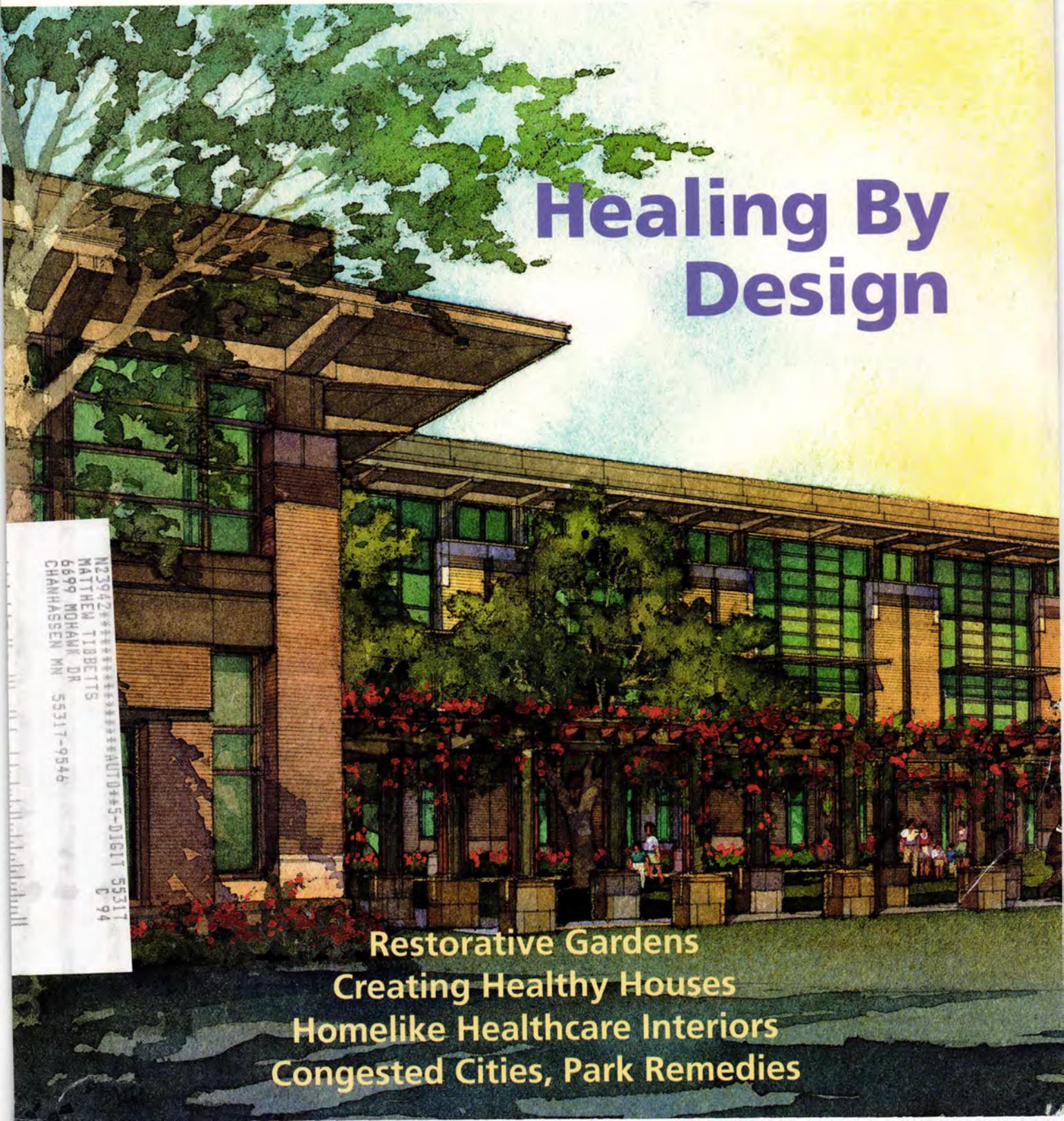


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PERKINS & WILL

### Cover

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 Architect: Hammel, Green and Abrahamson, Inc.  
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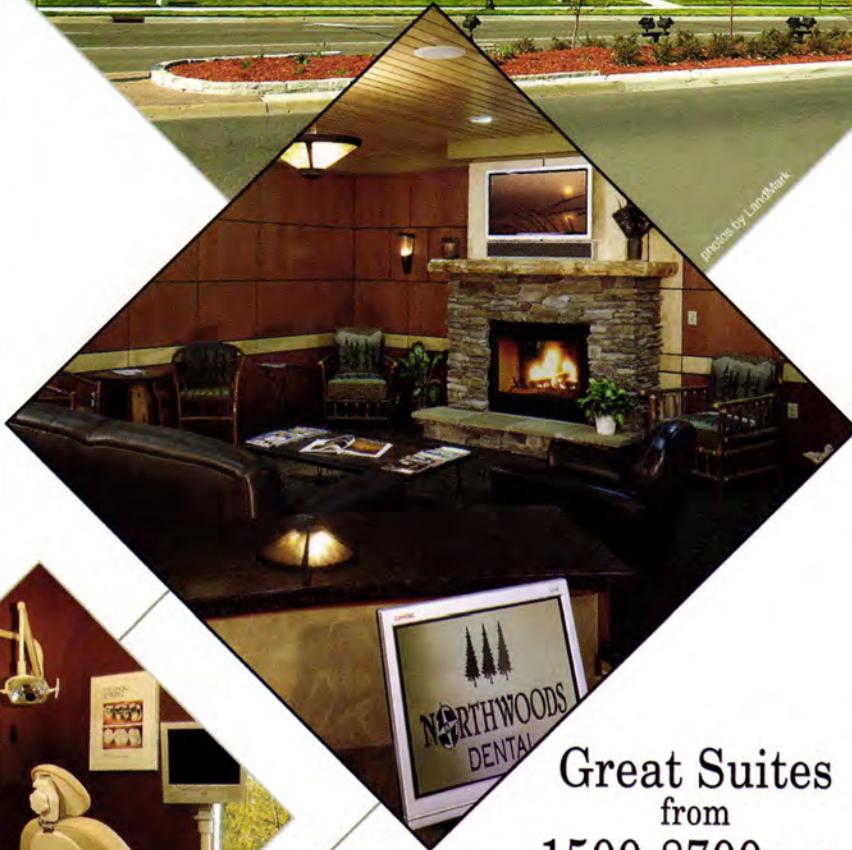


REBECCA KRINKE

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

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## AIA Minnesota

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### Architecture Minnesota Staff

Editor: Camille LeFevre (lefevre@aia-mn.org)

Graphic Design: Rubin Cordaro Design  
(r.christian@rubincordaro.com)

Advertising Sales: Judith Van Dyne  
(vandyne@aia-mn.org)

Circulation Manager: Amber Wald (wald@aia-mn.org)

Publisher: Beverly Hauschild-Baron, Hon. AIA,  
(hauschild@aia-mn.org)

### Architecture Minnesota Committee

Phillip Glenn Koski, AIA, Chair

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Thomas Fisher, Assoc. AIA

Robert Gerloff, AIA

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Howard Goltz, AIA

Clint Hewitt

Steven McNeill, AIA

Frank Nemeth, AIA

### AIA Minnesota Staff

Beverly Hauschild-Baron, Hon. AIA,

Executive Vice President, Publisher (hauschild@aia-mn.org)

Deanna Christiansen, Continuing Education Director

(christiansen@aia-mn.org)

Jennifer Gilhoi, Communications Director

(gilhoi@aia-mn.org)

Camille LeFevre, Editor, *Architecture Minnesota*

(lefevre@aia-mn.org)

SallyJane Mathias, Exhibit Sales Director

(mathias@aia-mn.org)

Tom Moua, Financial Manager (moua@aia-mn.org)

Dorothy Rand, Web Site Manager (drand@aia-mn.org)

Judith Van Dyne, Advertising Sales Director

(vandyne@aia-mn.org)

Amber Wald, Membership Coordinator (wald@aia-mn.org)

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Editorial office: International Market Square, 275 Market Street,

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# Start Seeing Architecture

## Contributors

**HEATHER BEAL** is director of business development for RSP Architects, Ltd., Minneapolis, and a journalist who writes about architecture, sustainability, and the visual and performing arts.

**BILL BEYER, FAIA**, is a principal with Stageberg Beyer Sachs, Inc., Minneapolis.

**GINA GRENSING** is a marketing director with LHB Engineers & Architects, Duluth, and a member of the *Architecture Minnesota* committee.

**BETTE HAMMEL** is a Wayzata-based journalist specializing in architecture.

**BARBARA KNOX** is a Minneapolis freelance writer and editor.

**PHILLIP GLENN KOSKI, AIA**, is an architect with Hammel, Green and Abrahamson, Inc., Minneapolis, chair of the *Architecture Minnesota* committee and a member of the Minneapolis Heritage Preservation Commission.

**ROBERT ROSCOE** is head of his own firm, Design for Preservation, Minneapolis.

**LINDA SHAPIRO** is a Minneapolis freelance writer and editor.

**Y**ears before the catchy “Got Milk?” advertisements and the myriad, derivative copycat ads it spawned, a bumper sticker caught my eye, “Start Seeing Motorcycles,” as did its imitator, “Start Seeing Sculpture.” While the subjects are different, the message is the same: To be aware of, and pay attention to, the things hidden in our blind spots—or risk certain peril.

Not seeing a motorcyclist, unfortunately, can have disastrous consequences, including injury or death. Someone’s inability to notice sculpture is, of course, less mortally perilous, but might result in missing a moment of joy, beauty or even outrage. The risk is an aesthetic one and results in a life less rich.

Many people’s inability to see the architecture around them carries the same risk. As AIA Minnesota’s 2004 president, Howard Goltz, AIA, points out in this edition of *Architecture Minnesota*, architects help create the places in which we live, work and play, as well as where we worship, secure an education and receive medical care. The current attention paid to star architects notwithstanding, we often take the built environment for granted without comprehending how architects have secured the well-being of the public’s health, safety and welfare—while often enhancing the aesthetics of daily life—through design.

Nowhere may this be more apparent than in healthcare design and often for good reason. As one of my colleagues at another architecture magazine recently pointed out, finding intriguing, well-designed healthcare projects for publication is extremely difficult. In fact, I avoided covering healthcare in *Architecture Minnesota* precisely because I feared good projects would be in scant supply. I had little to fear.

In assembling this healthcare-themed edition, in order to cover a scope of projects related to health, wellness and healing, I broadened the definition of “healthcare” beyond clinics and hospitals to include biomedical and neurological research facilities, a meditation center and a healthy house for a woman with chemical sensitivities. Not surprisingly, two discoveries came to the fore: a profound level of care, research and

dedication—on the part of the design teams—reflected in architectural details; and a desire—on the part of clients—to make interiors less clinical and more homey.

Featured in these pages, for instance, is a dental office with the feel of a Caribou Coffee shop or up-north lodge. An ambulatory-care clinic uses a small-town theme to create gathering spaces and treatment neighborhoods. A research center and clinic for children with autism incorporates custom-designed opaque panels to suggest the elusive barriers separating these children from reality, while demarcating the spaces in which they wait with their families to be served.

Such examples demonstrate architecture at work for the public good. So what’s the antidote to the blindness that prevents us from recognizing the holistic, pervasive nature of design in our environment? Attentiveness.

As James Boyd-Brent, a professor at the University of Minnesota and co-curator of *Here by Design*, a biennial exhibition of Minnesota design at The Goldstein Gallery, recently told me, “Design is a human activity that demonstrates a particular kind of attentiveness that people have or don’t have, that indicates whether people are actually paying attention to what’s going on around them, and not just to superficial or external things, but to things going on deep within their own sensibilities.”

When architects and designers pay so much attention to the places in which we spend our lives—in particular, those healthcare facilities in which we’re often most vulnerable—it behooves us to pay attention, to start seeing architecture, in return.



DON F. WONG

*Camille LeFevre*

Camille LeFevre  
lefevre@aia-mn.org



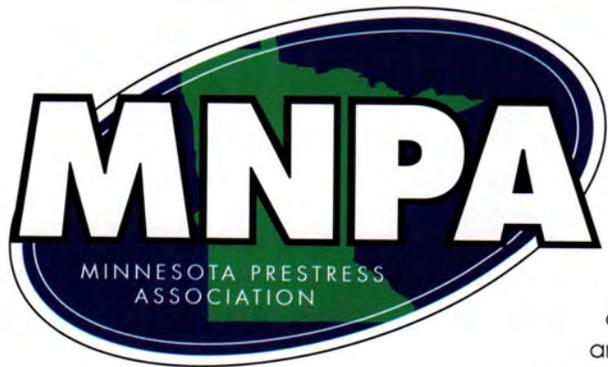
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INSIDER LINGO *By Gina Gensing*

## Off-Gassing



Antebellum Southern women were known to collapse from “the vapors,” mysterious odors that caused them to swoon or faint. This occurred, of course, in large part because women’s corsets were so tight, they couldn’t catch a decent breath. Today people are affected by vapors of a different sort; gaseous emissions from certain types of furniture, fabric, paint and carpet materials released into the air. This release is called “off-gassing” and many of these gases are considered toxic. People especially susceptible to these odors can suffer from headaches, dizziness, respiratory conditions and worse. Usually, high off-gassing vapor levels exist when the materials are first installed. The odors can decrease over time. In some cases, however, high vapor levels will persist for months or even years after a product’s installation. Many new “green” products low in or free of off-gassing materials are increasingly available. But users of products with high off-gassing levels should be aware of the potential dangers of such products and methods of avoiding inhalation, in order to avoid suffering from the vapors!

## Calendar

### February 15

**Architects Shape the New Minneapolis:**

**Jacques Herzog**

**Pantages Theatre**

**Minneapolis, Minnesota**

**(612) 625-9494**

**www.weisman.umn.edu**

The lecture series, sponsored in part by AIA Minnesota, continues with the architect of the Walker Art Center expansion. Leading the conversation is Jeffrey Kipnis, professor, Knowlton School of Architecture, Ohio State University, Columbus.

### Through February 29

**Household Names:**

**The Designer in American Life**

**Minneapolis Institute of Arts**

**Minneapolis, Minnesota**

**(612) 870-3131**

**www.artsmia.org**

The exhibition explores the designer’s rise to recognition in the mind of the American public after the advent of industrial production flooded homes with domestic objects.

### March 7

**Architects Shape the New Minneapolis:**

**Twin Cities Architects Roundtable**

**Coffman Memorial Union**

**University of Minnesota**

**Minneapolis, Minnesota**

**(612) 625-9494**

**www.weisman.umn.edu**

The lecture series, sponsored in part by AIA Minnesota, focuses on local talent with a roundtable featuring James Dayton, AIA, Garth Rockcastle, FAIA, Julie Snow, FAIA and Joan Sorrano, AIA, moderated by William Morish, former director, Design Center for American Urban Landscape, University of Minnesota.

### April 18

**Architects Shape the New Minneapolis:**

**Jean Nouvel**

**Pantages Theatre**

**Minneapolis, Minnesota**

**(612) 625-9494**

**www.weisman.umn.edu**

The lecture series, sponsored in part by AIA Minnesota, continues with the architect of the new Guthrie Theater on the Mississippi.

### April 21–23

**EnvironDesign 8**

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**Minneapolis, Minnesota**

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Janine Benyus, author of *Biomimicry*, William McDonough, FAIA, leading proponent of the “next industrial revolution,” Richard Jackson, director, National Center for Environmental Health, Centers for Disease Control, and Eileen Claussen, president, Pew Center of Global Climate Change headline this year’s conference.

### Through August 22

**Symphony in Steel:**

**Ironworks and the Walt Disney**

**Concert Hall**

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The skillful acrobatics of the ironworkers erecting the concert hall—a highly complex steel structure designed by Frank Gehry, FAIA—are the subject of Gil Garcetti’s photographs, which also document the building’s construction. The photographic series conveys the danger of the ironworkers’ jobs and reveals the nascent sculptural form of Gehry’s newest work.



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## Winter Carnival Ice Palace

The 2004 St. Paul Winter Carnival Ice Palace, the first to be built in conjunction with the carnival since 1992, will be on display for three weeks in January. The structure, designed by SLL/Leo A. Daly, Minneapolis, will use 27,000 blocks of ice cut from Lake Phalen and be constructed by volunteers and with in-kind-contributed materials. The palace will be located on the Cleveland Circle site across West Seventh Street from the Xcel Energy Center, in downtown St. Paul.

The design embraces ideas and concepts from previous palaces, yet brings its own unique elements to the tradition. For the first time since the 1941 palace, for example, visitors will be able to physically enter this ice palace and experience it from within. The design also includes

an ice-skating rink, a feature last seen in the 1938 palace.

The 2004 palace will also include a wall of ice, constructed in a herringbone pattern, surrounding the palace grounds. Visitors enter the grounds through gates flanked by ice turrets 20 feet high. The palace courtyard includes a ring of ice thrones and a water fountain of ice that spews fire. The palace itself will be approximately 240 feet along the base and constructed with five large turrets, the tallest of which is 75 feet high.

SLL/Leo A. Daly's team of volunteers worked with the St. Paul Festival and Heritage Foundation since 2000 to create this year's ice palace. "The involvement in and enthusiasm for this project on the part of the community has been phe-



SLL/LEO A. DALY

nomenal," says Frank Anderson, AIA, project manager.

While Anderson says he headed the effort for the firm, "the design of the ice palace was completely a team effort. We had a great time doing this project because we had the opportunity to interact with lots of new people who were all volunteering and because there was a lot of pride in the fact that we were designing an ice palace."

## 2003 Rapson Traveling Fellowship

Matthew Kreilich, a designer at Hammel, Green and Abrahamson, Inc., Minneapolis, received the 2003 Ralph Rapson Traveling Fellowship, administered by the Minnesota Architectural Foundation. The purpose of the competition, held annually since 1989, is to offer young architects the opportunity to advance their architectural education by pursuing foreign or domestic travel and study. To assist in their education, \$12,000 is awarded to the winner.

The 2003 fellowship competition program was to create a theoretical design that commemorates Paul and Sheila Wellstone, and houses Wellstone Action, a nonprofit organization. The program included 1,000 to 2,500 square feet of main space; 2,500 square feet of offices for Wellstone Action; 400 square feet of storage; 450 square feet for restrooms; and parking for 20 to 30 cars.

The Linwood Park site faces St. Clair Avenue in St. Paul and commands a view of lower St. Paul and the Mississippi River. The triangular bluff park features a rolling park area on the northern half; the southern half is an unbuildable, steeply wooded bluff; a modest community-activities complex is located at the west end; and residences sit along St. Clair and immediately north. The proposed design had to relate to the character and aesthetic of the park.

Kreilich's entry began by "addressing the most fundamental of programmatic notions: the contributions of Sheila and Paul Wellstone," the jurors said. "It went further by linking these con-



MATTHEW KREILICH

tributions to a public space that provides both solitary and large-forum activities."

The jurors also commended the entry for "two bold architectural elements that rise toward each other in yin-yang fashion, to embrace not only the large public gathering space, but also to express the individualism of Paul and Sheila Wellstone. This courtyard celebrates the coming together of these two spirits in a public symbol. As the Wellstones were partners, so is Kreilich's solution a shared expression, which brings together sensitive earth forms with strong architectural gestures."

The jurors concluded by adding that the theoretical design is, "Beautifully conceived, thoughtfully communicated and creatively crafted. This solution addresses both process and product to memorialize the strength of character and commitment to values expressed by the Wellstones in their separate, but equal contributions."

# THE BEST BUILDINGS ON EARTH ARE STILL BUILT BY HAND



More than a million bricks laid in a series of unique patterns, textures and colors make the Veterans Administration Health Care Facility in Detroit, Michigan, a striking example of masonry design by architects Smith, Hinchman & Grylls Associates. But masonry was chosen for more than its beauty and flexibility of design. Buildings built of masonry by skilled union craftworkers will outperform, outshine and outlast any others. Add to that the speed and efficiency of union masonry contractors, and you have a prescription for health care facilities that satisfies any schedule and budget. We're The International Masonry Institute, and we'd like to help you design and construct the best buildings on earth. Visit us on the World Wide Web at [www.imiweb.org](http://www.imiweb.org), or call us toll free at 1-800-IMI-0988 for design, technical and construction consultation.



*The International Masonry Institute*



*The International Masonry Institute — a labor/management partnership of the International Union of Bricklayers and Allied Craftworkers and the contractors who employ its members.*

**D**uring AIA Minnesota's 69th annual state convention in November, the 2003 Honor Awards jury selected 13 Honor Award projects and one Divine Detail. This year's jurors were: Julie Eizenberg, president and principal-in-charge of architectural design and master planning, Konig Eizenberg Architecture, Santa Monica, California; Ted Flato, FAIA, principal, Lake/Flato Architects, San Antonio, Texas; and Scott Simpson, FAIA, president and CEO, The Stubbins Associates, Cambridge, Massachusetts.

The award-winning projects are listed below. Full coverage, with jury comments, will follow in the March-April 2004 edition of *Architecture Minnesota*.

