Administrative Headquarters, St. Paul, MN; Clear Lake Fire Station, Clear Lake, IA; Grand Dental Center, Grand Rapids, MN; TruStone Financial, Golden Valley, MN; St. Anthony Park Elementary School, St. Paul, MN; Vermillion State Bank, Inver Grove Heights, MN

MEYER BORGMAN JOHNSON

12 South Sixth Street, Suite 810
Minneapolis, MN 55402
Tel: (612) 338-0713
Fax: (612) 337-5325
Email: info@mbjeng.com
www.mbjeng.com
Established 1955
Other MN Office: Duluth
Total MN Offices: 51
Other Office: Phoenix, Green Bay
Total Other Office: 12
Contact: Daniel E. Murphy, PE,
(612) 604-3604

Firm Principals
Daniel E. Murphy, PE
Michael J. Ramther, PE
Jerod Hoffman, PE
Brion Szwed, PE
Anthony J. Polusny, PE

50 years of thorough, responsive, and creative structural design for all building types. Committed to provide design solutions that fulfill the architectural vision while maintaining constructability and value to the owner. Services include design analysis, feasibility studies, construction documents, field observation, special inspections, forensics, and ramp condition surveys.

University of Minnesota Amplatz Children's Hospital, Minneapolis, MN; Coloplast North American Headquarters (expansion), Minneapolis, MN; U of Minnesota Northrop Auditorium (renovation), Minneapolis, MN; Duluth Airport Terminal (expansion), Duluth, MN; Minnesota Orchestra Hall (expansion), Minneapolis, MN; Target Field (peer review, construction administration, steel connection design), Minneapolis, MN

MICHAUD COOLEY ERICKSON

333 South Seventh Street, Suite 1200
Minneapolis, MN 55402
Tel: (612) 339-4941
Fax: (612) 339-8354
Email: drafferty@michaudcooley.com
www.michaudcooley.com
Established 1946
Total MN Office: 105
Contact: Dean Rafferty, PE, LEED AP,
(612) 673-6802

Firm Principals
Dean A. Rafferty, PE, LEED AP
Douglas C. Cooley, PE, LEED AP
Joseph A. Tennyson

Michaud Cooley Erickson has provided consulting engineering services for over 60 years. With a team of 105, we are the largest consulting engineering firm in the region. In addition to mechanical and electrical engineering, we have specialists in fire protection, lighting design, low-voltage system design and commissioning. Our primary markets include corporate, health care, mission critical data centers, medical, manufacturing, retail and aviation.

United Hospital, St. Paul, MN; Metropolitan Airports Commission, MN; Macalester College, St. Paul, MN; Tier IV Data Center (for financial client), KS; General Mills JFB, Master Planning, MN; Musical Instrument Museum, Phoenix, AZ

continued next column
Reigstad & Associates is a structural engineering firm providing engineering services throughout the United States. Our engineers and design professionals have the experience, qualifications and tools to provide cost-effective design and innovative solutions. Our Parking Consulting team provides full-service parking consulting, including functional/conceptual design, wayfinding design, complete documentation and project management. The Precast Engineering Department provides complete precast engineering and shop drawings required for producing precast components.

University of Minnesota Ridder Hockey Arena and Tennis Facility Minneapolis, MN; Maplewood Community Center, Maplewood, MN; RiverCentre (parking ramp restoration), St. Paul, MN; Epic Systems Corporation, Madison, WI; Westwood Church, Excelsior, MN; Mankato State University Student Athletic Facilities, Mankato, MN

Firm Principals
Tory R. Litton, PE, CEM
Dan M. Tollman

Established in 1994, Sebesta Blomberg is a nationally-recognized provider of engineering and design services. As a company, we promote collaborative and sustainable solutions by providing engineering, commissioning client utility solutions, eco-management, energy performance, and owner's representation services. Our professional staff is linked across a network of offices throughout the country, including Boston, Chicago, Dallas, Minneapolis-St. Paul, and Washington, DC.