# AIA Minnesota's 2003 HONOR AWARDS

## Honor Awards

### Mill City Museum

Minneapolis, Minnesota  
Meyer, Scherer &  
Rockcastle, Ltd.  
Minneapolis, Minnesota

### Emerson Sauna

Duluth, Minnesota  
Salmela Architect  
Duluth, Minnesota

### Target Plaza South

Minneapolis, Minnesota  
Ellerbe Becket, Inc.  
Minneapolis, Minnesota

### General Mills World Headquarters

Golden Valley, Minnesota  
Hammel, Green and  
Abrahamson, Inc.  
Minneapolis, Minnesota

### Art of Chiropractic

Minneapolis, Minnesota  
LEAD, Inc.  
Minneapolis, Minnesota

### Ramsey Town Center

Ramsey, Minnesota  
Elness Swenson Graham  
Architects, Inc.  
Minneapolis, Minnesota

### Performing Arts Center, Illinois State University

Normal, Illinois  
Hammel, Green and  
Abrahamson, Inc.  
Minneapolis, Minnesota

### Mills District Lofts

Minneapolis, Minnesota  
Paul Madson + Associates,  
Ltd./LHB Engineers and  
Architects, Inc.  
Minneapolis, Minnesota

### 301 Kenwood

Minneapolis, Minnesota  
Elness Swenson Graham  
Architects, Inc.  
Minneapolis, Minnesota

### Pantages Theatre

Minneapolis, Minnesota  
Hammel, Green and  
Abrahamson, Inc.  
Minneapolis, Minnesota

### Inver Glen Library

Inver Grove Heights,  
Minnesota  
The Leonard Parker  
Associates, Inc.  
Minneapolis, Minnesota

### 701 Washington Avenue Building

Minneapolis, Minnesota  
Hammel, Green and  
Abrahamson, Inc.  
Minneapolis, Minnesota

### Koehler Residence

Seely Cove, New Brunswick,  
Canada  
Julie Snow Architects, Inc.  
Minneapolis, Minnesota

## Divine Detail

### Cellular Skin, Architecture & the Psyche Installation/ Pavilion

Weisman Art Museum  
Minneapolis, Minnesota  
Locus Architecture, Ltd.  
Minneapolis, Minnesota

# Thank You Minnesota

THESE PROJECTS REPRESENT A RECENT SAMPLING OF OUR 2003 ACCOMPLISHMENTS

**\*\* Excelsior & Grand (St. Louis Park)**  
Elness Swenson Graham Architects Inc.  
Bor-Son Construction /Gresser  
Concrete Inc.

**Park Center, Brooklyn Jr. High,  
Addition (Brooklyn Park)**  
Armstrong, Torseth, Skold & Rydeen Inc.  
Donlar Construction /Camco  
Construction Inc./ John Henry

**Garden Terrace Addition (Little  
Canada)**  
Collaborative Design  
Shaw Lundquist Assoc. Inc./  
Stang Concrete

**Irondale High School, Addition  
(Shoreview)**  
Armstrong, Toresth, Skold & Rydeen Inc.  
Stahl Construction/Oakwood Builders Inc.

**\*Security State Bank (Howard Lake)**  
HTG Architects  
Shingobee Builders/Royal Masonry

**\*\*Summit Place (Eden Prairie)**  
Miller Hanson Partners  
Weis Builders, Inc., Northland  
Concrete & Masonry Co.

**Sam's Club (Bloomington)**  
Raymond H. Harris Architects &  
Associates  
Weis Builders Inc.,  
Gresser Concrete/ Masonry

**\*Bloomington City Hall**  
Ankeny Kell Architects  
M.A. Mortenson Co., Stellar Concrete  
& Masonry

**\*Bloomington Maintenance**  
Kodet Architectural Group, Ltd.  
Steenberg & Watrud Construction

**Cooper High School, Addition  
(New Hope)**  
Wold Architects And Engineers

**St. Michael Middle School, Addition**  
Architects Rego & Youngquist Inc.  
Donlar Construction

**\*Pet Crossings (Bloomington)**  
Winther - Johnson Robinson  
Kiffmeyer Inc.

**Centerville Elementary School  
(Addition)**  
Armstrong, Torseth, Skold & Rydeen, Inc.  
Axel H. Ohman, Inc.

**\*\*Delano Fire Station (Addition)**  
JSS & H Architects, Inc.  
MSC Concrete (Ebert)

**\*\*Delano City Hall**  
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Kraus Anderson Construction Co.,  
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Wold Architects and Engineers

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(Minneapolis)**  
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Vanman Companies Architects.  
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Cunningham Group Architecture, P.A.  
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Architects Rego & Youngquist, Inc.  
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**Meadowbrook Elementary School,  
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Mortenson Masonry

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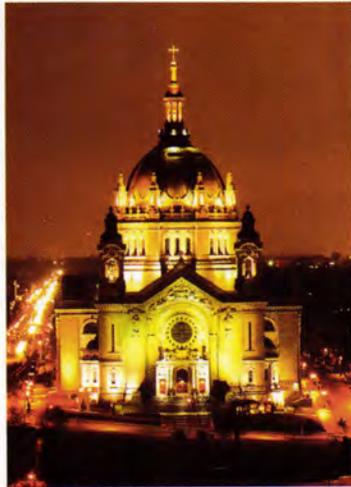


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# Preserving Historic Resources

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Architect: Miller Dunwiddie Architects, Minneapolis

**Commercial House  
Apartments,  
Spring Valley**

Client: Allman & Associates  
Architect: Yaggy Colby Architects, Rochester

**Kemp Insurance and  
Real Estate,  
Lake City**

Client: Bob Kemp,  
Lake City

**Mill City Museum,  
Minneapolis**

Client: St. Anthony Falls Heritage Center  
Architect: Meyer, Scherer & Rockcastle, Ltd., Minneapolis

**Mill Ruins Park,  
Minneapolis**

Client: City of Minneapolis  
Architect: MacDonald & Mack Architects Ltd., Minneapolis

**Nicholas Lahr Building,  
St. Cloud**

Owner: Thomas Grones,  
St. Cloud

**Pierre Bottineau Library,  
Minneapolis**

Client: Minneapolis Public Library Board of Trustees  
Architect: RSP Architects, Ltd., Minneapolis

**Smith-Douglas-More  
House, Eden Prairie**

Architect: MacDonald & Mack Architects, Ltd., Minneapolis

**Swan Jewelry,  
Lake City**

Owner: Steve Swan,  
Lake City

**Olof Swensson Farm  
Barn Museum,  
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# Healthcare Concerns, Cultural Innovations

BY BETTE HAMMEL

**Viewcrest HealthCare Center**, Duluth, demonstrates how an indoor courtyard, with skylights angled and sized so bedridden patients can see the sky, can provide the light and green space that, as research shows, contribute to the health and welfare of patients and residents in long-term-care environments. **Rebecca J. Lewis, AIA**, partner, **DSGW Architects, Inc.**, Duluth, worked closely with the Minnesota Department of Health in creating the courtyard space. Prior to the project, the State of Minnesota didn't allow a nursing-home resident-room window to open into an interior space. With careful calculations of the view from the bed, she created the sky-lit court outside the windows of several existing rooms. The indoor/outdoor space has been filled with greenery to create a "central park." The success of the project has set the stage for similar projects to be constructed in Minnesota. ❖

**The HGA Gallery** opened in the College of Architecture and Landscape Architecture, University of Minnesota, in November with an exhibition honoring the 50th anniversary of **Hammel, Green and Abrahamson, Inc.**, Minneapolis. **Tom Fisher, Assoc. AIA**, dean, CALA, noted the continuing emphasis the firm places on design by inviting **Joan Soranno, AIA**, principal, HGA, to lecture on her work. Students packed the auditorium to hear about her latest commissions, which include the Madison Children's Museum, Carleton College Art Building,

University of Alaska Museum, Schubert Theater, Minneapolis, and Bigelow Chapel for the United Theological Seminary. "Our work is an abstract contemporary expression of each institution and its context," Soranno said. "We try to embody each institution's spirit through form, light and space." For the Madison Children's Museum, for example, Soranno's design team played with shifting masses and came up with three triangulated tubes lined with color that slide, cantilever and angle toward the State Capitol. ❖

**Architects Shape the New Minneapolis**, an ongoing series of public discussions sponsored in part by AIA Minnesota, continued in November with Frank Gehry, FAIA, Frank O. Gehry & Associates, Inc., Santa Monica, California. The designer of the Weisman Art Museum, Minneapolis, which spurred his rise to fame, is currently working on a major expansion for the museum with new brick-clad galleries and a silvery café projecting toward the river. Asked about other star architects—Jean Nouvel, Herzog & deMeuron and Cesar Pelli, FAIA—working on major cultural projects in the Twin Cities, Gehry described them as friends, but also as sibling rivals. "These firms really know how to build good buildings. You have to give them a chance to be built," he told the sold-out audience. Asked about his own buildings, Gehry replied in his casual way, "These buildings are just a blip in the history of the world. Sometimes they come out okay, sometimes they don't. I try not to take myself too seriously." ❖

## Brewster Village

Appleton, Wisconsin, may be called a skilled-nursing facility, but thanks to its thoughtful design by **Horty Elving & Associates**, Minneapolis, elderly residents call it home. In fact, they no longer want to be referred to as residents, but instead as villagers. According to **Rick Moore, AIA**, principal, the new facility had to accommodate 204 individuals with chronic illnesses, mental retardation, developmental disabilities and Alzheimer's disease. So the design team created 15 "households" that each serve up to 14 individuals requiring similar care. Each household includes private bedrooms with baths, a living and dining room, and a secure outdoor courtyard. In addition, three households are grouped around each of five common areas. A post-occupancy evaluation indicated the design is an unqualified success as conflicts between residents have been eliminated, visitors stay longer and the facility now has a waiting list for new villagers. ❖

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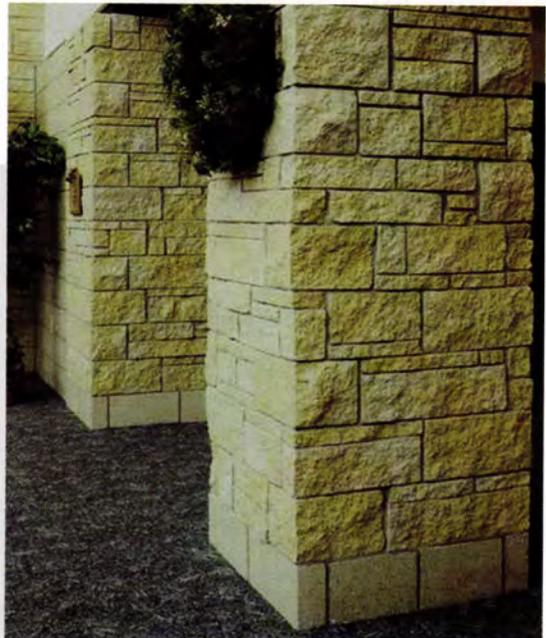
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# Howard F. Goltz, AIA

AIA Minnesota's 2004 president proposes to better the organization through three areas of focus while improving communication to the public

BY CAMILLE LEFEVRE

**H**oward F. Goltz, AIA, was heading toward a promising career in medicine, with a specialty in genetic and viral research, when he found his true calling: architecture. In the 1960s, he earned a B. A. and a B. Arch. in architecture from the University of Minnesota and began working at such large firms as Setter, Leach & Lindstrom, Minneapolis, and Ellerbe Becket, Minneapolis. For seven years he was a partner in his own firm, Klapste Goltz Associates, Minneapolis. Not surprisingly, much of his work involves the design of healthcare and technology projects.

By the 1970s, Goltz was actively engaged in myriad aspects of AIA Minnesota. Over the years, his many volunteer efforts have included stints on the Programs Committee, Publications Committee, Continuing Education Committee, Council of Firms and Quality Based Selection Task Force. From 1983 to 1990, Goltz served on the AIA Minneapolis Board as a director, secretary and then president. He has also served as the secretary of AIA Minnesota.

Since 1996, he's acted as director, treasurer and president of the Minnesota Architectural Foundation. Goltz currently works at SLL/Leo A. Daly, Minneapolis, as a project manager and principal. As he embarks on a new year as president of AIA Minnesota, Goltz views his leadership role to include facilitation and liaison between AIA Minnesota, the architects it represents and the public. *Architecture Minnesota* spoke with Goltz about his priorities in the coming year.

**Why did you accept the position as president of AIA Minnesota? What will the position allow you to accomplish?**

To maintain and improve the strength of our organization, which in turn facilitates architecture's continual improvement, the essence of our organization and its purpose. AIA is the one organization with the ability to serve all architects and architecture. It supports the root of what an architect does: shaping a built environment that serves the public and benefits the public good. AIA Minnesota does this for our Minnesota members and the environments they create.

Can AIA be all things to all architects? As individual architects, we frequently practice in unique, specialized and sometimes isolated ways. Each specialization needs continual integration and alignment with the work of others and the goals of our profession. We need an organization like AIA, a network, to provide communication among ourselves and to the public, continually informing each other about what we're doing to build on the diverse benefits we provide. It's the one common, architectural meeting and "learning" ground available to all architects and the public.

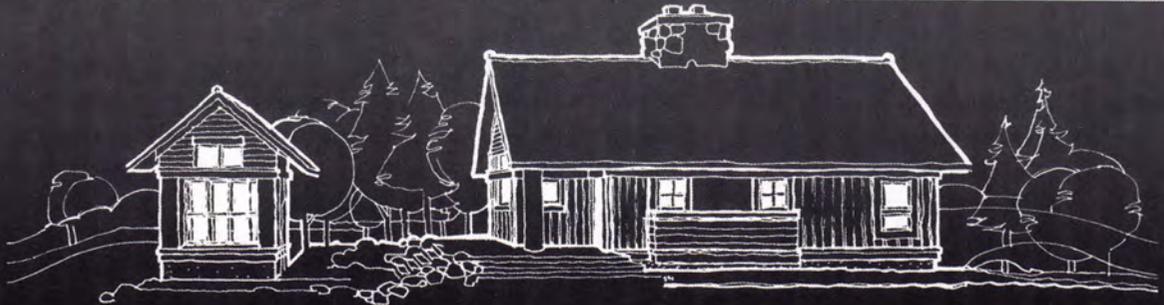
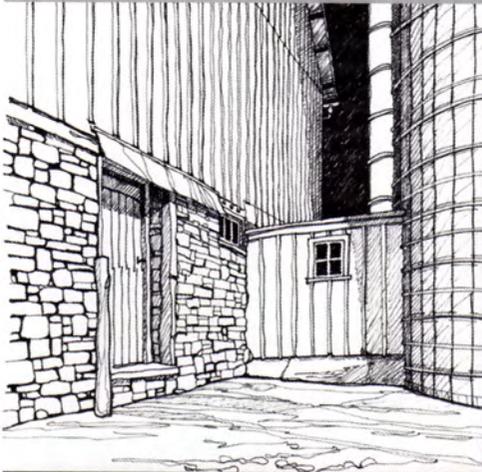
One of my primary goals is to increase public understanding and appreciation of what architects provide, so that together we can make the world a better place in which to live. Our work directly influences the quality of the



"One of my primary goals is to increase public understanding and appreciation of what architects provide, so that together we can make the world a better place in which to live."

*Continued on page 58*

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# Oheyawahi/Pilot Knob

Mendota Heights, Minnesota

BY ROBERT ROSCOE

In the earliest days of white European exploration in Minnesota, travelers like Joseph Nicollet passed near a large promontory along the southern edge of the confluence of the Minnesota and Mississippi rivers, and sometimes witnessed medicine ceremonies performed by Dakota and Ojibwe tribes. The Dakota called the site "Oheyawahi," meaning "a hill that is much visited." According to early missionaries Samuel and Gideon Pond, the Dakota believed "the mouth of the Minnesota River lies immediately over the center of the earth and under the center of the heavens." While rising from the waters at the joining of the two rivers, Unktehi (a giant and powerful being) pushed up the land called Oheyawahi.

The Dakota's neighbors, the Ojibwe, called the bluff "Saugeaukee," a name that combines their words for "river's mouth" and "ground." For both tribes, the site's function as a meeting place for medicine ceremonies, burial events, pipe ceremonies and other ritual gatherings made it an important facet of their lives and cultures. In the 1840s, Seth Eastman, commandant of Fort Snelling, documented the site and the tribes' ceremonies there in several paintings.

Riverboat crews, however, gave the knob-shaped landform the name "Pilot Knob," as it served as a navigation device and landmark. The site gained further historical significance as the location for negotiations over and the signing of the Treaty of 1851 between the U.S. government and the Mdewakanton and Wakpekute Dakota, which opened vast amounts of land in Minnesota, South Dakota and Iowa to settlement by European Americans.

In the past 160 years, portions of Oheyawahi/Pilot Knob have been developed. Part of the south slope is an office park. Acacia Cemetery, plotted in 1926, occupies 50 acres on the east side with ground-level grave markers shrouded by tree cover. Highway 55 and the Sibley Highway were built in the 1920s at the base of the northern and eastern slopes in a way that defines Oheyawahi/Pilot Knob's boundaries. The eastern site boundary touches the village of Mendota, one of Minnesota's earliest settlements. Remarkably, the most prominent aspect of Oheyawahi/Pilot Knob—its northeastern and northern faces—has remained free of development that would have lessened its landmark character.

As historians Bruce White and Alan Woolworth wrote in their application to add the site to the National Register of Historic Places, "Changes within Oheyawahi have not irreversibly affect-



DOUGLAS OHMAN / PRESERVATION ALLIANCE OF MINNESOTA

ed the site's historic and sacred character. The site retains an undeveloped character in the midst of suburbia and portions of the property still provide the extensive views described historically."

Today, however, areas of this cultural and historical site have been targeted by developers who are asking the City of Mendota Heights to rezone certain land parcels for development: 157 townhouses on 25 acres are proposed for the 160-acre site. Opposing this plan is a coalition of several organizations, mainly made up of Native American communities, environmental organizations, birdwatcher groups and the Preservation Alliance of Minnesota, which placed Oheyawahi/Pilot Knob on its 2003 List of Endangered Historic Properties.

Because most of the proposed townhouses would be built on the site's historic northeastern slope, those opposing the development say the construction would materially degrade the site's cultural and historic character. Mendota Heights city officials seem sympathetic to the historical concerns while espousing the need for additional housing.

According to Jim Danielson, city administrator, Mendota Heights, the city responded to a request by the Mdewakanton Dakota Community to conduct a comprehensive study to identify adverse effects of the development. The proposed developer, Minnstar Builders, Inc., Edina, was responsible for commissioning

*Continued on page 60*

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# Urban Remedy

Cleveland, Olmsted and Wirth expanded the concept of parks as “lungs” of a city by setting aside urban land for human contemplation and recreation, as well as for environmental preservation

BY PHILLIP GLENN KOSKI, AIA

The first landscape architect of the park systems for both Minneapolis and St. Paul, Horace W. S. Cleveland, came to Minnesota at the end of his career as an experienced designer who had written much and spoken often about the civic benefits of a public park system. Already in his late 60s, Cleveland recognized he had little time to

build the parkways, gardens and promenades we enjoy today. He opted instead to till the ground with words, inspiration and sometimes stern admonishments. Cleveland recognized his medium was not soil and trees, but time and opportunity. It's likely he would barely recognize the park as we use it today, but his rhetoric remains as powerful as it was then: Set parkland aside now—let the generations that follow figure out how to use it.

It's easy to take for granted the things that once seemed merely extravagances. Since its introduction a century and a half ago, the public park has evolved from municipal nicety to urban necessity. Public parks not only provide cities with their best postcard moments, they are one of those anomalies of modern civilization that really mean all things to all people. Depending on your perspective, a park is variously a contemplative scene, a bird sanctuary, a jogging route, a soccer field, a rose garden, a children's playground, an arena for political expression and sometimes a festival site.

This conception of the public park as a multiuse zone for recreational activity is relatively new. Two hundred years ago, the urban park was, quite frankly, a duller place. Parks, initially, were simply attempts to bring the natural benefits of the country into the city—to create a small plot of Elysium within the belly of Gotham.

The public park is fundamentally an urban phenomenon, evolving to satisfy those human needs—physical, psychological, spiritual and ecological—that cannot be met by the city alone. To say that the public park is a cure for the ills of the city is not merely figurative, but offers a serious departure point for a deeper con-



"Lake Harriet Pavilion, Minneapolis," ca. 1915, Minnesota Historical Society Photograph Collection.

CHARLES P. GIBSON

sideration of the relationship between the history of the public park and a parallel development in the science of medicine and public health.

Preceding construction of the first truly “public parks” (urban gardens had been around for centuries, but were always privately owned), 18th-century Enlightenment thinkers had estab-

lished a rudimentary scientific understanding about the anatomy of the human body, its diseases and the benefits of hygiene. This knowledge, in turn, inspired imaginative social reformers, somewhat inaccurately, to draw further parallels between the functions of the body and those of the city.

Indeed, the first examples of urban greenspace served little purpose except to remedy the ill-affecting conditions of the city around them—namely, to cleanse the heavy, putrid air of the increasingly crowded and industrialized “urb.” The writings of urban planners of the time compared streets and roads to the arteries and veins of the body, while parks functioned as the “lungs” of the city, refreshing the air and invigorating its residents.

Regent's Park in London, designed by John Nash in 1814, was one of the first ambitious attempts to apply Enlightenment principles of urban design to a healthy effect. Carved out of a dense tangle of streets and residences in the center of the city, the design included a large “country park” girded by wide boulevards. Nash's design for Regent's was straightforward, consisting of a large, flat, grassy field devoid of trees and fenced all around. The beneficial air produced was to be imparted to city residents by driving around the park's perimeter—by circulating around this urban “lung.”

In its original design, the park forswore the romantic guise of the English Landscape Gardening School. In strict accordance with Enlightenment theory, Nash's park replicated nature's

*Continued on page 60*



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# The Healthy Human Habitat

Ergonomics, ventilation, light, temperature and sensory stimulation all contribute to the creation of indoor environments that foster occupants' health, productivity and sense of well-being

BY LINDA SHAPIRO

Wendy Morris and Ned Rousmaniere thought they had bought the perfect house. They moved in and began remodeling the 1923 duplex in Minneapolis, tightening up leaks and adding additional insulation. Six months later, they were both suffering from respiratory problems and fatigue. After months of trying to diagnose the problem, they called in a "house doctor" who discovered that mold had penetrated the insulation and hydrocarbon gas was leaking into the air from incorrectly vented gas appliances.

Morris and Rousmaniere evacuated their house for nine months while specialists cleaned up what had become a toxic-waste dump. While the air-quality problems had existed before they moved in, the couple had inadvertently exacerbated them by insulating their house so tightly it could no longer breathe.

Their story is not unusual. Technological advances innovated after the energy crisis of the 1970s allowed buildings and homes to become virtually sealed, which in turn caused ventilation and pollution problems by eliminating fresh air and trapping moisture and toxic gases. Energy efficiency was often gained at the cost of indoor-air quality, causing an increase in respiratory illnesses and allergies, and resulting in millions of lost workdays and extensive litigation.

The Environmental Protection Agency has found that since 1960, 30 percent of the commercial buildings constructed have been deemed unhealthy in terms of their indoor environments (which the EPA defines as a conditioned—heated or cooled—space separated from the outside environment by the building envelope). The increasing prevalence of chronically unhealthy buildings, which scientists now refer to as "sick-building syndrome," is the result of chemical and natural pollutants com-

bined with inadequate levels of ventilation, lighting, temperature control and sensory stimulation.

These factors produce a range of problems, from mysterious illnesses like Legionnaire's disease to lower productivity and worker satisfaction. "Sick buildings have often been called a disease in search of a source," says Bob Moffitt, communications manager, Healthy House Program, American Lung Association, St. Paul. He cites the case of the Capitol Square Building in St. Paul, demolished in 2000 at a cost of \$40 million because workers were showing a variety of symptoms and no one was able to identify the problem.

Over the past decade, architects and researchers have stepped up their investigations of how to make buildings and homes more energy efficient, while improving occupants' health, productivity and sense of well-being. Researchers at the Center for Sustainable Building Research at the University of Minnesota have compiled information (available at [www.csbr.umn.edu](http://www.csbr.umn.edu)) about what architects, designers and builders need to provide in order to ensure people can both survive and thrive indoors. Specialists connected to the center are working on such areas as appropriate ventilation, adequate lighting, thermal comfort, ergonomically correct furniture, and visual and sensory stimulation in order to

make interiors both healthier and more habitable.

For example, many researchers believe that operable windows are essential to a healthy indoor environment—both physically and psychologically. "When people are overheated, they want immediate relief," says Jim Wise, adjunct professor, psychology, environmental sciences and regional planning,

"Standard high-tech buildings are the antithesis of how humans operate. We are free-roaming animals that long for open spaces, but are trapped in small, barren cubicles and buildings with windows that don't open."

*Continued on page 62*

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# Fat City

BY BILL BEYER, FAIA

In Tanzania in 1977, researchers uncovered the earliest evidence of humanoid bipedalism: the fossilized footprints of a pair of upright walkers from 3.7 million years ago. Whether they are related to Australopithecene Lucy or to yet undiscovered prehuman types, we only know they walked like we do. Our human forebears eventually walked out of Africa, from Asia via Alaska to America, and finally, almost everywhere.

Despite our natural bipedalism, however, we're fast becoming sedentary, with results disastrous to our health. In fact, a hot topic in the news lately has been walking as a recommended tonic against the increasing prevalence of obesity. The Centers for Disease Control and Prevention has developed the "Kids-Walk-to-School" program to improve health by selling the importance of physical activity and walkable communities. A study by the National Center for Smart Growth in College Park, Maryland, blames sprawling suburban development patterns for discouraging walking and contributing to the fattening of America.

Our bloated car culture feeds the rise in obesity. The U.S. Department of Transportation recently reported that the average household now has 1.75 drivers, but 1.90 personal vehicles, and that the main use of these cars is for short trips. In some cities, pedestrians are so rare that they're assumed to be motorists who have run out of gas.

Cars occupy so much of our land that walking has become increasingly dangerous. Walking from one big-box retail outlet to another has been made so inconvenient that driving a block is often the only safe choice. A Rutgers University study found that American walkers are two to six times more likely to be struck by cars than Dutch or German pedestrians, even though many more Europeans than Americans walk or bike.

Unlike suburbs, most central cities grew up in the pre-auto culture, so reclaiming a walking pattern of life in the city is easier. An Op-Ed writer in the June 20, 2003, *Star Tribune* opined that "aesthetics are crucial to a walkable city," and compared Minneapolis unfavorably to Portland, Washington, Chicago, New York and even Miami Beach in this category. He noted that Minneapolis's architecture and design are the biggest deterrents to walking, making exception, of course, for the chain of lakes and the central riverfront with its pedestrian-friendly Stone Arch Bridge.

Last year I began my own lunchtime walking for exercise and health, and found the riverfront to be especially salubrious. The Stone Arch Bridge alone has made the riverfront more physically accessible; now we need to design more street-oriented places to engage our senses and attract us every day. Minneapolis Mayor R. T. Rybak's proposal to convert the Main Post Office to housing and retail would help by unlocking the building's riverfront arcade for human activity.

Ultimately, what makes a city livable are opportunities to walk, incentives to walk, rewards for walking, respect for walkers and the celebration of people walking together on the streets. In *Wanderlust*, her rambling book of essays on the history of walking, Rebecca Solnit reviews the walking philosophers of yore, from Rousseau to Kierkegaard, Wordsworth and Thoreau. She celebrates the world's few remaining walking cities, including Paris and San Francisco, concluding that: "A city is a language, a repository of possibilities, and walking is the act of speaking that language."

We can remain on our current treadmill to nowhere, bulging 'burbs hanging over our beltways, or we can design our cities to speak the language of walking. The choice is ours: peripatetic or peri-pathetic.

"The treadmill is a corollary to the suburb and the autotropolis: a device with which to go nowhere in places where there is now nowhere to go."

Rebecca Solnit,  
*Wanderlust*

# Care and CURE

A MULTIDISCIPLINARY FACILITY DEDICATED TO AUTISM TREATS CHILDREN, SUPPORTS FAMILIES AND FACILITATES SCIENTIFIC RESEARCH *By Linda Shapiro*



*Design team (left to right seated): Bill Blanski, AIA; Rich Firkins; (standing) Chris Vickery; Jim Butler, AIA; (not pictured) George Gorbatenko.*

**When Chuck Gardner learned** his child had autism, he recalls being told to “find an institution for our child and get on with our lives.” Instead, he joined with four other fathers of autistic children, all of whom were frustrated with their inability to find adequate information about autism and its treatment, and secured funding to support a new multidisciplinary facility dedicated to autism spectrum disorders, or ASDs, and other neurological disorders.

In 2003, the Institute for the Medical Investigation of Neurodevelopmental Disorders (M.I.N.D. Institute) opened on the University of California-Davis Medical Center campus in Sacramento, California. Designed by Hammel, Green and Abrahamson, Inc., Minneapolis, the 136,000-square-foot complex consists of three buildings: a resource center; an outpatient clinic and academic office building; and a laboratory for research in biology, genetics and human tissue. A fourth building, a laboratory for psychological research, has not yet been built.

“We needed to create a world-class facility where critical research is occurring, but also a haven for families,” says Bill O’Malley, AIA, principal. The unique facility’s creation began with extensive research into ASD, which included interviews with physicians, researchers and the parents of autistic children; tours of ASD schools; and research into the trends and issues surrounding children with ASD.

The design team’s investigations led to a facility that promotes research, creates a soothing and intimate atmosphere for the children and their families, and allows families, researchers and physicians to interact on a daily basis. Moreover, the facility incorporates a unique de-



RICHARD BARNES

sign structure that makes autism visible. “At the M.I.N.D. Institute, nobody will research autism and not see an autistic child,” insists Bill Blanski, AIA, project designer.

“The interaction begins with the fact that everyone who comes to the M.I.N.D. Institute enters at the front door,” he says. Children and parents, researchers, physicians and students alike cross paths as they enter, and continue to interact throughout the facility, because everyone shares the same stairways and hallways. Throughout the complex, the architecture orchestrates the “necessary nuisance”—chance encounters on stairs, in courtyards and around the coffee machine that can encourage breakthrough ideas.



*The M.I.N.D. Institute's limestone rotunda (above) welcomes families, staff and researchers, all of whom use this main entrance. A variety of courtyards on the campus, including one with oaks transplanted from within the site (left), function as gathering places.*



RICHARD BARNES



Inside the entry rotunda, maple-wood paneling and a mix of light sources create a welcoming, warm atmosphere (opposite). Throughout the building, "emerging walls" create spaces and represent the gradual emergence of a child from the haze of autism (above and middle), while maple-wood ceiling trellises give waiting areas a sense of enclosure (far right).

The resource center consists of a library, an auditorium, conference rooms, a café and a two-story main-entry rotunda that functions as the building's hub. The rugged warmth of the rotunda's golden limestone façade extends to the inside, where maple-wood paneling and abundant natural light create a soft, burnished glow. Since incandescent lighting can be disorienting to autistic children, indirect fluorescent or frosted light is combined with natural daylight. Deep horizontal metal mullions on the windows block glare.

The adjacent red-brick clinic and academic building contains two waiting areas and several consultation, family and exam rooms. Because autistic children often develop a fear of clinics, the design team incorporated an extraordinary level of detail into the project to ensure the children's comfort while fostering interaction.

For instance, the waiting areas are open to encourage connections between people. But because enclosed spaces have a calming effect on ASD children, these areas also convey a sense of intimacy through a system of overhanging maple-wood trellises. "Research has determined that warm tones are soothing to children with ASD," explains Chris Vickery, interior designer, "so we incorporated earth tones and beiges, as well as warm wood tones in maple and walnut." Each waiting area also includes several smaller family zones furnished with aquariums and televisions, which Vickery says are "animated things to look at that do not involve touch,

the latter of which can be disturbing to autistic children."

Throughout the building, wood-panel frames inset with Imago (laminated acrylic with fabric sandwiched in between to produce various degrees of opacity) suggest the elusive barriers that can separate autistic children from reality. Blanski observed autistic children ages 2 to 18 before creating the panels. These "emerging walls," as he calls them, represent the gradual emergence of a child from the haze of autism as they undergo treatment, as well as "a spectrum of translucencies that symbolize stages of interaction the children experience."

In the examination rooms, maple-wood exam tables merge with maple-paneled walls, providing a consistent element that ties in the visual environment with the waiting areas and minimizes jarring changes for the children. Desks with softly rounded contours ensure children won't injure themselves. Sinks are enclosed in cabinets with concealed latches because the sight and sound of running water can over-stimulate children with ASD. Family consultation rooms accommodate both children and adults with adjustable tables and chairs (so autistic children can feel grounded with their feet touching the floor) and beanbag-style chairs on which children can roll, curl up or otherwise relax.

Residential-scale rooms where researchers can observe families in a homelike setting incorporate such domestic amenities as kitchens and overstuffed furniture. Other details throughout

Some courtyards include benches around oak trees and trellises that shade the sun (opposite).

the building include random tile configurations and solid fabrics, because autistic children tend to fixate on repeated patterns and lapse into "stemming mode," wherein they count or order the pattern, possibly in an attempt to "solve" it. Wooden railings are both pleasant to touch and difficult to climb.

The clinic areas fulfill physicians' needs through an efficiently planned series of exam/assessment/consult rooms. "These areas are much more than a place where a doctor sees a patient," Blanski says. "They are actually highly sophisticated research centers with cameras, audio, one-way glass, special lighting considerations for filming, options for DVD recording, and Internet up-links strategically and carefully concealed to be as unobtrusive as possible for the child while providing a high level of productivity for the doctor."

Researchers work in a laboratory with flexible zones they can rearrange. Offices for the lab's leaders and their assistants (post-docs and fellows) are on the fourth side, which faces one of many outdoor courtyards that connect the various buildings on the campus.

One courtyard, for instance, contains conventional swings, slides and platforms in primary colors where the children can be observed in a traditional play environment. Other exterior spaces include benches under 60-year-old oak trees transplanted from within site or "hearth windows" with wide stone sills on which people can sit.

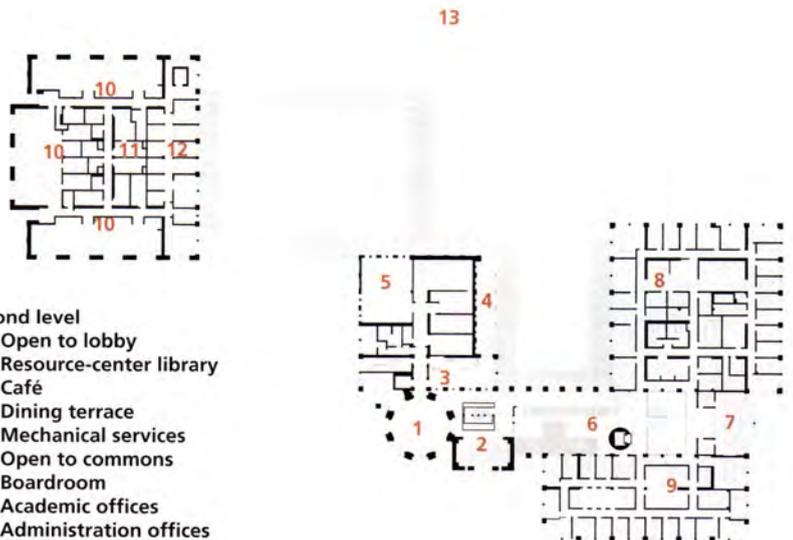
As a whole, the complex functions as a community setting that "gives everyone lots of elbow room to hang out and interact with each other," Blanski says, while facilitating research and encouraging scientific breakthroughs. "A project like this," Blanski adds, "is one of the most rewarding experiences a design team can have."

**Institute for the Medical Investigation of  
Neurodevelopmental Disorders  
University of California-Davis Medical Center  
Sacramento, California  
Hammel, Green and Abrahamson, Inc.  
Minneapolis, Minnesota**



**Entry level**

1. Entry court
2. Lobby
3. Resource center
4. Auditorium
5. Family waiting
6. Commons
7. Great room at research clinic
8. Research offices
9. Great room at assessment clinic
10. Clinician offices
11. Child's play yard
12. Reception court
13. Research quad
14. Biological-research entry
15. Biological-research labs
16. Research-support labs
17. Biological-research offices
18. Loading/services
19. Future psychology lab



**Second level**

1. Open to lobby
2. Resource-center library
3. Café
4. Dining terrace
5. Mechanical services
6. Open to commons
7. Boardroom
8. Academic offices
9. Administration offices
10. Biological-research lab
11. Research-support labs
12. Research-lab offices
13. Future psychology lab



## Serene SENSIBILITY

AN ILLINOIS HEALTH CENTER REMODELS AND EXPANDS TO CONVEY A SMALL-TOWN CHARACTER THAT INVITES AND COMFORTS *By Barbara Knox*



*Design team (left to right standing): Ananth Shankar, AIA; Jeff Krueger; Roger Larson, AIA; Brad Fitzsimmons; Susan Clark; Glenn Mann; David Leighly, AIA; Jim Davy, AIA; (left to right seated): C. Jay Sleiter, AIA; Pete Mikkelsen.*

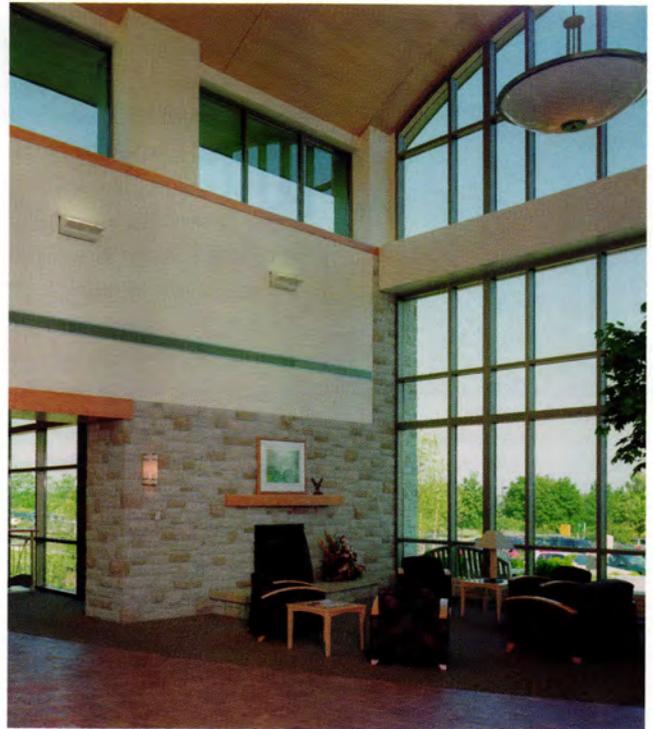
**When the residents** of McHenry, Illinois, were asked for their opinions on a proposed expansion to the local medical center, there was consensus on the look and feel of the facility. "Their message was clear: Get rid of the sterility and make it more homey," recalls Sandra Davis, vice president of operations, Centegra Health Systems, which runs the Northern Illinois Medical Center Ambulatory Care Center. "We needed to take the edge off the experience of coming to this facility for wellness care."

Playing off a "small-town" theme, BWBR Architects, St. Paul, developed a plan that would welcome rather than intimidate patients coming for ambulatory care at this large facility. "This is a big hospital in a small community," explains Jim Davy, AIA, principal. "The spirit of the project from the beginning was to keep that small-town character alive within these spaces."

BWBR launched into the project in 2000. The program included a 50,800-square-foot expansion to accommodate outpatient services, as



PHILIP G. PROWSE

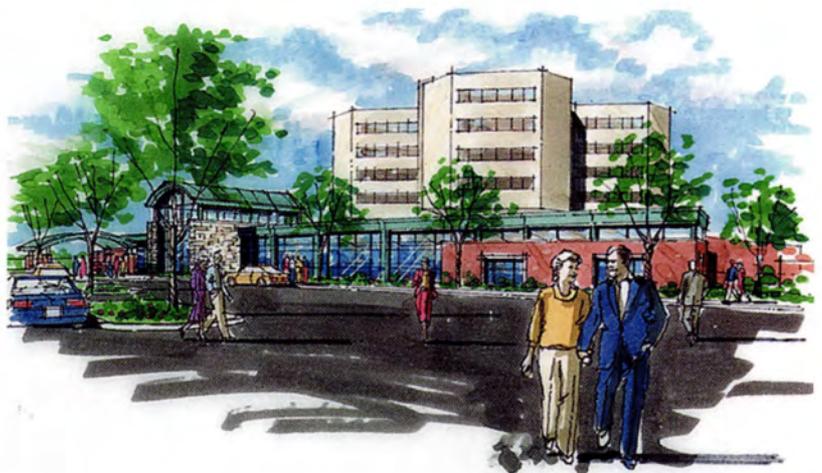


*Playing off a "small-town" theme, the center's transparent entrance (opposite) opens into a spacious "town square" where patients and families orient themselves (above).*

well as the remodeling of an existing 20,700 square feet. Included in the expansion were new surgery and recovery rooms and a new heart center.

To create openness and transparency in the facility's new front elevation, the design team used glass, stone and red brick. "Creating a whole new entrance to an existing facility was challenging," admits Davy. "Choosing the brick and stone and glass, as opposed to the precast concrete of the existing structure, helped present a friendlier public image."

The entrance opens into a two-story, glass-walled "town square," where patients and families orient themselves and begin their journey



BWBR



BWBR

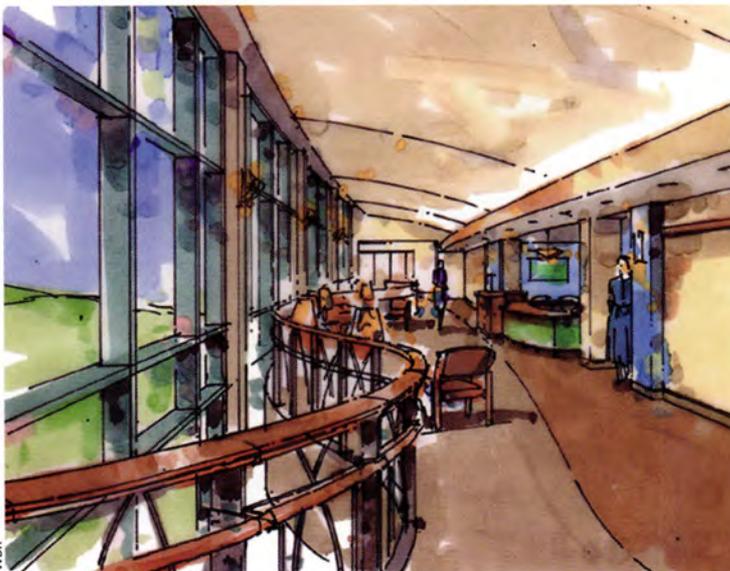
*Abundant natural light, airy interiors, curving corridors (opposite) and nature-themed details (above) combine to create the clinic's friendly feel and welcoming aesthetic.*

to one of the four outpatient areas: a women's clinic, imaging center, a heart center and an ambulatory-care center made up of multiple subspecialty clinics. Flooded with natural light and featuring a curved, wood ceiling, the space features porcelain-tile flooring chosen to mimic exterior pavers and a gas fireplace set into a stone wall that's a continuation of the same wall found on the building's exterior. Comfortable furnishings grouped around the fireplace offer visitors a relaxing place to gather.

A corridor with floor-to-ceiling windows, through which sun drenches waiting areas, leads to a "central park" on each level, along which the clinics are located. An open wood-and-metal stairway (with metal pickets sculpturally shaped to represent bowing prairie grass) connects the two levels. Along the "central-park" corridors each clinic entrance is signified by a different color scheme to assist people with wayfinding.

"We established a separate identity for each of the outpatient clinics along the central-park corridors through the use of materials, colors and artwork," explains Susan Clark, interior designer, BWBR. Each clinic also has a reception area that functions like a "front porch," Davy says, "to help convey a warm, welcoming feeling."

Within each clinic space, the team designed treatment areas with the same user-friendly touches. Nurses' stations are only desk high so they're approachable; treatment cubicles are finished with decorative-glass treatments on the doors, soft wall colors and artwork. The



BWBR



PHILIP G. PROWSE





PHILIP G. PROWSE

Healing gardens are visible through the floor-to-ceiling windows (above), which also flood the interiors with healthy, healing daylight.

women's center, located at the end of central park for added privacy, is decorated with wood trim, wall sconces and oval wall mirrors.