NCSU Co-generation and Boiler Design, Raleigh, NC; Pentagon Wedge 4 and 5 Commissioning, Washington, DC; Embassy Commissioning, Overseas Locations; University of Minnesota CMRR Expansion, Minneapolis, MN; VA VISN 7 Retro-commissioning, AL, CA, SC; University of Iowa West Campus Power Plant, Iowa City, IA

St. Joseph – Carondelet, St. Paul, MN; Olmsted County Public Works Facility, Rochester, MN; North Country Health Services, Berniidi, MN; McDonalds Nationwide: Skilled Nursing/Assisted Living Projects. Nationwide: Frogtown Square, St. Paul, MN

Stork Twin City Testing
662 Cromwell Avenue
St. Paul, MN 55114
Tel: (651) 645-3601
Fax: (651) 659-7348
Email: info.tct@us.stork.com
www.storkemt.com

Established 1938
Total MN: 90
Other Offices: Wausau, Des Moines
Total in Other Offices: 12
Contact: Air McKee-Sexton, (651) 659-7327

Firm Principals
Michiel Craswinkel
Tracy Toeper
Steven Ruesink, PE
John Stieben, PE

Stork Twin City Testing is a member of the Stork Materials Technology network of independent laboratories, providing materials testing, product testing, failure analysis and consulting worldwide. Stork TCT specializes in construction materials and geotechnical engineering, concrete, asphalt, and masonry testing, building product testing, fastener and anchor testing, acoustic evaluation, chemical analysis, non-destructive testing, windows and doors testing, and more.

Central Corridor Light Rail Project, St. Paul and Minneapolis, MN; Nobles Wind Project, Nobles County, Worthington, MN; Runway 17-35, Taxiway C-D, and 2008 Taxiway P Reconstruction Projects, Minneapolis/St. Paul International Airport, St. Paul, MN; Smith Avenue Transit Center, St. Paul, MN; I-494 Design-build Reconstruction Phase II (TH 5 to I-394), Children’s Tower and Parking Garage, University of Minnesota Children’s Hospital – Fairview, Minneapolis, MN

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VAA, LLC (VAN SICKLE, ALLEN)

2955 Xenium Lane North, Suite 10
Plymouth, MN 55441
Tel: (763) 599-9100
Fax: (763) 559-6023
Email: info@vaaeng.com
www.vaaeng.com
Established 1978
Total MN Offices: 66
Other Office: Hutchinson, KS
Contact: Scott Stangeland, (763) 577-9132

Firm Principals
Keith W. Jacobson, PE, LEED AP
Scott A. Stangeland, PE
Kelsey F. Brown, PE, SE
Mark D. Mielke, PE, LEED AP
Jeffrey J. Schrock, PE, LEED AP
David J. Galey, PE, LEED AP

VAA, LLC (Van Sickle, Allen) is committed to meeting the expectations of our clients, providing collaborative thinking, proactive communication, innovative solutions, and unparalleled service and support. We are engineering consultants providing structural and civil engineering services for commercial, corporate, retail, hospitality, education, civic, healthcare, wastewater, industrial, senior housing, and parking facilities.

Hazeltine National Golf Club, Chaska, MN: Target Corporation. Nationwide: Sydney Hall, Minneapolis, MN; American Hospital, Dubai, UAE; Simulator Sholom East Campus, St. Paul, MN; Isleta Casino and Resort Hotel/Convention Center, Albuquerque, NM

Wenzel Engineering, Inc. is a structural engineering firm dedicated to understanding and meeting our clients’ goals. Our experience includes new facilities, renovations, additions, and investigations for commercial, industrial, public, retail, educational, religious and healthcare clients.

Blue Lake Wastewater Treatment Plant Improvements: Twins Stadium, Minneapolis, MN; Gopher Stadium, Minneapolis, MN; McNamara Alumni Center (addition), Minneapolis, MN; Duluth Convention Center (addition), Duluth, MN; University of Minnesota (science teaching and student services building), Duluth, MN

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James I. Swenson Civil Engineering Building