Along the central park's curving corridors, such amenities as children's play areas, a resource library, a variety of seating options and computer carrels with plug-ins for laptops enhance the family-friendly environment, allowing people to relax, stroll or work while they wait. Plants and abundant natural light add to the area's serene sensibility.

While sustainable-design strategies weren't inherent to the project's program, the design team incorporated several green strategies that

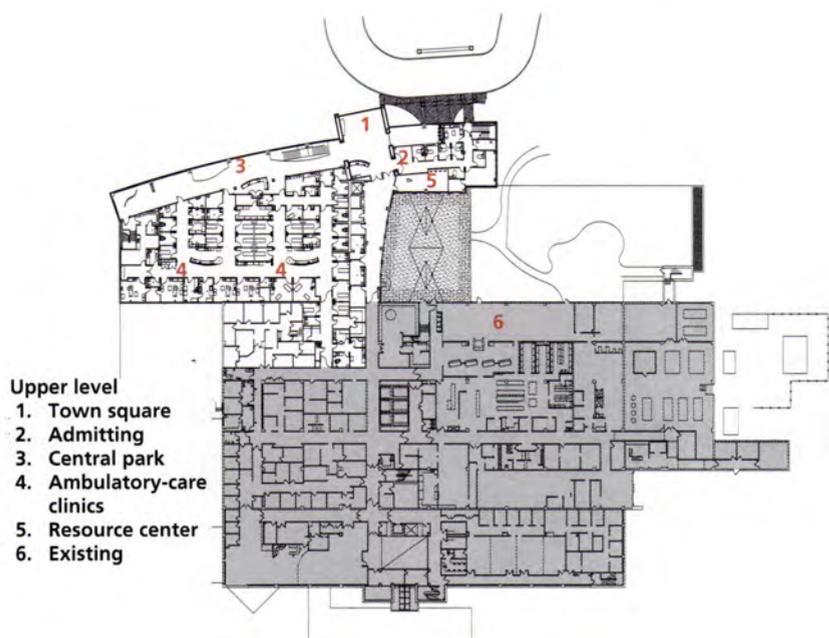
add to the facility's healing environment. Outside, the healing gardens include native trees and shrubs. Indoor spaces feature abundant natural light and views to the outside, to provide both staff and patients with the benefits of connection to the outdoors. Low-VOC-emitting materials and a medical-quality HVAC system keep off-gassing and odors to a minimum.

According to Davy, the building's overall design features several key elements that help convey the accessible image the clinic sought to achieve. Curves in the roof form, in the stair railing along the upper landing and along the central-park corridor, for instance, "are comforting to people and they reduce the expanse of straight corridors," Davy says. "A 200-foot corridor that curves is much less intimidating than one that goes straight ahead of you endlessly."

The new facility is notably open to the outdoors. Visitors can easily orient themselves to the outside through the floor-to-ceiling windows in the town-square area and healing gardens are visible through the large windows that line the central-park corridors. While noting that "it takes more square footage to go this route," Davy says he believes establishing a connection to the outdoors is becoming increasingly important in healthcare design. "There has been a lot of research over the past 20 years about the benefits of natural light," he says, citing one example, "and it seems conclusive that natural light is key to reducing people's stress and anxiety, and thus to establishing a healing environment."

The community has embraced the facility's transformation and the expansion of its new outpatient-services facility. "Prior to our remodel and expansion, we had a 56-percent patient-satisfaction rating," Davis says. "We're pleased to say that in our last survey, we got a 95-percent rating in customer satisfaction. The atmosphere and environment of this facility have changed so dramatically—everything worked out just as we had hoped."

**Northern Illinois Medical Center Ambulatory Care Center**  
**Centegra Health Systems**  
**McHenry, Illinois**  
**BWBR Architects**  
**St. Paul, Minnesota**



- Upper level
1. Town square
  2. Admitting
  3. Central park
  4. Ambulatory-care clinics
  5. Resource center
  6. Existing



LANDMARK PHOTOGRAPHY &amp; DESIGN

## Dental CARE

A NEW DENTAL OFFICE MERGES HIGH-TECH PRACTICE AND PATIENT AMENITIES WITH A LODGE-STYLE AESTHETIC *By Barbara Knox*



*Design team (left to right): Tom Wasmoen, AIA; Todd Donskey; Paul Meyer, AIA.*

*Lodgelike styling and high-tech amenities merge in this dental office (above).*

**Wander into Northwoods Dental** in Plymouth and you may, for a moment, think you've stepped into a Caribou Coffee house. With its wood-paneled waiting room filled with oversized leather furniture and featuring a stone fireplace, Northwoods Dental feels more like a kick-off-your-shoes, lodge-style lounge than the anteroom to a high-tech dentistry practice.

"We used the lodge theme as a basic concept," explains Paul Meyer, AIA, Paul Meyer Architects, Plymouth, "and refined it for this dental office so

the look wasn't too rough-hewn." While the client, Scott Scharf, D.D.S., was drawn to the "up-north" lodge look so many Minnesotans relate to, he also wanted to celebrate the leading-edge technology he employs in his dental practice. He turned to Meyer, also the architect-of-record for the recently completed office building in which Northwoods Dental is located, to merge the two disparate themes.

In the waiting room of the 3,600-square-foot office, walls are covered in maple- and cherry-

wood paneling to harmonize with the cultured-stone fireplace and a wood ceiling system. Log-style furnishings with leather upholstery offer a comfortable spot for waiting clients to relax by the fire or watch TV on the plasma screen. A curved reception counter backed by a cultured-stone wall completes the reception area.

Beyond the waiting room, however, Dr. Scharf's offices feature state-of-the-art patient rooms and an equipment-sterilization area open for all to view. While the welcoming feel of the waiting area is continued in such details as two-panel maple-wood doors with stiles and rails in contrasting finishes, technology plays a dominant role. Each patient chair includes a 17-inch flat screen that allows the client to relax and enjoy their favorite DVD or cable-TV show while the doctor works. "It was our intention, throughout the project, to balance high technology and earthy materials in order that people might feel more comfortable during their appointments," Meyer says.

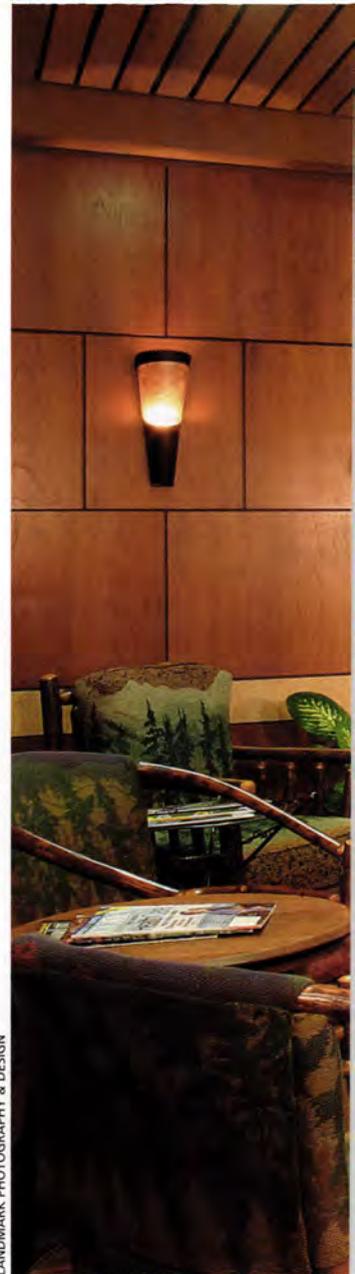
A sophisticated HVAC system cleans the air and keeps medical smells at bay. Streamlined fixtures include blue lenses to soften overhead light. The design team also specified an acousti-

cal ceiling in a pleasing graphic pattern. The choice of flooring, a wood-grain-style vinyl, adds to the overall feel of the office. Large window openings in each patient room let in abundant natural light.

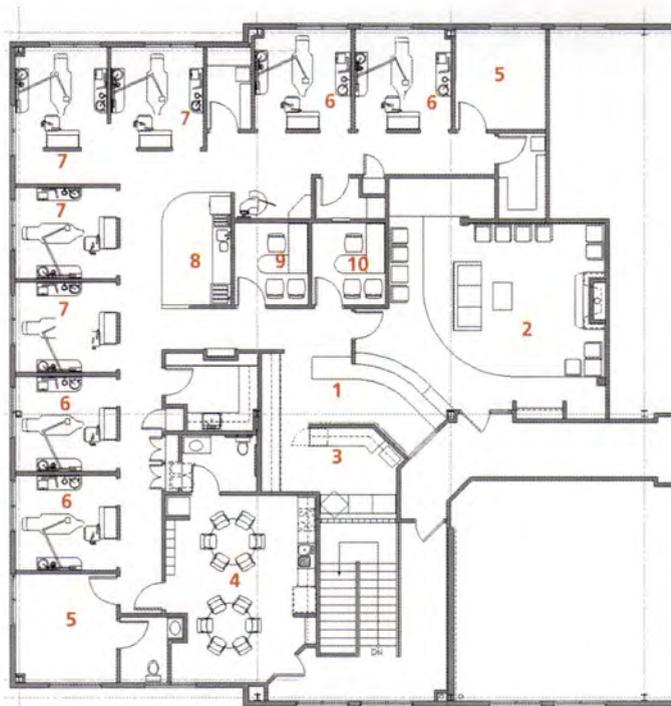
"In the 1980s, dental offices were all about open spaces with low partitions between patient stations," says Scharf, "which made patients feel more vulnerable during an experience that should be private." Meyer echoes the thought when he says that his goal was to create for Scharf "a space that doesn't intimidate, an environment that helps transform the stereotypically negative dental visit into a more positive experience."

With the aroma of fresh cookies—baked daily in the office's staff-room oven—lingering in the waiting room and a roaring fire in the grate, Northwoods Dental has hit upon a winning strategy for making patients feel pampered, if not at home.

**Northwoods Dental**  
**Plymouth, Minnesota**  
**Paul Meyer Architects**  
**Plymouth, Minnesota**



LANDMARK PHOTOGRAPHY & DESIGN



- Plan**
- 1. Reception
  - 2. Waiting
  - 3. Business
  - 4. Break
  - 5. Office
  - 6. Operation
  - 7. Hygiene
  - 8. Sterilization
  - 9. Financial
  - 10. Consult



*The office's waiting area, with its stone fireplace and wood paneling, is more lodge than clinic (top), with state-of-the-art dentistry practiced in rooms with views (left and far left).*





ANDREA RUGG

## Clean LIVING

A HEALTHY HOUSE IS A HAVEN FOR A COUPLE WITH CHEMICAL SENSITIVITIES AND ACCESSIBILITY NEEDS *By Camille LeFevre*



*Design team (left to right): Rosemary McMonigal, AIA; Ashley Mitlyng; Jennifer Schlag; Curtis Martinson; Melissa Steinberg.*

**Hans and Barb Gasterland** tried to renovate their older home in south Minneapolis to accommodate a wheelchair and be free of off-gassing and other noxious odors. Barb uses a wheelchair on occasion while coping with a degenerative joint disease and may use it more in the future. She also suffers from chemical sensitivities. The couple soon recognized the need to start from scratch to get the house they needed.

The Gasterlands purchased land in the Bryn Mawr neighborhood of Minneapolis, hired Rosemary McMonigal, AIA, McMonigal Architects, LLC, Minneapolis, and started anew. "They really wanted a place that would cheer and shelter them, and give strength to body and soul," McMonigal says.

The gable-roofed 880-square-foot house, completed in 2002, adopts a farmhouse vernacular (with galvanized-metal details) that fits into the

neighborhood and harkens back to Barb's Wisconsin roots. The house is separated from the garage, which is detached to isolate exhaust and oil fumes from the house. A covered sloped walkway to the house's wheelchair-accessible main entrance connects the two structures. A screened porch on the garage overlooks the backyard.

The three-level house includes a second floor with two bedrooms and a bath; a first floor with kitchen, dining and living areas, a half bath and Barb's office; and a basement with laundry, Hans's office, a bath and a family/guest space—all complete with grab bars, accessible by elevator and spacious enough for a wheelchair. Spaces and built-ins were also designed to allow future modifications as the couple's needs change.

Moreover, Barb spent two years testing products used in the house—from paint and adhesives to wood. Hans would put two samples in

ANDREA RUGG



mason jars, seal one jar and leave the other sample to dry in the open air. Barb would later smell them and undergo muscle testing with her doctor to determine her sensitivity.

Later Barb and Hans tried to closely monitor the products' installation and application. Once, however, a well-meaning painter thought a primer too smelly and substituted a different one. Barb, however, had selected the smelly primer because of its neutrality once it dried. Consequently, the primer had to be stripped off and the original one applied.

The construction schedule incorporated a period of time after work was completed in which the house sat empty and was ventilated, so any off-gassing was finished before the Gasterlands moved in. "Building this house was quite a research project," Barb says.

In addition, the Gasterlands needed custom bathroom and kitchen counters, because Hans is about 17 inches taller than Barb. Rooms have windows on two sides for cross ventilation and daylighting. The furnace and appliances are electric. Because Barb is a master gardener, low-

maintenance native-plant gardens were installed in the front yard and wheelchair-accessible raised-bed gardens were created in the backyard. The landscaping also includes catchment gardens that collect and store roof water.

About the house, McMonigal says, "We wanted a clean simple design for balancing the Gasterlands' health concerns while carefully shaping the site." Hans adds, "We firmly believe our house has pizzazz." For her part, Barb admits to encountering many challenges in creating a healthy house, but the effort is reaping rewards.

"My health has gotten better since moving into the house," Barb says. "My immune system isn't getting hit with so many things. And the design of the house, with all of the natural light and views to the woods, is uplifting. It's a beautiful place."

**Gasterland House**  
**Minneapolis, Minnesota**  
**McMonigal Architects, LLC**  
**Minneapolis, Minnesota**



*House and garage are connected by a covered walkway (opposite). Inside, abundant natural light and simple materials create the clean aesthetic (above left) that accommodates the Gasterlands, as do countertops of varying heights (above and top).*



DON F. WONG

## Research DRIVEN

A STATE-OF-THE-ART FACILITY SUPPORTS UNIVERSITY OF MINNESOTA RESEARCHERS AT THE LEADING EDGE OF THE BIOLOGICAL-SCIENCES REVOLUTION *By Barbara Knox*



*Design team (left to right front): Bruce Corzine, AIA; Doug Pierce, AIA; Trevor Dickie; (back) Chuck Knight, AIA; Marianne Repp O'Brien, AIA; (not pictured) Rich Smith.*

**For researchers at the University of Minnesota**, the new Molecular and Cellular Biology Building was a long time in coming. In fact, faculty first began discussing a new facility as far back as 1981. "As it became more and more apparent that the human genome was being discovered and understood, we knew we needed a building where researchers could explore what human DNA is all about," says Dr. Frank B. Cerra, senior vice president, health sciences, University of Minnesota.

"We also wanted to bring researchers together in one place," he adds, referring to a university-wide movement to consolidate the medical school and the college of biological sciences. With doctors and scientists working on related biological research scattered around the two Twin Cities campuses of the university, coherent collaboration had been difficult at best.

After years of grappling with the problem, the university requested—and the 1998 legislature approved—a bonding bill that would help pay



for a new building on the Minneapolis campus. Part of the "Capital Plan for the Support of Academic Programs in the 21st Century" created by Mark Yudof, then-president of the university, the new Molecular and Cellular Biology Building was deemed essential for putting the University of Minnesota at the leading edge of the revolution occurring in the biological sciences. There, researchers could explore such critical contemporary challenges as the genetics of cancer and developmental disabilities like autism.

"The university really wanted this building to catapult biological research to the next level and bring all the players together to enhance collaboration in both research and teaching," says Chuck Knight, AIA, managing principal, Perkins & Will, Minneapolis, whose firm designed the building. Part of a larger effort to build a biological-research corridor between the St. Paul and Minneapolis campuses, the building opened in 2002 to rave reviews from those who have worked long and hard on its conception.

"This is a state-of-the-art facility," Cerra says. "We wanted the best space in the world to support the research that ensued from the discovery of the human genome and I think this is a model building."

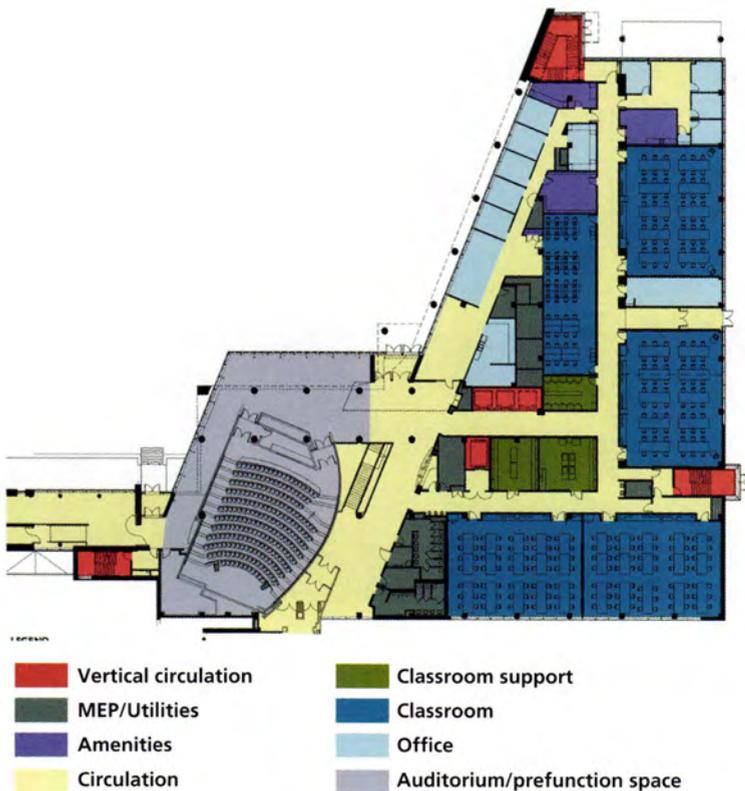
Called a modernist/traditional building by Knight, the 276,000-square-foot facility had a straightforward program. The university required lecture halls, teaching labs, research labs with office spaces, an auditorium, common areas and a clearly defined circulation system designed to allow even casual visitors to easily navigate their way through the building.

The resulting plan resembles an L-shape with a curve in it. Two sublevels and five above-grade levels contain the requisite teaching and research spaces, including advanced wet and dry



*The energy-efficient brick building (opposite and top) operates at 34-percent better than code, and has a high degree of transparency to utilize daylighting and create gathering spaces near windows (above).*

DON F. WONG



laboratories (researchers conduct chemical experiments in wet laboratories, while computer and classroom work is done in dry laboratories), and support spaces for undergraduate, graduate and professional students.

The brick building's glass curtain wall provides a high degree of transparency and allows visitors to quickly orient themselves to the outdoors and thus never feel lost. Classrooms and offices are along the perimeter of the internal core to provide students with easy access to faculty. Laboratories and other support spaces fill the core. At the link of the L, vertical meeting spaces bring everyone together, which was one of Cerra's goals for the project.

"We wanted common areas where you could bring your lunch and bump into your colleagues," he explains. "One person starts to talk to another and all of a sudden you've got a whole new series of ideas. That's not something you can manage or direct, but it's something that grows naturally out of an environment of creativity. And it's definitely working here."



DON F. WONG



*Labs (opposite and above) were designed for durability and flexibility, and are located at the building's core along with support and teaching spaces (top).*

Although, as Knight says, the program boiled down to “getting as many lab spaces and offices and teaching rooms into the footprint as possible,” the finished building is highly functional and designed for future flexibility. Modular casework in the laboratories can be moved around fixed plumbing stacks to allow researchers to reconfigure lab space as needed. Services located near the perimeter of the labs keeps interior spaces free to accommodate the changing needs of researchers.

Terrazzo floors and brick interior walls were chosen for durability and function. Also designed with energy conservation in mind, the building operates at 34-percent better than code requirements and was optimized using federal Department of Energy energy-modeling technology. The high-end mechanical system includes safety backups and was designed to accommodate future growth.

The largest research building ever constructed on campus, the Molecular and Cellular Biology Building provides space for 70 different

research groups, including more than 400 scientists (many of whom are engaged in initiatives linked to pediatric and general medicine), the university’s cancer center, and private local and national biotech companies. Working within the facility, the researchers are also producing knowledge that adds value to public and private, local and national biotech companies.

Heady stuff for the uninitiated, but, Cerra says, the requirements for a successful building are the same no matter the pursuits within. “To me, good design is about getting the programmatic functionality into the building so you can do what you need to do, but at the same time enjoy being in the space. Perkins & Will accomplished all of that for us.”

**Molecular and Cellular Biology Building**

**University of Minnesota**

**Minneapolis, Minnesota**

**Perkins & Will**

**Minneapolis, Minnesota**



RIK SFERRA

## Spiritual MATTERS

A MEDITATION CENTER IS THE NEW SYMBOLIC HEART OF THE HAZELDEN FOUNDATION CAMPUS AND ITS RECOVERY PROGRAMS *By Camille LeFevre*



*Design team (left to right): Malini Srivistava; Thomas Meyer, AIA; Jodi Gillespie; Paul Hannemann, AIA; Jeffrey Scherer, FAIA.*

**The people who find themselves** in treatment at the Hazelden Foundation in Center City, Minnesota, are a group diverse in age, circumstances, background and religious affiliation. But they share one characteristic: All suffer from addiction to alcohol or drugs and are in recovery. So when Hazelden decided to add a meditation center to its range of healing therapies and its 500-acre campus, the challenge was to create an ecumenical place in which anyone could find solace and grace.

"That's where the architect played a key role," says Dave Hill, corporate director, facilities and support services, Hazelden Foundation. "The design, the materials and the lighting all work together in creating a representation of spirituality

that anyone can relate to and draw strength from, whatever their idea of a higher power."