Location: Duluth, Minnesota
Client: University of Minnesota
Board of Regents
Design architect: Ross Barney Architects (RBA)
Principal-in-charge: Carol Ross Barney, FAIA
Project lead designer: Carol Ross Barney, FAIA
Project architect: Michael A. Ross, AIA
RBA project team: Carol Ross Barney, FAIA; Michael A. Ross, AIA; Kimberly Patten; Jonathan D. Graves
Architect of record: SJA Architects
Principal-in-charge: Brian Morse, AIA
SJA project team: Brian Morse, AIA; Ron Stanius, AIA; Rick Stanius, AIA; Tari Rayala, AIA; Corey Beste; Ryan Weiss
Interior design: Ross Barney Architects
Landscape architect: oslund.and.assoc.
Landscape project team: Thomas Oslund; Todd Kruen; Misa Inoue; Bret Wieseler
Civil engineer: MSA
Professional Services
Structural engineer: MBJ Inc.
Mechanical and electrical engineer: Dunham
Energy modeling: Dunham
Lighting design: Dunham
Commissioning agent: Halberg Engineering
Geotechnical engineering and special materials testing: American Engineering and Testing
General contractor: Stahl Construction
Cast-in-place concrete and flatwork: Kelleher Construction, Inc.
Precast wall panels and floor plank: Hanson Structural Precast
Concrete floor polishing: Terrazzo & Concrete Restoration
Masonry: Harbor City Masonry
Burnished masonry units: Premier Block Ultra
Structural steel: Duluth Steel Fabrication
Structural steel erection: Red Cedar Steel Erectors
Miscellaneous steel and Railings: Duluth Steel Fabrication
Gantry cranes: Kone Cranes
Thermoplastic roofing and green roof: Peterson Bros. Roofing

Hot applied membrane waterproofing: Kremer and Davis
Light tubes: SolarTube International, Inc.
By Daylight Designs
Curtain wall and entrances: St. Germain's Glass
Reclaimed Cyprus planters: Tekton Construction
Wood doors and hardware: Sell Hardware
Exterior bifolding doors: Wilcon Doors Inc.
Operable walls: Hufcor
Raised floor system: TecCrete
Cabinetwork: St. Germain's Cabinet
Recycled concrete countertops: IceStone
Wood casework: Dakota Burl veneer
Carpet tiles: Shaw Prisma Tiles
Floor and wall tile: DaTile
Cor-Ten steel panels, including rain-screen construction: Jamar Companies
Cor-Ten pedestrian bridge: Anderson Iron
Temperature controls: Siemens Building Technologies
Plumbing contractor: Shannon’s Mechanical
Mechanical systems and displacement ventilation: Shannon’s Mechanical
Electrical contractor and daylighting controls: API Electric Co.
Site work: Veit & Company
Taconite stone and gabions: Veit & Company Modular Gabion Systems
Site and roof plantings: Boreal Natives
Cor-Ten water retention basins: Jamar Companies
Photographer: Kate Joyce Studios

Bagley Nature Area Classroom Building

Location: Duluth, Minnesota
Owner: University of Minnesota Duluth
Owner’s representatives: John Rashid, AIA; Kevin Claus. John Pastor; Tim Bates; Ken Gilbertson
Architect: Salmela Architect
Principal-in-charge: David Salmela, FAIA
Project lead designer: David Salmela, FAIA
Project manager: Carly Coulson, AIA
Energy consultant: Conservation Technology
Structural engineer: MBJ
Design engineer: Paul Johnson

Face brick and precast: Gage Brothers
Concrete Products Inc.
Cabinetwork: Aaron Carlson
Corporation (supply); McGough
Construction (installation)
Flooring systems/materials: Architectural Sales (access flooring);
Twin City Tile & Marble Company (terrazzo and resinous flooring);
St. Paul Linoleum & Carpet Company (carpeting)
Window systems: Twin City
Glass Contractors
Architectural metal panels: MG McGrath Inc.
Concrete work: McGough
Construction Millwork: Donlar Construction
Millwork: Ron’s Cabinets
Photographer: Lara Swimmer

Twin City Tile & Marble Corporation (supply); McGough
Construction (installation)
Ornamental metals: Metro Manufacturing Inc.
Gypsum assemblies: Custom Drywall Inc.
Photographer: Tim Griffith

Welcome Center

Location: Morris, Minnesota
Client: University of Minnesota
Morrison Architects: Meyer, Scherer & Rockcastle, Ltd. (MS&R)
Principal-in-charge: Thomas Meyer, FAIA
Project lead designer: Josh Stowers, AIA
Project manager: Josh Stowers, AIA
Project architects: Michael Stickley; Aaron Wittkamper
Project team: Nuno Cruz; Megan Eckhoff; Traci Engle Lesneski; Greta Foster; Dan Vernrussye; Sean Wagner, AIA; Alana Zbaren
Energy modeling: Karges-Faulconbridge, Inc. (KFI)
Structural and civil engineer: BKBM
Mechanical and electrical engineer: KFI
Lighting design: MS&R
Interior design: MS&R
Construction manager: JE Dunn
Landscape architect: oslund.and.assoc.
Landscape project team: Thomas Oslund; Todd Kruen
Cabinetwork: Ron’s Cabinets
Flooring systems/materials: Warmboard; Interface Flor
Window systems: Pella; National
Concrete work: Donlar Construction
Millwork: Ron’s Cabinets
Photographer: Lara Swimmer