In creating the 2,800-square-foot center, completed in 2001, Jeffrey Scherer, FAIA, principal, Meyer, Scherer & Rockcastle, Ltd., Minneapolis, and his design team began with a quote from psychologist Marion Woodman: "The wound is where the light comes in." Explains Scherer, "Woodman's quote relates to a key element of recovery: honesty. Knowing the place where you're the most damaged is the site where you'll find the most healing. By dealing with the pain and opening to the light, you can be transformed."

Thus the genesis of the building's form is a perfect square separated in the middle (with one side rising more than three feet higher than the



other) by an open space symbolic of the wound of addiction—a narrow exterior landscape of jagged bluestone monoliths and glass walls through which natural light fills the interior. The center is sited on the crest of a hill that slopes down to a pond to protect the people inside from being seen while they're meditating.

Inside the masonry building, which is framed with recycled fir, the width of the entry corridor narrows from double-wide to single-wide, reinforcing the solitary act of meditation. On the east side of the building are four single meditation rooms layered between masonry and screen

walls. On the other side is a *vesica* or vessel room that accommodates up to 10 people meditating together. Radiant heating in the bamboo floors, abundant daylight and plaster walls create a clean, natural aesthetic.

"Just as our clients at Hazelden understand that recovery is a process, so were they attuned to the unfolding nature of discovery that's integral to the design process," Scherer says. Conversely, the meditation center reflects an open, explorative design process that delved into allusive ideas of how spirituality and meditation inform the individual's healing process and expressed those ideas in architectural form.

For his part, Hill commends the durability of the building and its craftsmanship, but adds that, "It's wonderful to stand in the middle of the building on a cloudy day and watch how its character and ambience change as the light moves around inside. Here is a safe, quiet place for healing away from everything else on campus."

**Hazelden Meditation Center**  
**Center City, Minnesota**  
**Meyer, Scherer & Rockcastle, Ltd.**  
**Minneapolis, Minnesota**



*The structure is created around a "wound" of addiction (opposite and top) landscaped with bluestone, while the center's interior features meditation rooms with a clean aesthetic and bountiful natural light (left).*

RIK SFERRA

# NATURAL *Healing*

While cultures around the world have long recognized the palliative power of nature, landscape architects and their clients are now designing gardens to play a significant role in the healing process *By Heather Beal*

**Like a string of pearls**, a series of gardens follows a trail that begins at the edge of a patio, slowly drops in elevation and meanders through wetlands and wooded areas, the sights and sounds of nature gradually replacing the views and noises of the suburbs. Plants that stimulate and delight the senses with color, texture, form and sound animate the trail. The leaves of lamb's ear are soft and furry to the touch. The aroma of wild geranium floats through the air.

The orblike blossoms of giant allium sway on slender stems. The leaves of the quaking aspen gently rustle in the wind. In the future, visitors might watch butterflies in a prairie meadow or weave their way through a fieldstone maze. A woodland shelter will provide space for meditation, while a gazebo will accommodate group gatherings.

So where is this idyllic spot? In a nature preserve or private garden? On a corporate campus or in a public arboretum? None of the above. It's actually a series of "healing gardens" on the Woodwinds Health

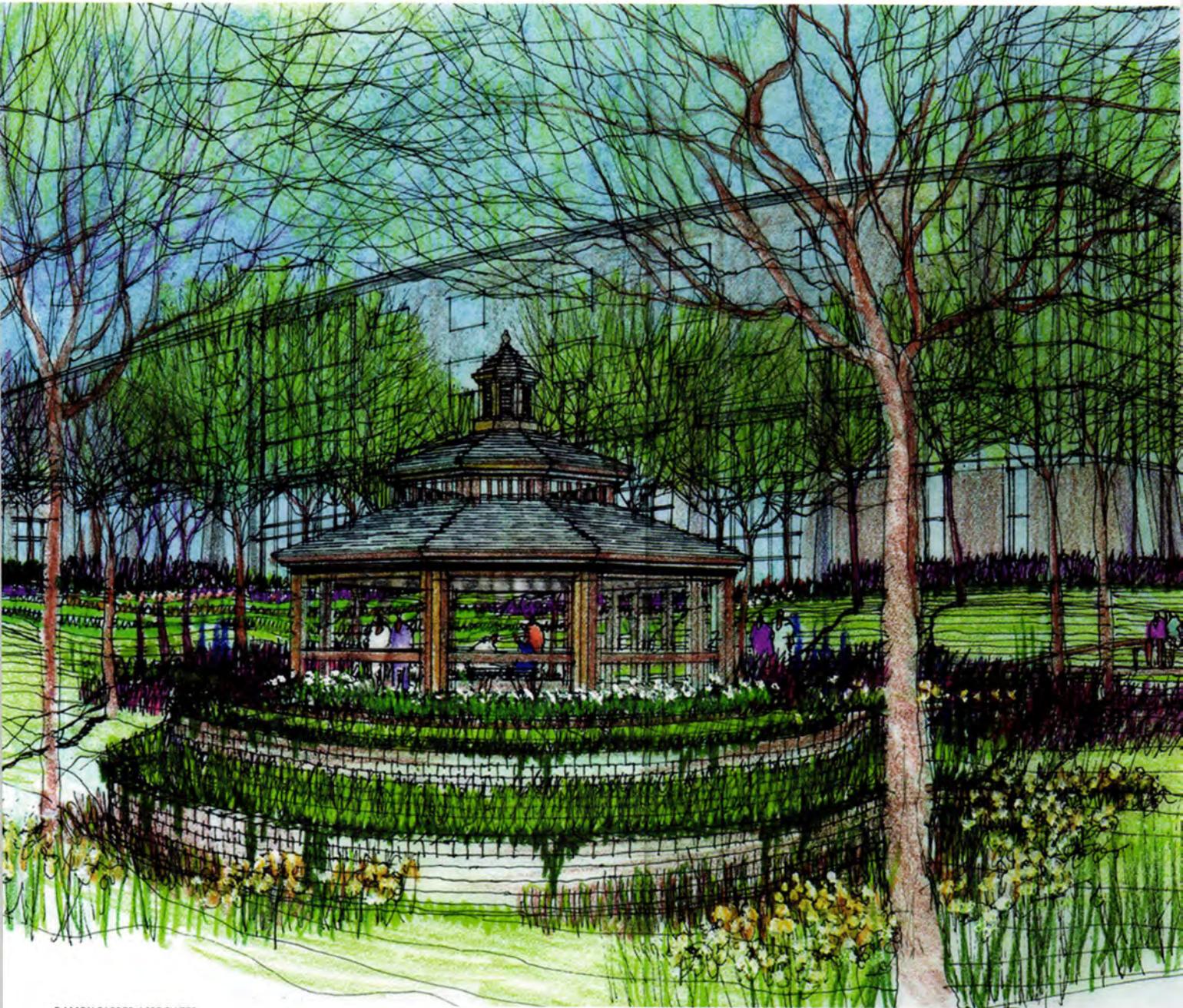
Campus in Woodbury, Minnesota, designed by Damon Farber Associates, Minneapolis.

Created to extend the compassionate-care philosophy of HealthEast Care System and Children's Hospitals and Clinics into the site of this new medical facility, the gardens increase sensory awareness, strengthen people's connection with nature, and thus provide a calming distraction from the stress of being ill or caring for someone who is sick. Once all of the gardens are complete, a leisurely stroll along the "healing trail" will provide soothing, restorative experiences via an ever-changing collage of outdoor landscapes.

While integrating gardens into a holistic healing regimen might seem like a new idea, cultures around the world have intuitively recognized the palliative power of nature since the beginning of recorded history. The restorative gardens of ancient cultures in Persia, Egypt and Asia resurfaced as courtyard gardens in medieval European healing places, such as monasteries and hospices.

After a brief decline in the 14th and 15th centuries, when plagues, crop failures and migration to the cities overwhelmed caregiving facilities, gardens returned to hospital and asylum settings from the 17th through 19th centuries as Romantic beliefs about the value of communing with nature converged with observations that cross ventilation and natural light could help halt the spread of disease. Patients who weren't ambulatory were wheeled out onto porches and broad balconies to enjoy the fresh air, sunlight and views of the countryside.

During the 20th century, however, rapid technological innovation and economic pressures combined



DAMON FARBER ASSOCIATES



*Woodwinds Health Campus in Woodbury, designed by Damon Farber Associates, allows family members, patients and medical staff to experience nature in a variety of settings (above and left).*



REBECCA KRINKE



Forest Transformation (top and above) is a contemplative area designed by Rebecca Krinke for the Minnesota Landscape Arboretum in Chanhassen.

to create a rift between scientific and natural approaches to medicine. In the United States, healthcare-reform measures prompted public leaders and medical administrators to measure success in terms of shorter hospital stays and streamlined service delivery.

Medical professionals tried to keep pace with the growing volume of knowledge by focusing on the treatment of particular body parts or specific afflictions. As Nancy Gerlach-Spriggs, Sam Bass Warner and Richard Kaufman note in their book *Restorative Gardens: The Healing Landscape*, “patients became diseased entities, not self-healing humans,” and less care was given to providing usable outdoor spaces in or around medical facilities.

Since the mid-1980s, however, a more integrated approach to healthcare that blends science and nature has helped resuscitate the belief that gardens can play a significant role in the healing process. Studies by Dr. Roger Ulrich (*Science*, 1984) and others have demonstrated that simply viewing nature can have positive physiological and psychological effects, such as lowering blood pressure, increasing brain activity that elevates a per-



JIM HAGSTROM

son's mood, slowing pulse and breathing rates, reducing muscle tension and expediting recovery from surgery.

In recent years, landscape architects have used such research to inform their designs for gardens located in healthcare or restorative settings, thereby creating healing gardens that complement and enhance specific healing processes. Research for the design of these gardens begins with such questions as: How does the organization that owns and maintains the garden define healing? Who will use the garden? Why? What type of therapeutic or restorative activities will occur there? What are the desired physical and/or psychological outcomes?

"At Woodwinds, healing doesn't just refer to patients," explains Tom Whitlock, project landscape architect, Damon Farber Associates. "Sometimes family members and medical staff just need to get away. The design we developed centers on the idea that healing occurs in different ways for patients and everyone who assists with the healing process."



*The Tabitha Memory Care Garden in Hastings (top and above) was created with the challenges and considerations of Alzheimer's patients in mind.*

*Continued on page 52*

## natural healing

Continued from page 51

To understand the needs of a wide range of users, designers met with caregivers, staff, donors and administrators. They also reviewed examples of healing-garden design, drawing particularly upon information in the book *The Meaning of Gardens*, by Randy Hester and Mark Francis. "We decided the Woodwinds Healing Gardens should provide multisensory experiences and opportunities for participation, exploration, discovery, meditation and sharing," Whitlock says. "We tested every garden against these principles while trying to create flexible spaces where nature could be experienced in a variety of ways."

But the Woodwinds landscape is only one example of healing gardens. Diverse interpretations of the concept, while always based on restoration of the human body and psyche through interaction with nature, are materializing throughout Minnesota. *Forest Transformation*, for example, designed by Rebecca Krinke, assistant professor of landscape architecture, College of Architecture and Landscape Architecture, University of Minnesota, Minneapolis, serves a broad range of people, yet it focuses on a specific activity: contemplation.

Located at the Minnesota Landscape Arboretum in Chanhassen, *Forest Transformation* is visited by students, faculty, participants in the University of Minnesota's horticulture-therapy program and members of the public.

According to Krinke, the arboretum's director, Peter Olin, wanted to create a place where anyone could feel restored by connecting with nature. The terrorist attacks of 9/11 occurred while she was designing this garden. The increased need for contemplative places was immediately apparent.

"In their book *Healing Gardens, Therapeutic Benefits and Design Recommendations*, Clare Cooper Marcus and Marni Barnes define healing as 'a beneficial process that promotes overall well-being' and they identify three deliberate outcomes of this process: alleviation of physical symptoms;

stress reduction; and improvement in the overall sense of wellness," Krinke explains. "My work engages parts two and three of this definition."

Krinke drew upon diverse sources in creating the work. She used a theory developed by environmental psychologists Rachel and Stephen Kaplan, which states that a restorative landscape has four attributes: a quality of "being away," a quality of evoking "fascination," a balance between coherence and mystery, and a feeling of safety. Krinke was also inspired by Walter DiMaria's artwork *The Lightning Field*, which explores moment-by-moment changes in light, and by Japanese screens that distill nature into a captured pictorial moment. "Researchers have

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**Studies demonstrate that  
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and reducing muscle tension.**

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shown that discursive thought is stilled when you capture and hold moment-by-moment attention," Krinke says. "Blood pressure goes down and people are calmed by the experience."

*Forest Transformation* is composed of an intimate, enclosed bench which, when someone is seated, focuses his or her attention on a sealed-copper wall (which has a second bench attached to its back). The garden is sited in a grove of maple and basswood trees, "because people tend

to endow groves of trees with a numinous, sacred quality," she explains.

"Copper seemed an appropriate cladding for the wall because it is a natural material associated with healing," she continues. "As shadows from the trees travel across the wall, the effect is the same as the art on Japanese screens; nature is distilled. When your gaze shifts back to taking in the whole forest, you see it differently."

"Having a place to enjoy nature without a specific, goal-oriented activity is key to the contemplative experience," she adds. "This work is about direct, unmediated experience. What could be simpler? It is not radically unfamiliar and yet it transports you out of everyday life."

In contrast to the Woodwinds healing gardens and *Forest Transformation*, which serve a broad range of people, the Tabitha Memory Care Garden responds to the needs of a specific patient population. Located at the Tabitha Memory Care Center, an assisted-living facility in Hastings, Minnesota, this garden serves older adults who have Alzheimer's disease or other conditions that have resulted in memory loss.

In 1998, Jim Hagstrom, Marjorie Pitz, Todd Wickman, Rebekah McNeil, Erik Jorgenson and Ellen Burbank collaborated as part of the American Society of Landscape Architects' Alzheimer's Garden Project. In addition to reviewing research about healing-garden design and learning about the symptoms and progression of the disease from the Alzheimer's Association, the design-team members drew upon their personal observations, because each had a relative or friend with Alzheimer's.

"Although short-term memory loss is a common symptom," says landscape architect Jim Hagstrom, "many Alzheimer's patients can recall distant memories. The path from the residential building to the garden builds comfort by re-creating a familiar sequence that moves from home to porch to backyard. We also chose plants with colors, scents and textures that could be found in most residential gardens to evoke pleasant memories of the past."

Ensuring the residents' safety presented some unique challenges. "Since people with Alzheimer's can become confused or lost even in familiar settings, the strolling path through the garden forms a loop to return residents to the entry point," Hagstrom says. "We also enclosed the garden with a fence and minimized connections with the surrounding landscape, because if the residents saw a larger outdoor space, they naturally would want to go there. In general, designers avoid making exits too obvious, because in Alzheimer's gardens residents might walk through them, become disoriented and wander off."

Jeannie Larson, coordinator, therapeutic-horticulture services, Minnesota Landscape Arboretum, believes valuable post-occupancy research could be conducted at the Tabitha Memory Care Garden to strengthen connections between design decisions, new therapeutic activities, and desired physical or mental improvements.

"Techniques, such as dementia-care mapping used in clinical settings, could be adapted to measure the effects of a healing garden designed for people with Alzheimer's disease," Larson says. "Without establishing connections between design intention, therapeutic activities and results, a healing garden is just another beautiful, natural place."

Paul Mellblom, AIA, agrees with Larson about the importance of research. Mellblom is board president for Clare Housing, a Minneapolis nonprofit organization planning to build a 30-unit apartment complex and related contemplative garden for people living with AIDS. "For the garden to be successful," he says, "it must uniquely reflect its location, consider our time in the history of the disease, and take into account the effects of HIV/AIDS on the residents and their support community. Research will allow us to design a place that emotionally and spiritually enhances the lives of the people who use the garden. This cannot be achieved without a profound understanding of their specific needs."

As an informal advisor for the Clare garden, Krinke is helping to establish

landscape-design guidelines. "I recently finished reviewing examples of gardens designed for people living with AIDS," Krinke says. "Next I'll develop a list of questions that the building-committee members and the architect can use to set design objectives. Ideally, these objectives will define desired healing outcomes that can be measured or observed later. There are very few case studies to inform design decisions. We need more data about actual effects to continue learning and improving the design of healing gardens."

The University of Minnesota's Center for Spirituality and Healing may soon be able to help professionals gather this data, as it's raising funds to construct a healing garden for health-sciences education, patient care and research. University students, faculty and staff, healthcare providers, patients and community members will use this garden to learn more about the relationship between healing and medicinal herbs, as well as therapeutic horticulture.

According to Elizabeth Lake, director of development, Center for Spirituality and Healing, there are a number of ways research could be linked to activities in the garden. "The biggest challenge will be to design a garden flexible enough to be adapted as new research projects arise," Lake says. "For example, our director, Mary Jo Kreitzer, recently won a major grant to examine the effects of meditation on transplant patients. We could include meditation activities occurring in a contemplative area of the garden in this study."

Even if studies continue to show that merely being in nature can have positive physiological and psychological effects, and as medical professionals, researchers and landscape architects collaborate to blend the best of scientific knowledge with age-old wisdom about the restorative power of nature, there is one point on which everyone seems to agree: Design intent must translate into measurable results if a garden is truly to be considered "healing." ♦

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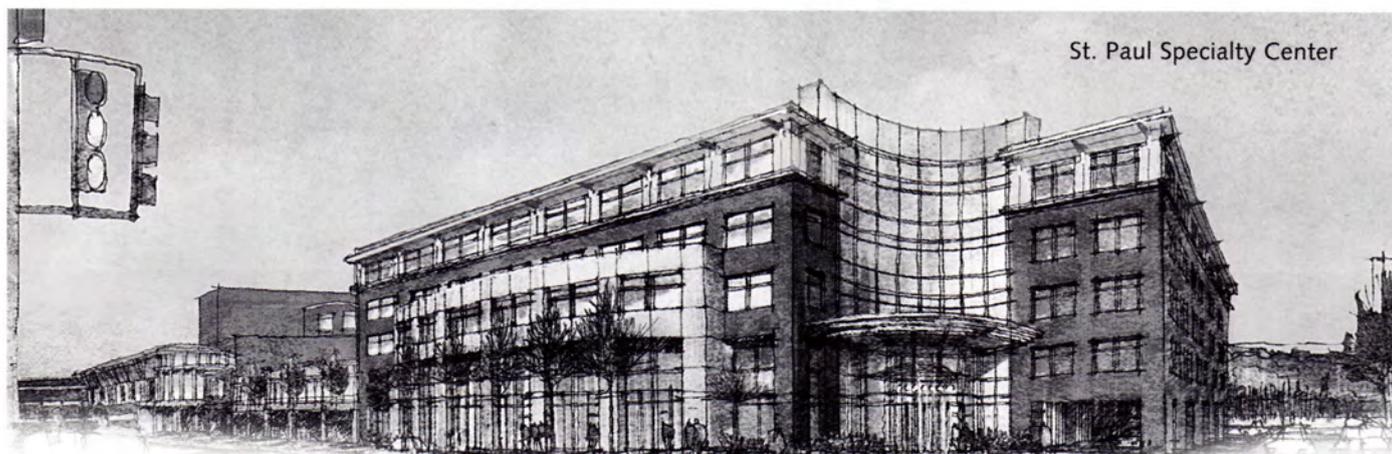
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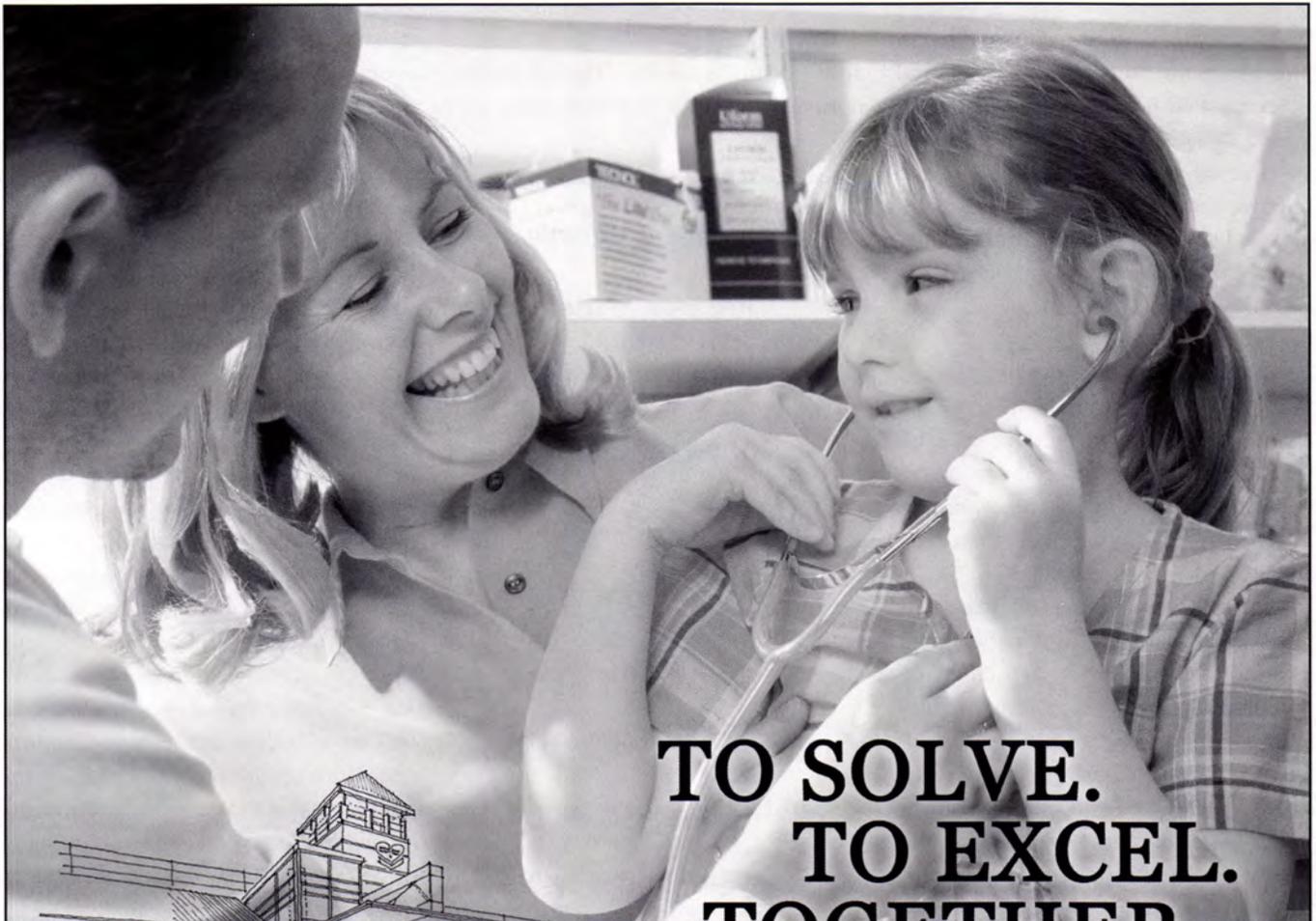
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## president's message

*Continued from page 17*

built and natural environments, which in turn affects the function, cost, safety and enjoyment in how we live, work, play, learn and worship. It's a 24/7, quality-of-life issue for virtually everyone. I hope to improve the relationship between architects and their public, in order to continually upgrade the diverse aspects of our living environment.