It takes a village to design, engineer, and construct a great building. So let’s give credit where credit is due.
Mechanical and electrical engineer: Gausman & Moore
Civil engineer: Salo Engineering
Construction manager: University of Minnesota Duluth
Photographer: Paul Crosby

Wallin Medical Biosciences Building
page 34
Location: Minneapolis, Minnesota
Client: University of Minnesota
Architect: Perkins+Will
Managing principal: Jeff Zielbarth, AIA
Design principal: David Dimond, AIA
Project manager: Bob Novak, AIA
Project architects: Ray Beets, FAIA; Gary Shaw, AIA; Tom Grumble, AIA; Pete Salmon, AIA; Chris Fischer; Trevor Dickie; Beth Lato; Jen Somers
Project team: Tom Beck, AIA; Alex Clinton; Edward Heinen; Anthony Paprocki; Matt Petermann
Energy design assistance: The Weidt Group
Wind studies: RWDI
Structural engineer: Ericksen Roed and Associates, Inc.
Mechanical and electrical engineer: Affiliated Engineers, Inc.
Lighting design: Affiliated Engineers, Inc.
Civil engineer: Pierce Pini & Associates, Inc.
Interior design: Perkins+Will
Landscape architect: Close Associates Architects
Kitchen design: Robert Rippe Associates Inc.
Construction manager: Kraus Anderson Construction Co.
Concrete work: Kelleher Construction, Inc.
Face brick: Gresser
Cast stone: Artstone
Mechanical contractor: Metropolitan Mechanical Contractors, Inc.
Electrical contractor: Hunt Electric
Window systems: Empirehouse, Inc.
Lab casework: Haldeman-Homme, Inc.
Photographers: Paul Crosby; Lucie Marusin

Cassat and Memorial Residence Halls
Page 38
Location: Northfield, Minnesota
Client: Carleton College
Architect: LHB
Principal-in-charge: Kim Bretheim, AIA
Project lead designer: Kim Bretheim, AIA
Project manager: Maureen Ness Colburn, AIA
Project team: Bill Niebur, AIA; Tu-Anh Bui, Assoc. AIA; Andy Madison, Assoc. AIA
Construction administrator: Roger Purdy
Roof and waterproofing design: Inspec
Energy design assistance: The Weidt Group
Structural and civil engineer: LHB
Mechanical and electrical engineer: LKB
Lighting design: LKB
Interior design: Isola Design
Construction manager: JE Dunn
Landscape architect: Spencer Jones Landscape Architect
Face brick: Twin City Brick & Stone
Stone: Twin City Brick & Stone
Cabinetwork: ABC Kitchens
Flooring systems/materials: Schleis
Floor Covering (resilient, tile, carpet); Schaefer Hardwood Floors (wood)
Window systems: Andersen Windows
Concrete work: Cemstone and Reward Wall (ICFs); County Materials (precast planks)
Roofing: Dalco
Mechanical: Egan
Electrical: Premier
Photographers: Peter Bastianelli-Kerze; Don Wong; Kim Bretheim, AIA

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Egan 16
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Marvin Windows and Doors 1
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Minnesota Ceramic Tile Industry 45
National Window Associates 12
PIE Forensic Consultants 46
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RJM Construction 51
Schuler Shook — Theatre Planners & Lighting Designers 47
Peter J. Sieger Architectural Photography 51
TCH — Integrated Access Systems 47
VAA, LLC Van Sickle, Allen & Associates — Structural Engineering 50
The Weidt Group 49
Wells Concrete 4
WoodWorks Cover 2
Xcel Energy 8
For its work on Westminster Presbyterian Church's Memorial Columbarium and Fellowship Courtyard, landscape architecture firm Coen + Partners, collaborating with Meyer, Scherer & Rockcastle, won 2009 design awards from the American Society of Landscape Architects and its Minnesota chapter.

“The copper fence that veils the Westminster Presbyterian Church courtyard in downtown Minneapolis features a pattern abstracted from an image found in the church’s inspirational stained-glass windows. The two-walled perforated screen creates an inspirational effect of its own, thanks to a moiré shimmer that changes according to the passerby’s speed and angle of view.” — Photographer Paul Crosby