### Do you have other priorities this year?

Yes. With the help of AIA Minnesota's Board of Directors, I've outlined three interrelated participation-action programs that go beyond our normal operations, to keep AIA Minnesota strong through 2004 and beyond.

Our organization has a solid structure, tremendous tools with which to communicate with the public, outstanding continuing-education programs and a multitude of committees that focus on the different aspects of delivering architecture, all supported by a political-action group. So I'm tempted to refer to that old Alfred E. Newman quote from *Mad Magazine*: "What, me worry?"

Still, I want all of us to be proactive in designing AIA Minnesota's future, just as we do buildings, and to continue to protect the public's health, safety and welfare, which is what we are licensed to do.

All of which leads to the three special issues we'll be attending to this year: inclusiveness and diversity; the changing marketplace; and education and licensure.

### Let's start with inclusiveness and diversity. In what sense are you referring?

This works on several levels. First, the architectural profession is still perceived as a white, upper-class, male profession whose members are 45 to 50 years old. What is the reality? How should that change in the next year?

We need to make sure our membership represents the cultural and ethnic backgrounds of Minnesota architects. The demographics of the state are changing, and women and various ethnic and

cultural backgrounds are underrepresented in the profession of architecture. We don't have the diversity of our public.

One-third of the profession is women and growing. However, the ethnic-minority participation is not showing pro-

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portional growth. We need to formulate ways to reach out to these groups by increasing our support of minority students, promoting cultural diversity in the profession, and through education and scholarship.

In still another regard, architects work in widely diverse professional settings beyond the traditional firm or practice. We have members serving as educators at the University of Minnesota, working in construction firms, as corporate architects within businesses and as public employees with the government. How do we

serve that diversity in terms of continuing education, recognition and at the legislature? The organization and its services must be accessible and relevant to all categories of practicing architects in order for each of them to be their best.

### So let's discuss the upcoming year in terms of education and licensure.

Yes, as we need to educate firms and students on the process and value of licensure. Licensure is critical because it's the true differentiator between someone practicing in an allied field and the architect who is certified, by law, to protect the health, safety and welfare of the public. One of our goals is to identify the reasons why someone may not pursue or complete testing for licensure.

Another goal is, in conjunction with the University of Minnesota's College of Architecture and Landscape Architecture, to prepare a simple outline of the learning cycle, charting out the architect's career from college through registration and on into continuing education. At the same time, the public needs to know that an architect must complete a minimum of a 10-year education and experience process before having the ability to even take the test to become registered. A licensed, registered architect has, at minimum, a 10-year portfolio of education and experience behind them, similar to the professions of law or medicine.

### How does all of this relate to the changing marketplace?

The architect's role always seems to be at some risk of being nibbled away at by several forces, including our increasingly complex specializations and reemerging project-delivery modes. We need to pay attention to changes in these areas. In addition, we need to reinforce our position at the state level on the qualifications-based selection process (Minnesota has an independent board—the State Designer Selection Board—that selects architects for state-funded projects) to ensure it's maintained. We don't want that process bypassed.

So by the end of the year, what do you hope to have accomplished as president?

Hopefully we'll have reached direction on the three issues just talked about. While they're not towering, live-or-die issues, they will affect our ability to practice and thus need our proactive attention. They are another stage in the process of growth and public awareness.

It's easy for the public to take the built environment for granted, because it appears passive and inconspicuous when it's working well. What may not be understood or appreciated is that the architectural design of spaces directly affects human productivity, mental well-being and physical health, in addition to a company's bottom line. So communication to the public about what architects do is critical. **AM**



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## endangered

*Continued from page 19*

an Environmental Assessment Worksheet that analyzes a variety of possible negative impacts—including environmental and historical—on the site and surrounding area. Barr Engineering, Minneapolis, conducted the study.

The EAW recommended several projects intended to mitigate proposed alterations to the site. The projects include: a bike trail that connects an existing trail at the west end with the future housing development; and a commemorative open space with a water feature, a limestone wall and a historical marker in a trail turnaround where treaties and agreements “were said to be negotiated.” Last November, after a mandated EAW-review period, the Mendota Heights City Council voted to order an Environmental Impact Statement, a more complex and thorough study of the adverse aspects of the issue.

Coalition members have been concerned that although Mendota Heights officials acknowledge Oheyawahi/Pilot Knob’s potential historic importance, they have focused on analysis of physical evidence as the determining factor for the site’s historic status. A survey by the Office of the State Archaeologist indicated no evidence of known burials. White and Woolworth’s nomination form, however, mentions various persons who knew of native remains unearthed and transferred to burial vaults within Acacia Cemetery.

White says the city is, in effect, saying, “Show us the bones,” as a way of defining the site’s historic merit. Native American history, however, is often largely based on such intangible aspects as collective memory and beliefs derived from spiritual experiences. Besides, White adds, although the burial aspect has gained the most attention, it is the healing ceremonies that render Oheyawahi/Pilot Knob’s principal value. Can potentially eligible historic properties associated with Native American culture, particularly aspects related to that culture’s spiritual beliefs, be “fair and

balanced” in legal proceedings? “Law has not evolved, federal or state, that would fully address the complexity of Native American spiritual beliefs and culture,” explains Tom Casey, attorney for the Mendota Mdewakanton Dakota Community, which is one of the organizations seeking to keep Oheyawahi/Pilot Knob in its present character.

Casey notes that nonnative research looks for physical evidence that usually doesn’t exist in places that are spirit-based. “Places can be sacred,” he says, “without containing the physical evidence on which nonnatives depend. While monotheistic religions place importance on man-made monuments and places, aspects of nature-based places are held sacred by Native American communities.”

The National Park Service, the federal authority in regulatory functions of historic preservation, has established procedures for consideration of such properties as Oheyawahi/Pilot Knob in a category titled Traditional Cultural Landscapes. According to the guidelines, “traditional refers to beliefs, customs and practices of a living community passed down through generations, usually oral or through practice. A traditional cultural landscape can look like a typical landscape, even though a significant culture existed there. As a result, such places may not be identified (solely) by conducting archaeological, historical or architectural surveys.” The guidelines recommend interviews with knowledgeable persons to form the basis for historical consideration.

Doubters may consider such oral accounting to be hearsay and not concrete enough to establish historical record. The NPS states that in assessing traditional cultural properties, the purely intangible cannot be recognized without related tangible data. Charlene Roise, president, Hess, Roise and Company, Minneapolis, supports the emerging recognition of Native American historic preservation and agrees with the tangibility requirement. “There needs to be a ‘there’ there,” she says.

Arguably, Seth Eastman’s documentary illustrations, early reports of native

remains and other data noted in White and Woolworth’s nomination provide tangible evidence. In addition, according to White, the Mendota Mdewakanton Dakota still hold pipe ceremonies on Oheyawahi/Pilot Knob.

Clearly, there’s already enough “there” there at the site without a bike trail and commemorative space. As well intentioned as they may be, these “improvements” are merely the design responses of a dominant culture. **AM**

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## citizen architect

*Continued from page 21*

operation, not its image. The park’s salubrious effects on central London, however, inspired the creation of parks in other, less well-heeled neighborhoods. A bona-fide park movement began. Landscape architect and father of American park design, Frederick Law Olmsted, toured the early English public parks in 1851 (including Regent’s, Victoria and Birkenhead parks) just prior to commencing work on New York’s Central Park with his partner, the architect Calvert Vaux.

While the earlier tradition of landscape gardening focused primarily on aggrandizing the aristocracy and impressing the public, Olmsted spent his career arguing for the landscape’s wholesome effect on the individual user. In particular, he believed that exposure to natural settings while riding, strolling or simply relaxing could repair the physical and emotional injuries caused by urban life.

Writing in the 1868 Annual Report to the Brooklyn, N.Y. Park Commissioners, Olmsted posits that, “Civilized men, while they are gaining ground against certain acute forms of disease, are growing more and more subject to other and more insidious enemies to their health and happiness, and against these the remedy and preventive cannot be found in medicine or in athletic recreations but only in sunlight and such forms of gentle exercise as are

*Continued on page 62*

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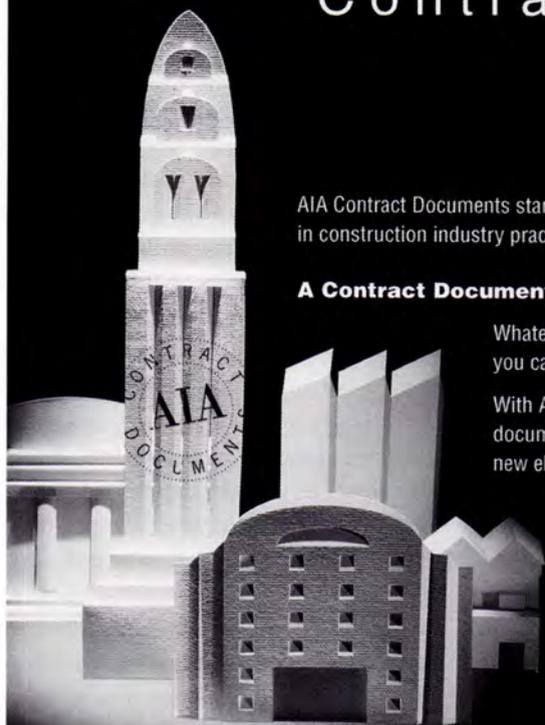
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## citizen architect

*Continued from page 60*

calculated to equalize the circulation and relieve the brain."

Clearly, Olmsted saw the urban park primarily as a place of passive recreation—the appropriate mode for recharging the spirit of the urban dweller. Accordingly, his designs for Central Park and Prospect Park in New York, and Franklin Park in Boston, consist mainly of strolling and carriage paths, riding trails and opportunities for quiet contemplation of bucolic scenes. Intensive athletic activities were discouraged or banned outright, since it was thought these would disrupt the calm and serenity imparted by the natural setting.

While Cleveland was a contemporary of and sometimes a collaborator with Olmsted, his work in Minneapolis marked a shift in the approach to park planning. Cleveland's vision was not that of a singular greenspace surrounded by urbanity, but a collection of preexisting natural features linked by parkways and ornamental boulevards that threaded through the city.

Harkening back to the philosophy of Enlightenment planners, Cleveland believed that such an integration of parkways into the urban fabric would improve public health by bringing, "winds...into the heart of the city, purified by their passage over a long stretch of living water, and through the foliage of miles of forest."

Like Olmsted, Cleveland saw the park primarily as a place of spiritual refreshment through passive recreation and individual contemplation of natural beauty. It was not until the beginning of the 20th century that we see more active forms of recreation taking place within park limits. In 1906, the Playground Association of America was formed, culminating a decade-long movement on the part of the nation's park superintendents to open up municipally owned parkland for recreational use by children and young adults.

Not coincidentally, that same year the newly installed superintendent of Minneapolis parks, Theodore Wirth, ordered the removal of all "Keep Off the Grass" signs, ushering in a new era of athletic recreation for the Minneapolis Park System. Throughout his tenure, Wirth expanded park pro-

grams and facilities to accommodate and encourage such physical activities as sledding, skating, baseball, horseshoes and even ski jumping.

One can argue that the shift in focus from passive to active park uses was again a response to the changing social conditions attending modern urban life. The park as locus for physical fitness satisfied a new need for a society removed from long days of physical labor. Even today the park serves as an extension of the gymnasium, another modern institution created to compensate for the symptoms of a sedentary and increasingly auto-focused urban lifestyle.

Cities today are not the discrete urbs of a hundred years ago; they are vast intermunicipal systems that blur into the rural landscape. As the metropolis expands, regional park systems are called upon to mitigate the increasing ecological damage of urban sprawl. They contain nature preserves for endangered species, bioswales and ponds to filter contaminated storm-water run-off, and are home to reestablished natural ecosystems like marshlands and prairies to reduce flooding and soil erosion. The regional park is but the public park writ large and, in like fashion, is a tool to heal the damage we are inflicting on the planet due to low-density urbanization.

It's sadly ironic that at the time of Central Park's sesquicentennial, a time to revel in the art and vitality of the American park system, we have somehow lost the grandness of vision that brought such parks into being. Even at the time of this writing the Metropolitan Council has retreated from a clear and strong plan to preserve natural and agricultural lands at the urban periphery, hanging their hat instead on a loose framework of goals without clearly stated objectives or measurable outcomes.

In the 1980s, in response to the deteriorated condition of Central Park, activists rallied around the slogan, "You Gotta Have a Park!" Well, indeed, we gotta have a park, but we also need dynamic visionaries like Olmsted, Cleveland and Wirth to make them happen. If history is any indication, the future health of our cities and suburban communities is depending on it. **AM**

## practice

*Continued from page 23*

Washington State University. "Just the act of opening a window, even on a hot and sultry day, can make people feel cooler."

According to Wise, who developed a system called Biometrics, which he defines as "creating an ecological context for people where their neuro-sensory systems operate within designed parameters," and who worked with the CSBR to develop the Minnesota Sustainable Building Guide, many factors can stimulate the neuro-sensory system to function more efficiently. For instance, to think effectively, people need a visual space of at least 20 feet, and something to focus on in the distance, like a view of the outdoors or of a painting. Yet, Wise says, "Standard high-tech buildings are the antithesis of how humans operate. We are free-roaming animals that long for open spaces, but are trapped in small, barren cubicles and buildings with windows that don't open."

Creating and sustaining healthy indoor environments is one goal of the sustainable-architecture movement, which began in the early 1990s. "Sustainable architecture is a broad term that refers to buildings that are energy efficient with low impact on air, land, water, ecosystems and material resources," says John Carmody, director, CSBR. "Sustainable architecture also includes a healthy indoor environment that enhances the well-being and productivity of the occupants."

Carmody argues that worker satisfaction and health are directly linked to energy-efficient and cost-effective indoor environments. For instance, a 2003 study by the Lighting Research Center at Rensselaer Polytechnic Institute, Troy, New York, states: "Physiologically, daylight is an effective stimulant to the human visual system and the human circadian system. Psychologically, daylight and a view are much desired."

The study points out that while increasing the number of windows in a building may add to construction costs, the incorporation of daylight reduces the cost of electricity, as well as costs related to worker absenteeism and the demand for health

services due to eyestrain and stress. Likewise, Carmody says, an ergonomically correct computer chair, which places the body in correct alignment to the keyboard and supports the back, minimizes such potentially costly and debilitating injuries as carpal-tunnel syndrome.

Perhaps the most obvious indicator of a healthy environment is air quality. Such problems as mold and ventilation are only part of the challenge. The ban on smoking in most buildings, which began in the early 1990s, has had a major impact on air quality, but also some unexpected repercussions. "Now that the lingering odor of stale tobacco smoke has been removed from most buildings, we can smell all the odors that the smoke was masking," says David Grimsrud, former director, CSBR, and an expert on indoor-air quality. Consequently, people are more aware of the presence of molds and pollutants from materials used in walls, carpets, paints and adhesives.

Grimsrud stresses the need to include simple and cost-efficient methods for ventilation in homes, such as bathroom fans that run continuously and hoods over cook-top stoves vented to the outside. But consumers, architects and builders also need to seek out products and materials that don't emit harmful gases, such as low- or no-VOC paints, organic finishes and floor coverings with recycled content and minimal or no off-gassing.

Buildings are made up of complex, interrelated systems, Moffitt emphasizes. "We need to be aware that if we change or alter one thing, another problem may pop up," he says. For instance, people often make alterations to their homes that can change the air pressure and allow gas from combustion appliances to get sucked into the basement.

After noticing an alarming increase in the rates of asthma and other allergies without apparent cause, the ALA built a Health House 10 years ago that incorporated everything known about indoor environments. (The program has since completed 120 houses from Alaska to Florida. The ALA has also developed designs for healthy commercial buildings, but hasn't

*Continued on page 64*



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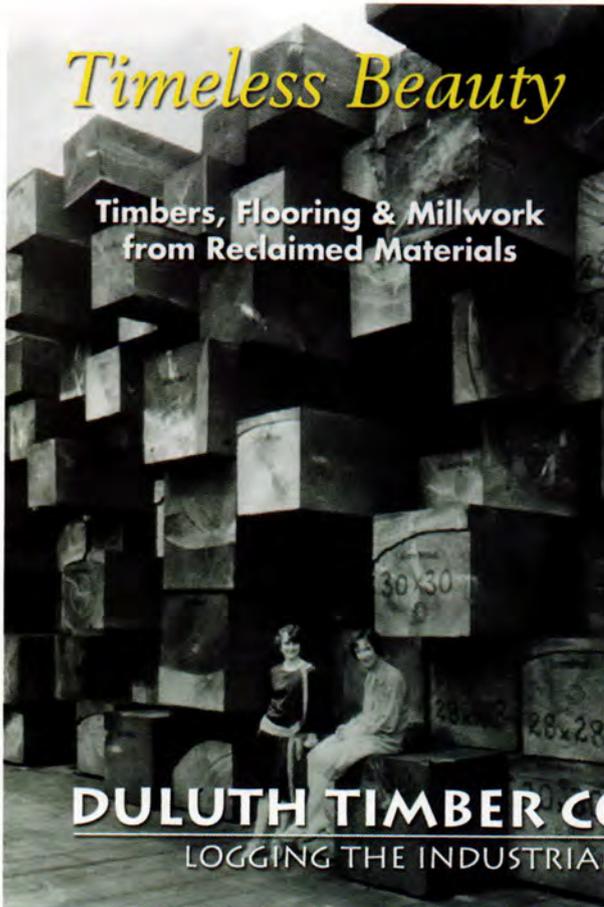


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## practice

Continued from page 63

found the funding to build a demonstration model.)

Building on the premise that healthy indoor environments can be achieved at low costs, the ALA developed Health House Guidelines ([www.healthhouse.org](http://www.healthhouse.org)) that suggest such measures as putting in gravel, PVC pipes and plastic sheeting before a house foundation is laid to prevent random gases from accumulating, and such moisture-control methods as building up landscapes and repairing drain pipes.

To ensure a healthy and productive indoor environment, buildings must also respond in a variety of ways to the human biological mechanism. "As human beings evolved, they were 'wired' to prefer certain environments that reflect the natural world," Carmody says. Environments incorporating natural daylight, fresh air, colors and patterns reflecting nature (the shape of a tree or a cloud, for instance) are more conducive to health and creativity than the abstract geometry and antiseptic atmosphere of many workplaces and public buildings.

Carmody cites a study of patients in recovery rooms in hospitals, which found that patients placed in rooms with windows looking out onto views of nature, or with paintings of natural scenes, recovered more quickly. "The most important thing is to do no harm," Carmody says. "Then we can move toward more conceptual ideas of replicating certain ideal environments found in nature."

"One can synthesize the appearance and 'touch and feel' of natural environments without having to literally re-create these environments," Wise adds. "Through color, texture and pattern, we can re-create mathematical structures in nature so that the interior of a building acts like a natural environment."

As an example, Wise cites the "canopy lighting" in shopping malls, which generates a carefully calibrated dappled pattern through heterogeneous light sources placed at different levels. This type of system, he continues, "re-creates the sort of lighting one would experience sitting un-

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der the sheltering edge of a tree with a tier of broad horizontal limbs, situated on a daylit plain."

Carmody stresses that improving indoor environments both increases worker productivity and lowers a company's bottom line. For example, the CSBR's Minnesota Sustainable Building Guidelines are currently required for all buildings funded by the State of Minnesota. "The State now recognizes an economic incentive for decisions such as putting in more windows," he says. "They can see that incorporating healthy building techniques translates into workers with fewer sick days and employers with less turnover."

Perhaps most important, healthy indoor environments allow people to function efficiently and creatively. When architecture responds to biological needs, a building becomes an incubator where the human organism can develop and flourish. **AM**

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 Fax: 651/426-5048  
 E-mail: jcain@cainoue.com  
 www.cainoue.com  
 Established 1983

—  
 Jay J. Cain PE  
 Wallace M. Ouse PE  
 Scott D. Thomas PE

Firm Personnel by Discipline	
Mechanical Engineers	3
Electrical Engineers	2
Technical	4
Administrative	2
Total	11

—  
 Mechanical and Electrical Engineering for the construction industry. Project types include residential complexes, educational facilities, transportation, religious facilities, and manufacturing for owners, contractors, developers and architects.

—  
 River Falls High School, River Falls, WI; North Hennepin Community College General Education Building, MN; St. Michaels Church and School, Stillwater, MN; Croixdale Residence and Apartments, Bayport, MN; Carlton County Highway Department, Cloquet, MN; Boutwells Landing, Oak Park Heights, MN

**CLARK ENGINEERING CORP.**

621 Lilac Drive North  
 Minneapolis, MN 55422  
 Tel: 763/545-9196  
 Fax: 763/541-0056  
 E-mail:  
 lmcumtry@clark-eng.com  
 www.clark-eng.com  
 Established: 1938  
 Other Offices: Aberdeen and  
 Sioux Falls, SD

—	
Larry McMurtry	PE
Michael Fowler	PE
Hadi Sajadi	PE
Cory Casperson	PE
Tim La Bissoniere	PE
Abi Assadi	PE
—	
Firm Personnel by Discipline	
Civil Engineers	8
Structural Engineers	12
Surveyors	4
Other Professional	2
Technical	26
Administrative	5
Total	57

Clark Engineering Corporation provides structural engineering, civil engineering and land surveying services for educational, commercial, industrial, and public sector facilities. Specialty design services for blast resistant structures, special foundations, elevated towers and overhead material handling systems. Civil engineering and surveying services for site development, planning, water supply and distribution, waste water treatment and disposal and storm water management.

U.S.A. Furniture Outlet, Shakopee, MN; Royal Credit Union, Eau Claire, WI; Central Bucks South High School, Warrenton, PA; Sauk Rapids High School Site Development, Sauk Rapids, MN; Brookdale Regional Government Center Expansion and Remodeling, Brooklyn Center, MN; Sumner Community Library Expansion and Remodeling, Minneapolis, MN

**DARG BOLGREAN MENK, INC.**

7575 Golden Valley Road  
 Ste. 210  
 Golden Valley, MN 55427  
 Tel: 763/544-8456  
 Fax: 763/544-8914  
 E-mail: info@dbm-inc.com  
 www.dbm-inc.com  
 Established 1966

—		
Gene Bolgrean	PE	
Harry D. Menk	PE	
—		
Firm Personnel by Discipline		
Structural Engineers	3.5	
Technical	2	
Administrative	1	
Total	6.5	

Consulting 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 5,000 projects in 21 states.

St. Anthony Fire Station, St. Anthony, MN; Midland Country Club, Midland, TX; Fridley Public Works Office Addition, Fridley, MN; Falcon Heights Retail/Apartments, Falcon Heights, MN; Buhler Addition, Buhler, MN; Becker Furniture World Addition, Becker, MN

**DATA CORE ENGINEERING, INC.**

2021 East Hennepin Avenue  
 Ste. 200  
 Minneapolis, MN 55413  
 Tel: 612/617-1200  
 Fax: 612/617-1299  
 E-mail: info@dcedesign.com  
 www.datacoreeng.com  
 Established 1991

—		
James W. Giefer	PE	
D. Lane Hersey	PE	
Jeff Westlund	RCDD	
Bill McGuire		
—		
Firm Personnel by Discipline		
Electrical Engineers	2	
Technical	9	
Administrative	1	
Total	12	

*Continued on next column*

Data Core is a technology consulting firm. We provide technology planning and design services to architects and engineers for the integration of computer, audio/visual, telephone and other communication systems for both new construction and renovation projects. In addition, we help businesses and institutions integrate computer/telephone systems and software programs to best support current and future needs.

Technology Upgrade, Saint Paul Public Schools; Citywide Offices Network, City of South St. Paul, MN; Minnesota Counties Insurance Trust, St. Paul, MN; Technology Upgrade, Owatonna Public Schools, MN; Network and Intranet Support, Cretin Derham Hall, St. Paul, MN; Technology Upgrade, Hastings Public Schools, MN; Technology Design, Douglas County Metro Center, Superior, WI

**DLR GROUP**

9521 West 78th Street  
 Minneapolis, MN 55344-3853  
 Tel: 952/941-8950  
 Fax: 952/941-7965  
 E-mail:  
 minneapolis@dlrgroup.com  
 www.dlrgroup.com  
 Established 1966

Other Offices: Chicago, IL; Colorado Springs, CO; Des Moines, IA; Farmington, NM; Honolulu, HI; Kansas City, MO; Milwaukee, WI; Omaha, NE; Orlando and Tampa, FL; Overland Park, KS; Philadelphia, PA; Phoenix, AZ; Portland, OR; Sacramento, CA; Seattle, WA

—		
Griff Davenport	AIA	
Matt Johnson	AIA	
Kelly Artz	PE	
Marlene Evenson	AIA	
Jon Crump	AIA	
George Fantauzza	AIA, CID	
—		
Firm Personnel by Discipline		
Civil Engineers	1	
Structural Engineers	2	
Mechanical Engineers	6	
Electrical Engineers	3	
Architects	14	
Other Professional	6	
Administrative	9	
Total	41	

*Continued on next column*

DLR Group has been providing exceptional engineering and design services since its inception in 1966. As a full-service architectural and engineering (mechanical, electrical, structural, civil and technology/communications) firm, we are a national leader in the design of corporate, industrial, educational, sports, justice and health care facilities, and associated building systems.

East Central School District, New K-12 School, Sandstone, MN; Richfield School District, Multiple Projects, Richfield, MN; Scott County Jail, New Jail and Law Enforcement Center, Shakopee, MN; B.H. Whipple Federal Building, Building Renovations, Minneapolis, MN; Anoka Ramsey Community College, Campus Expansion, Cambridge, MN; Global Industries, Office/Showroom/Warehouse, Brooklyn Center, MN

**DOLEJS ASSOCIATES INC.**

1624 North Riverfront Drive  
 Mankato, MN 56001  
 Tel: 507/625-7869  
 Fax: 507/388-9225  
 E-mail: dolejs@mnic.net  
 Established 1977  
 Other Offices: Burnsville, MN

—		
Joseph Dolejs	PE	
Michael Dolejs	PE	
Christopher Dolejs	PE	
—		
Firm Personnel by Discipline		
Mechanical Engineers	3	
Electrical Engineer	1	
Technical	10	
Administrative	1	
Total	14	

Dolejs Associates provides Mechanical and Electrical Design Services for the building industry. An experienced and stable staff provides expertise in the HVAC, Plumbing, Fire Protection, Temperature Control, Lighting Power, Communication and Life Safety Systems. Recent projects include schools, restaurants, athletic facilities, motels, engineered housing, churches, ADA and energy conservation retrofits.

Itasca State Park Visitors Center, Bemidji, MN; K-12 School, Medford, MN; Hosanna Lutheran Church, Lakeville, MN; Community Center/Ice Arena, New Ulm, MN; Eagle Villa Condominiums, Dubuque, IA; Bethany Lutheran College Math/Science Building, Mankato, MN

**DUNHAM ASSOCIATES, INC.**

8200 Normandale Blvd., Ste. 500  
Minneapolis, MN 55437

Tel: 952/820-1400

Fax: 952/820-2760

E-mail:

info@dunhamassociates.com

www.dunhamassociates.com

Established 1960

—	
Kathleen Kolbeck	PE
Dale Holland	PE
Jay Rohkohl	PE
Mark Sigel	PE
Darrell Martin	EIT
Brian Szwed	PE

Firm Personnel by Discipline	
Structural Engineers	4
Mechanical Engineers	33
Electrical Engineers	23
Communications Distribution Designer (RCDD)	1
Other Professionals	1
Technical	3
Administrative	10
Total Staff	75

Dunham Associates provides mechanical, electrical and structural consulting engineering along with lighting design, fire protection, telecommunications distribution design and Indoor Air Quality. Our IAQ expertise includes Thermal Displacement Ventilation and Computational Fluid Dynamics modeling. We provide our clients with specialized expertise in all business markets - Commercial, Institutional, Retail and Transportation.

Ramsey County Public Works Facility, Arden Hills, MN; Methodist Hospital Heart and Vascular Center, St. Louis Park, MN; William Mitchell College of Law, St. Paul, MN; Minneapolis/St. Paul International Airport Terminals Expansions, St. Paul, MN; Grand Casino Mille Lacs and Hinckley - Onamia and Hinckley, MN; Regis Hairstyling Salons and Master-Cuts, Nationwide

**ELLERBE BECKET**

800 LaSalle Avenue  
Minneapolis, MN 55402

Tel: 612/376-2000

Fax: 612/376-2271

E-mail: info@ellerbebeck.com

www.ellerbebeck.com

Established 1909

Other Offices: Greenville, SC; Kansas City, MO; San Francisco, CA; Washington, DC; Dubai, UAE

Continued on next column

Rick Lincicome	AIA
Randy Wood	PE
Al Wenzel	PE
Charles Franklin	PE
Steve Wernersbach	—

Firm Personnel by Discipline

Civil Engineers	1
Structural Engineers	17
Mechanical Engineers	32
Electrical Engineers	21
Architects	109
Other Professional	71
Technical	25
Administrative	75
Total	361

Ellerbe Becket has designed efficient, reliable engineering systems for over 90 years, including heating and cooling systems, reliable energy networks, building automation and life safety systems, code compliance investigations, special electrical and lighting systems, HVAC improvements, structural investigations, vibration control, material/waste handling systems and manufacturing improvements to existing facilities.

Nicollet Mall Development, Minneapolis, MN; Mayo Clinic Gonda Building, Rochester, MN; Target Technology Center, Minneapolis, MN; Seattle Seahawks Stadium, Seattle, WA; University of Minnesota Pedestrian Bridges, Minneapolis, MN; Kingdom Centre, Riyadh, Saudi Arabia.

**ENGINEERING DESIGN INITIATIVE**

420 N. 5th Street, Ste. 1090

Minneapolis, MN 55401

Tel: 612/343-5965

Fax: 612/343-5982

E-mail: Inemer@edilimited.com

Established 2002

—	
Jay Hruby	PE
Larry Nemer	PE
Larry Svitak	PE

Firm Personnel by Discipline

Mechanical Engineers	5
Electrical Engineers	3
Total	8

EDI provides innovative M/E engineering solutions for a variety of building types. EDI is committed to delivering designs that are energy-efficient, maintainable and sustainable. We are passionate in our creative design, attention to detail and commitment to teamwork - from the establishment of initial performance goals through validation by commissioning.

Continued on next column

AIA	Camp Ripley, Northern Armories,
PE	MN; Grinnell College, Commissioning Services, Grinnell, IA; SPPS
PE	Washington Middle School, Boiler Replacement, St. Paul, MN; SPPS
PE	Wilson Middle School Gymnasium, St. Paul, MN; Sawyer Community Center, Cloquet, MN;
—	Nobles County Human Services
—	Remodeling, Worthington, MN

**ERICKSEN ELLISON AND ASSOCIATES, INC. (EEA)**

2635 University Avenue West  
Ste. 200

St. Paul, MN 55114-1231

Tel: 651/632-2300

Fax: 651/632-2397

E-mail: info@eeaengineers.com

www.eeaengineers.com

Established 1954

Other Office: Grand Rapids, MN

—	
William F. Thiesse	PE
James H. Art	PE
Todd A. Peterson	PE
Terri A. Fleischhacker	—
David L. Larson	RCDD

Firm Personnel by Discipline	
Mechanical Engineers	5
Electrical Engineers	2
Registered Communications Distribution Designers (RCDD)	3
Technical	22
Administrative	6
Total	38

The consulting engineering firm of EEA specializes in electrical and mechanical design of HVAC, plumbing, fire protection, specialty lighting, power, security/surveillance and electronic communication system designs for educational correctional, manufacturing, and recreational facilities, libraries, offices, clean rooms and data centers. EEA provides systems commissioning, operator training, and facilities infrastructure planning.

Federal Correctional Institute (FCI), Sandstone, MN; Walter Library Technology Center, University of Minnesota, Minneapolis, MN; Macalester College Central Chiller Plant and Campus Distribution, St. Paul, MN; Elmer L. Andersen Library and the Minnesota Library Access Center, University of Minnesota, Minneapolis, MN; Eli Lilly Corporation Data Center, Indianapolis, IN; Grinnell College Energy Center, Grinnell, IA

**ERICKSEN ROED & ASSOCIATES, INC.**

2550 University Avenue West  
Ste. 201-S

St. Paul, MN 55114

Tel: 651/251-7570

Fax: 651/251-7578

Established 1985

—	
Alfred "Bud" Erickson	PE
Thomas E. Amundson	—
James D. Roed	PE
Robert A. Curtis	PE
William T. Buller	PE
Robert J. Quinn	PE
David J. Pluke	—
Michael A. DeSutter	PE

Firm Personnel by Discipline	
Structural Engineers	20
Technical	15
Administrative	2
Total	37

Full-service structural engineering for a broad range of facility types. Our experience includes design and construction observation for industrial, retail, medical, commercial, educational, computer centers, high-rise offices, parking facilities, sports and recreational facilities, as well as conduct investigations of existing structures for remodeling and renovation, building review studies and forensic engineering. We are registered as Professional Engineers in Minnesota and throughout the United States.

Fairview Southdale Hospital Expansion, Parking Ramp and Skyway, Edina, MN; Piper Jaffray Tower, Minneapolis, MN; Lawson Commons Office Building, St. Paul, MN; Guthrie Theater, Minneapolis, MN; University of Minnesota Riverbend Commons Dormitory and Parking Ramp, Minneapolis, MN; Target Retail/Office Building, 900 Nicollet, Minneapolis, MN

■ **FOSTER, JACOBS & JOHNSON, INC.**  
 345 Canal Park Drive, Ste. 200  
 Duluth, MN 55802  
 Tel: 218/722-3060  
 Fax: 218/722-1931  
 E-mail: mail@fjj.com  
 Established 1922

—  
 James R. Johnson PE  
 Charles F. Jacobs PE  
 —  
 Firm Personnel by Discipline  
 Mechanical Engineers 5  
 Electrical Engineers 2  
 Technical 7  
 Administrative 2  
 Total 16

—  
 Full Service Mechanical and Electrical consulting services, including design and preparation of contract documents for fire protection, plumbing, HVAC, controls, lighting, power distribution, communications and life-safety systems and construction administration. We offer computer-aided selection of M/E equipment and generate drawings using AutoCad with "soft desk" building services.

—  
 Blue Cross/Blue Shield Adjudication Centers, Virginia and Aurora, MN; City of Duluth Public Works and Utilities Maintenance Garage, Duluth, MN; Grand Rapids Middle School, Grand Rapids, MN; Mercy Hospital Surgery Expansion, Moose Lake, MN; Minnesota Air National Guard Aircraft Maintenance Complex, Duluth, MN; University of Minnesota, Duluth Kirby Plaza Addition and Remodel, Duluth, MN

■ **FUTRELL FIRE CONSULT & DESIGN, INC.**  
 8860 Jefferson Highway  
 Osseo, MN 55369-1500  
 Tel: 763/425-1001  
 Fax: 763/425-2234  
 E-mail: scottf@ffcdi.com  
 www.ffcdi.com  
 Established 1989

—  
 Scott A. Futrell PE (WI)  
 Rich Pehrson PhD, PE (MN, SD)  
 Ken Strand PE (MN, ND)  
 —  
 Firm Personnel by Discipline  
 Fire Protection Engineers 3  
 Technical 4  
 Administrative 2  
 Total 9

Continued on next column

Fire Protection Engineering, fire sprinkler, fire alarm and fire suppression system design, risk analysis, plan and engineering report reviews, special inspections, commissioning, expert witness, third-party review and project management.

—  
 U.S. Steel, Mountain Iron, MN; 3M Company, Nationwide; University of Minnesota, Various Projects Minneapolis Campus, MN; Guardian Angels School, Chaska, MN; St. Paul Public Housing Authority, Front High Rise, St. Paul, MN; Minot Air Force Base, Minot, ND

■ **GAUSMAN & MOORE ASSOCIATES, INC.**  
 1700 West Highway 36  
 700 Rosedale Towers  
 Roseville, MN 55113  
 Tel: 651/639-9606  
 Fax: 651/639-9618  
 E-mail: gmmail@gausman.com  
 www.gausman.com  
 Established 1935  
 Other Offices: Duluth, MN; Portland, OR

—  
 James W. Giefer PE  
 James A. Keller PE  
 D. Lane Hersey PE  
 Robert B. Full PE  
 —  
 Firm Personnel by Discipline  
 Mechanical Engineers 7  
 Electrical Engineers 5  
 Other Engineer 1  
 Technical 30  
 Administrative 11  
 Total 54

—  
 Gausman & Moore provides mechanical, electrical, fire protection, and technology design engineering services. Areas of Special Expertise include sustainable design (LEED Accredited), mission critical power systems, forensic investigations, lighting design, and commissioning.

—  
 Target Stores, Nationwide; Saint Paul Public Schools, MN; Minneapolis Public Schools, MN; University of Minnesota Duluth, Weber Music Performance Hall; Cloquet Community Memorial Hospital, MN; Brookdale Library and Service; Wooddale Church; University of Minnesota, Numerous Projects Statewide; U.S. Army Corps of Engineers Training and Vehicle Maintenance Centers, Nationwide; Christopher & Banks, Nationwide

■ **HALLBERG ENGINEERING, INC.**  
 1750 Commerce Court  
 White Bear Lake, MN 55110  
 Tel: 651/748-1100  
 Fax: 651/748-9370  
 E-mail: hei@hallbergengineering.com  
 www.hallbergengineering.com  
 Established 1984

—  
 Joseph W. Hallberg PE  
 James R. Penkivech PE  
 Larry A. Jensen PE  
 —  
 Firm Personnel by Discipline  
 Mechanical Engineers 12  
 Electrical Engineers 6  
 Technical 18  
 Administrative 5  
 Total 41

—  
 Mechanical, electrical, technology and facility management engineering services for educational, retail, commercial, institutional, health care and correctional facilities. Our Commissioning group performs mechanical and technology commissioning for new and existing facilities. The Schools for Energy Efficient™ (SEE) program provides schools with the tools to save energy and avoid energy costs.

—  
 Turck Hall, Wallace Hall and Kargin Commons, Macalester College, St. Paul, MN; Earle Brown Elementary, Brooklyn Center, MN; District Energy Chiller Plant, St. Paul, MN; Chaska Schools District-wide System Assessments, Chaska, MN; Buffalo Hospital, Buffalo, MN

■ **HAMMEL, GREEN AND ABRAHAMSON**  
 701 Washington Avenue North  
 Minneapolis, MN 55401  
 Tel: 612/758-4000  
 Fax: 612/758-4199  
 E-mail: info@hga.com  
 www.hga.com  
 Established 1953

—  
 Other Offices: Rochester, MN; Milwaukee, WI; Sacramento, Los Angeles and San Francisco, CA  
 —  
 Leigh Harrison PE  
 Kenny Horns PE  
 Yan Shagalov PE  
 Jeff Harris PE  
 Chuck Cappellin PE

—  
 Firm Personnel by Discipline  
 Civil Engineering 4  
 Structural Engineering 24  
 Mechanical Engineering 42  
 Electrical Engineering 27  
 Industrial Engineers 2  
 Architects 208  
 Other Professionals 33  
 Technical 47  
 Administrative 94  
 Total Staff 484

—  
 HGA has engineering expertise in the design of a broad range of facility types. In addition to traditional HVAC, structural and electrical systems, HGA has specialists in clean environments, industrial processes, central plants, utility infrastructure, existing condition surveys, property evaluations, telecommunications systems design, healthcare technology applications design and specialty lighting. HGA engineers serve both prime consultants and sub-consultants.

—  
 CentraCare Health System, St. Cloud, MN; General Mills, Inc., Golden Valley, MN Grace Church, Eden Prairie, MN; Walker Art Center Expansion, Minneapolis, MN; Minnesota Departments of Agriculture and Health, St. Paul, MN; The Community Medical Center of the Woodlands, The Woodlands, TX

**INSPEC, INC.**

5801 Duluth Street  
 Minneapolis, MN 55422  
 Tel: 763/546-3434  
 Fax: 763/546-8669  
 E-mail: fking@inspec.com  
 www.inspec.com  
 Established 1973  
 Other Office: Milwaukee, WI;  
 Chicago, IL

Dwight D. Benoy PE  
 Gary C. Patrick AIA  
 Michael D. Remington PE  
 Richard W. Phillips AIA  
 David W. Campbell AIA  
 Fred W. King

Firm Personnel by Discipline	
Civil Engineers	7
Structural Engineers	4
Architects	3
Technical	55
Administrative	21
Total	90

INSPEC, INC. is an independent consulting engineering/architectural firm specializing in roofs, pavements, waterproofing, and exterior walls. Other services include investigations, laboratory testing, surveys/evaluations, management programs, design/consultations, and construction administration.

Glensheen, Duluth, MN; Minnesota State Capitol, St. Paul, MN; American Swedish Institute, Minneapolis, MN; Minnesota State Colleges and Universities (54 campuses), Statewide; Anoka County, MN; University of Chicago, Chicago, IL

**KARGES-FAULCONBRIDGE, INC.**

670 West County Road B  
 St. Paul, MN 55113  
 Tel: 651/771-0880  
 Fax: 651/771-0878  
 E-mail: kfi@kfi-eng.com  
 Established 1996

William J. Karges, Jr. PE  
 James A. Faulconbridge PE

Firm Personnel by Discipline	
Mechanical Engineers	15
Electrical Engineers	3
Chemical Engineers	1
Commissioning	8
Other Professional	20
Administrative	5
Total	52

Continued on next column

Karges-Faulconbridge, Inc. (KFI) is a unique engineering firm of engineers, designers, professional estimators, and commissioning specialists registered in 50 states and the District of Columbia. KFI is LEED Certified, and provides engineering and construction management services for industrial, institutional, healthcare and commercial organizations. KFI clients rely on this unique combination of skills and experience to address issues of constructability, phasing, maintenance and operations early in the design stage, conserving time and resources.

Soybean Extraction Plant, Cenex Harvest States, Fairmont, MN; Minnesota Veterans Home, Infrastructure Improvements, Hastings, MN; New Vegetable Oil Refinery, AGP, Hastings, NE; Robbinsdale School District 281, Ventilation Systems, Robbinsdale, MN; Estimating for Minneapolis-St. Paul International Airport Expansion,, Bloomington, MN; Commissioning Osseo Schools, Osseo, MN

**KRECH, O'BRIEN, MUELLER & WASS, INC.**

6115 Cahill Avenue  
 Inver Grove Heights, MN 55076  
 Tel: 651/451-4605  
 Fax: 651/451-0917  
 E-mail: jkreckkomw@komw.com  
 www.komw.com  
 Established 1987

James H. Krech PE  
 Michael J. Lisowski PE  
 Daniel J. O'Brien AIA  
 Brady R. Mueller AIA  
 Brian C. Wass AIA

Firm Personnel by Discipline	
Structural Engineers	3
Architects	7
Architectural Interns	3
Other Professional	2
Technical	6
Administrative	3
Total Staff	24

KOMW offers structural engineering, architecture, interior design and construction management services. Registered structurally in 21 states, typical structural projects include industrial, commercial, institutional, ecclesiastical, forensic, agricultural, blast resistance, and hazardous waste containment. Specialties include granular material storage, hazardous liquid containment, corrosive environments, blast resistance, and aluminum greenhouse design.

Continued on next column

Van Hoven Resource Recovery, South St. Paul, MN; Ultra Machining Company, Monticello, MN; Caribou Coffee, Minneapolis, MN; Novartis Nutrition Corporation, St. Louis Park, MN; Waterous Company, South St. Paul, MN; St. Louis Park Arena, Renovation, St. Louis Park, MN

**L S ENGINEERS, INC.**

200 South Main Street  
 Le Sueur, MN 56058  
 Tel: 507/665-6255  
 Fax: 507/665-6818  
 E-mail: lseng@mnic.net  
 Established 1988

Robert L. Sprengeler PE  
 William P. Lehnertz PE

Firm Personnel by Discipline	
Structural Engineers	4
Technical	4
Administrative	1.5
Total	9.5

L S Engineers provides structural engineering services for all building types in the areas of industrial, commercial, religious, institutional, residential, manufacturing, as well as specialized structures for water and wastewater plants. L S Engineers provides a full range of services including feasibility studies, investigations, construction documents, cost estimates, and field observations.

Hermann Monument Restoration, New Ulm, MN; Minnesota Dept. of Transportation District Building, Mankato, MN; Voyager Bank Building, Shakopee, MN; Medalion Corporate Office Building, Waconia, MN; Klein Business Center, Chaska, MN; Progressive Impressions International Building Addition, Bloomington, IL

**LANDFORM**

510 First Avenue N., Ste. 650  
 Minneapolis, MN 55403  
 Tel: 612/252-9070  
 Fax: 612/252-9077  
 E-mail: info@landformmsp.com  
 www.landform.net  
 Established 1994

Other Office, Phoenix, AZ

Darren Lazan RLA  
 Stephen Johnston PE  
 Carolyn Krall AIA  
 Howard Rogers LS  
 Marlin "Butch" Larsen PE  
 Stanley Blackmore LS

Continued on next column

Firm Personnel by Discipline	
Civil Engineers	18
Architects	4
Other Professional	9
Technical	12
Administrative	7
Total	50

Landform provides civil engineering, planning, landscape architecture, land surveying and architectural services. Our broad range of local and national clients includes developers, architects, corporate/commercial groups, builders, and government entities. Specialties are hospitality, office, residential, housing, institutional, and medical.

Robbinsdale Transit-oriented Development, Robbinsdale, MN; Target Stores, Multiple Locations; Methodist Hospital, St. Louis Park, MN; Stone Bay, Orono, MN; Fairview Hospital; Applebee's Restaurants, Multiple Midwest Locations	
---	--

**LARSON ENGINEERING OF MINNESOTA**

3524 Labore Road  
 White Bear Lake, MN 55110  
 Tel: 651/481-9120  
 Fax: 651/481-9201  
 E-mail: info@larsonmn.com  
 www.larsonengr.com  
 Established 1979  
 Other Offices: Naperville, IL; Appleton, WI; Norcross, GA; St. Louis, MO; Scottsdale, AZ

Lee Granquist PE  
 Kesh Ramdular PE  
 Henry Voth PE

Firm Personnel by Discipline	
Civil Engineers	4
Structural Engineers	22
Technical	7
Administrative	7
Total Staff	40

Larson Engineering of Minnesota offers engineering services in both STRUCTURAL (including architectural, curtain wall and industrial), and CIVIL (including pavement management and athletic facilities).

STRUCTURAL: Sauk Rapids High School, Sauk Rapids, MN; Disney Concert Hall, Los Angeles, CA (CW); Boston-Logan Airport, Boston, MA (CW). CIVIL: Sartell Elementary School, Sartell, MN; Northfield Middle School, Northfield, MN; St. Croix Lutheran High School, West St. Paul, MN

■ **LHB**  
 21 West Superior Street, Ste. 500  
 Duluth, MN 55802  
 Tel: 218/727-8446  
 Fax: 218/727-8456  
 E-mail: joellyn.gum@lhbcorp.com  
 www.lhbcorp.com  
 Established 1966  
 Other Offices: Minneapolis, MN

William D. Bennett PE  
 Joseph D. Litman PE  
 Jay B. Bergman PE  
 Timothy E. Korby PE  
 David M. Sheedy PE  
 David T. Williams PE

Firm Personnel by Discipline  
 Civil Engineers 12  
 Structural Engineers 9  
 Mechanical Engineers 6  
 Electrical Engineers 5  
 Architects 24  
 Other Professional 16  
 Technical 39  
 Administrative 29  
 Total Staff 140

LHB's services include survey, civil, electrical, mechanical, and structural engineering. We design engineering systems for buildings, site development and infrastructure for clients in government, public works, education, healthcare, pipeline, workplace and housing. LHB specializes in high performance design which considers a balance of social, economic and environmental concerns and responsibilities.

City of Duluth West Leg Natural Gas Main Pipeline, Duluth, MN; MN/DOT's TH 169 Lake Pokegama Causeway, Grand Rapids, MN; Reconstruction of Historic Bridge L8502/69640, Duluth, MN; Lowry Avenue Corridor Revitalization, Minneapolis, MN; Minnesota Air National Guard Surface Transportation Facility HVAC, St. Paul, MN; Bethel Wastewater Treatment Facility, Bethel, MN

■ **LIGHTOWLER JOHNSON ASSOCIATES**  
 700 Main Avenue  
 Fargo, ND 58103  
 Tel: 701/293-1350  
 Fax: 701/293-1353  
 E-mail: sdewald@lightowlerjohnson.com  
 www.lightowlerjohnson.com  
 Established 1954  
 Other Office: Moorhead, MN

Continued on next column

Stevan Dewald  
 Steve Goldade  
 Cameron Merkel  
 Timothy Olson  
 Winton Johnson  
 Joe Lightowler, Jr.

—  
 Firm Personnel by Discipline  
 Civil Engineers 2  
 Structural Engineer 1  
 Mechanical Engineers 4  
 Electrical Engineers 2  
 Architects 4  
 Other Professional 1  
 Technical 22  
 Administrative 3  
 Total 38

Lightowler Johnson Associates is a full-service Engineering and Architectural firm. We provide mechanical, electrical, civil and structural engineering, land surveying and architectural services. We work with architects and clients to create exceptional projects.

Soybean Processing Plant, Brewster, MN; Holiday Inn Express, Grand Forks, ND; Barracks Reconstruction, Fort Buford, ND; Steam Line Replacement, St. Peter Regional Treatment Center, St. Peter, MN; AmericInn, Cedar Rapids, IA; Municipal Pool Replacement, Milnor, ND

■ **LOUCKS ASSOCIATES**  
 7200 Hemlock Lane, Ste. 300  
 Minneapolis, MN 55369  
 Tel: 763/424-5505  
 Fax: 763/424-5822  
 E-mail: home@loucksmclagan.com  
 www.loucksmclagan.com  
 Established 1976  
 Other Offices: Loucks McLagan, St. Paul, MN

Thomas G. Loucks  
 Jeffrey A. Shopek PE  
 Paul J. McGinley PLS  
 Michael J. St. Martin PE  
 Richard Licht PLS  
 John Bergh

—  
 Firm Personnel by Discipline  
 Civil Engineers 7  
 Other Professionals 6  
 Technical 32  
 Administrative 4  
 Total Staff 49

Continued on next column

PE Services include site layout, grading, storm water conveyance systems, water quality retention ponds, wetland mitigation, EAW/EIS documents. Phase I and II ESAs, 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.

—  
 Allianz Corp. Facility, Golden Valley, MN; Protein Design Lab (PDL), Brooklyn Park, MN; Boston Scientific, Maple Grove, MN; Gramercy Co-op Senior Housing, Statewide Locations, MN; North Quadrant/Sibley Mixed Use, St. Paul, MN; Minnesota State Fair, St. Paul, MN

■ **LUNDQUIST, KILLEEN, POTVIN & BENDER, INC. (LKPB)**  
 1935 W. County Rd.B2, Ste. 300  
 Saint Paul, MN 55113  
 Tel: 651/633-1223  
 Fax: 651/633-1355  
 E-mail: nbart@lkpb.com  
 www.lkpb.com  
 Established 1969

Leonard A. Lundquist PE  
 John M. Killeen PE  
 Peter A. Potvin PE  
 Gayland J. Bender PE  
 Stephen J. Gentilini PE

—  
 Firm Personnel by Discipline  
 Mechanical Engineers 10  
 Electrical Engineers 6  
 Technical 21  
 Administrative 8  
 Total 45

Lundquist, Killeen, Potvin & Bender, Inc. (LKPB) is a mechanical and electrical consulting engineering firm that was founded in 1969. The firm provides services to clients in diverse settings such as post-secondary education, health care, corporate, commercial and municipal environments.

—  
 Middlebury College, New Library, Middlebury, VT; Regions Hospital Master Planning, St. Paul, MN; Minnesota State Capitol Infrastructure Upgrades, St. Paul, MN; University of Minnesota Landscape Arboretum, New Visitor Center, Chanhassen, MN; Carlson Towers, Minnetonka, MN; Mill City Museum, Minneapolis, MN

■ **MATTSON/MACDONALD, INC.**  
 1516 West Lake Street, Ste. 102  
 Minneapolis, MN 55408  
 Tel: 612/827-7825  
 Fax: 612/827-0805  
 E-mail: davem@mattsonmacdonald.com  
 Established 1983

David H. Macdonald PE  
 Stephanie J. Young PE

—  
 Firm Personnel by Discipline  
 Structural Engineers 8  
 Technical 3  
 Administrative 1  
 Total 12

Structural engineering services for commercial, educational, industrial, institutional and residential buildings. Design of new buildings, renovation and restoration of existing buildings. Experienced in the restoration and adaptive re-use of historic buildings.

—  
 Milwaukee Road Depot Restoration, Minneapolis, MN; Stone Arch Lofts, Minneapolis, MN; Wayzata City Hall and Library, Wayzata, MN; Uptown Transit Station, Minneapolis, MN; Hosanna Lutheran Church, Lakeville, MN; Boutwells Landing Seniors Community, Oak Park Heights, MN

■ **MCCONKEY JOHNSON SOLTERMANN, INC.**  
 3144 Hennepin Avenue South  
 Minneapolis, MN 55408  
 Tel: 612/822-6950  
 Fax: 612/822-8385  
 E-mail: mjseng@qwst.net  
 Established 1978

Richard W. Johnson PE  
 Christian Soltermann PE

—  
 Firm Personnel by Discipline  
 Structural Engineers 4  
 Technical 2  
 Administrative 1  
 Total 7

Structural engineering consulting services for commercial, industrial, institutional, public and residential projects. Rehabilitation and remodeling of existing structures. Structural investigations and reports. Licensed in 24 states.

—  
 Lac Courte Oreilles Casino and Hotel, Hayward, WI; Eckankar Spiritual Center, Chanhassen, MN; 700 Grand, Saint Paul, MN; Word of Peace Lutheran Church, Rogers, MN; Citizen State Bank of Clara City, Clara City, MN; Granite City Food and Brewery, Various Locations

■ **MEYER, BORGMAN & JOHNSON, INC.**  
 12 South Sixth Street, Ste. 810  
 Minneapolis, MN 55402  
 Tel: 612/338-0713  
 Fax: 612/337-5325  
 E-mail: jglasper@mbjeng.com  
 www.mbjeng.com  
 Established 1955  
 Other Office: Duluth, MN

Daniel E. Murphy PE  
 Michael J. Ramerth PE

Firm Personnel by Discipline	
Structural Engineers	25
Technical	7
Administrative	3
Total	35

Provides structural engineering services for all building types including educational, medical, commercial, parking, industrial, advanced technology, historic renovation, recreational, entertainment, correctional, religious, housing, and forensic, totaling approximately \$350 million in new construction annually. Services include feasibility studies, analysis, design, construction documentation, field observation, special inspections and parking ramp condition surveys.

Wells Fargo Home Mortgage, Minneapolis, MN; Minneapolis Heart Hospital, Abbott Northwestern, Minneapolis, MN; Minneapolis Art Institute/Children's Theater Expansion, Minneapolis, MN; Regis Center for Art, University of Minnesota, Minneapolis, MN; St. Mary's Duluth Clinic, Duluth, MN; 301 Kenwood Condominiums, Minneapolis, MN

■ **MICHAUD COOLEY ERICKSON**  
 333 South Seventh Street  
 Ste. 1200  
 Minneapolis, MN 55402  
 Tel: 612/339-4941  
 Fax: 612/339-8354  
 E-mail:  
 rtaylor@michaudcooley.com  
 www.michaudcooley.com  
 Established 1946

Dean A. Rafferty PE  
 Monty L. Talbert  
 Douglas C. Cooley PE  
 Joseph A. Tennyson

Firm Personnel by Discipline	
Mechanical Engineers	60
Electrical Engineers	43
Administrative	16
Total	119

Continued on next column

MCE designs HVAC, plumbing, fire protection, electrical, illumination, security, life safety, audio visual, building automation and special system engineering. The firm also provides feasibility and deficiency studies, reports, master planning, tenant representation and fit-up services, commissioning, facilities management, and indoor air quality analysis.

Wells Fargo Shoreview Operations Center, Shoreview, MN; Guthrie Riverfront Theatre, Minneapolis, MN; Saint Paul Cathedral, St. Paul, MN; University of Minnesota Regis Center for Art, Minneapolis, MN; Allianz Life Headquarters, Golden Valley, MN; Woodwinds Health Campus, Woodbury, MN

■ **MJP ASSOCIATES, LTD.**  
 4362 Oakmede Lane  
 White Bear Lake, MN 55110  
 Tel: 651/426-7037  
 Fax: 651/426-6643  
 E-mail: mike@mjp-associates.com  
 www.mjp-associates.com  
 Established 1993

Michael J. Preston PE

Firm Personnel by Discipline	
Structural Engineers	1
Administrative	.5
Total	1.5

Specialized structural engineering services tailored to high-end residential projects, specialized component evaluation, and miscellaneous structures including investigative studies, feasibility studies, structural analysis and design, preparation of contract documents, and construction observation.

Curved Steel Stair Structures, Lakeville, MN; Walgreen's Pharmacies Exterior Metal Studs, Various Locations; Gearen Residence, Minneapolis, MN; Field Stone Retaining Walls, Various Locations

■ **The MOUNTAINSTAR GROUP, INC.**  
 7800 Metro Parkway, Ste. 212  
 Bloomington, MN 55425  
 Tel: 952/851-3085  
 Fax: 952/851-3086  
 E-mail: mohara@mtstar.com  
 www.mtstar.com  
 Established 1988

Michael A. O'Hara, PE

Continued on next column

Fire protection, building and fire code consulting compliance, safety, special inspections of smoke control systems and performance-based design. Specialized Areas: code equivalencies and alternate methods of construction

Best Buy Headquarters, Richfield, MN; Walker Art Center, Minneapolis, MN; Minneapolis Institute of Arts, Minneapolis, MN; Light Rail, Mall of America, Bloomington, MN; Minneapolis Central Library, Minneapolis, MN; Minnesota Public Radio, St. Paul, MN

■ **PAULSON & CLARK ENGINEERING, INC.**  
 2352 East County Road J  
 White Bear Lake, MN 55110  
 Tel: 651/407-6056  
 Fax: 651/407-6476  
 E-mail: pac@paulsonclark.com  
 www.paulsonclark.com  
 Established 1998

Daniel S. Paulson PE  
 Bruce A. Clark

Firm Personnel by Discipline	
Structural Engineers	2
Mechanical Engineers	2
Electrical Engineers	3
Technical	6
Total	13

We provide traditional engineering services including structural, mechanical, and electrical engineering. We also specialize in security system consulting, design and implementation services.

Best Buy Campus Security System Design, Richfield, MN; Hennepin County Government Center Duress and Alarm System, Minneapolis, MN; Robbinsdale School District (ISD #281) High School Renovations, Robbinsdale, MN; New Brighton Public Safety Building and Fire Station, New Brighton, MN; South Dakota Army National Guard Surface Equipment Maintenance Facility, Mitchell, SD; St. Ambrose Church, Woodbury, MN

■ **POWRTEK ENGINEERING, INC.**  
 20900 Swenson Drive, Ste. 570  
 Waukesha, WI 53186  
 Tel: 952/854-0203  
 Fax: 952/854-0403  
 E-mail: debbiez@powrtek.com  
 www.powrtek.com  
 Established 1995  
 Other Office: Minneapolis, MN 952/854-0203

Continued on next column

Greg Sadowski	PE
Firm Personnel by Discipline	
Electrical Engineers	2
Lighting Engineers (NCQLP)	1
Other Professional	1
Technical	2
Total	6

Powrtek's design experience includes architectural, municipal, industrial, and transportation (roadway and aviation) projects from conceptual planning through construction administration. Related systems include: energy audits, feasibility studies, power distribution, speciality lighting, security, fire alarm, and communications. Other systems include: telemetry, ground fault current and trend analysis, machine controls and PLC, etc.

Miller Park Baseball Stadium, Milwaukee, WI; AT&T, General Consulting Services; Alterra Office Building, Wauwatosa, WI; General Mitchell International Airport Parking Structure, Milwaukee, WI; Muskego High School, Muskego, WI; John H. Batten Airport, Racine, WI

■ **REIGSTAD & ASSOCIATES**  
 192 West 9th Street, Ste. 200  
 St. Paul, MN 55102  
 Tel: 651/292-1123  
 Fax: 651/292-8015  
 E-mail: greigstad@reigstad.com  
 www.reigstad.com  
 Established 1979  
 Other Office: Biloxi, MS

Gordon H. Reigstad PE, PhD, SE

Firm Personnel by Discipline	
Structural Engineers	12
Technical	16
Administrative	4
Total	32

Provides structural design for all types of projects utilizing steel, concrete, masonry, and timber systems, along with pre-stressed and post-tensioned concrete and space frame systems. Specialty structural designs include multi-story floating buildings, along with marine design, barge modifications, and mooring dolphins and, since 2001, providing anti-terrorist designed structures for military.

University of Minnesota Girls' Hockey Facility, Minneapolis, MN; Whitney Hotel Conversion, Minneapolis, MN; Shingle Springs Casino Resort, Sacramento, CA; Mohawk Casino Resort, Monticello, NY; Hard Rock Casino Resort, Biloxi, MS; Bachelor Enlisted Quarters, Keesler AFB, Biloxi, MS

■ **RLK-KUUSISTO, LTD.**  
 6110 Blue Circle Drive, Ste. 100  
 Minnetonka, MN 55343  
 Tel: 952/933-0972  
 Fax: 952/933-1153  
 E-mail: info@rlk-kuusisto.com  
 www.rlk-kuusisto.com  
 Established 1959  
 Other Offices: Hibbing, Duluth  
 and Ham Lake, MN

John Dietrich ASLA  
 Vern Swing PE  
 John Jammick PE  
 Michele Caron PE  
 Gary Brown PE  
 Joe Samuel PE

—  
 Firm Personnel by Discipline  
 Civil Engineers 41  
 Architects 5  
 Other Professionals 35  
 Technical 1  
 Administrative 12  
 Total 94

—  
 RLK-Kuusisto, Ltd. is a professional consulting firm specializing in civil engineering, transportation, surveying, planning and landscape architecture. We provide services to developers, property owners, and municipalities who focus on commercial, residential, industrial and infrastructure redevelopment. Specialized services are site development approval, value engineering, and is comprehensive to site specific engineering design and detail.

—  
 National Market Center, Blaine, MN; Valley Green Corporate Center, Shakopee, MN; Gift of Mary Children's Home, Eagan, MN; Crystal Shopping Center Redevelopment, Crystal, MN; Savage Crossings, Savage, MN; Upsher-Smith Corporate Campus, Maple Grove, MN

■ **SCHOELL & MADSON, INC.**  
 10580 Wayzata Boulevard, Ste. 1  
 Minnetonka, MN 55305  
 Tel: 952/546-7601  
 Fax: 952/546-9065  
 E-mail: mail@schoellmadson.com  
 www.schoellmadson.com  
 Established 1956  
 Other Office: Elk River, MN

—  
 Dana Swindler  
 Kenneth Adolf PE  
 Daniel Nickols RLS  
 Lee Koppay PE

Continued on next column

Firm Personnel by Discipline  
 Civil Engineers 9  
 Other Professional 10  
 Technical 22  
 Administrative 3  
 Total 45

—  
 Civil engineering (commercial, residential, industrial, retail), municipal, site planning, landscape architecture, system studies, design and construction/contract administration. Land surveys, ALTA, CIC, GPS, Topographic, Construction and As-Built. Wetland, natural resource services, environmental site assessments, cultural resources/archaeological assessment, regulatory compliance and permitting.

—  
 Shakopee Public Utility Service Center, Shakopee, MN; Wooddale Church, Eden Prairie, MN; Wolf Lake Professional Center, St. Louis Park, MN; Stone Creek Village, Plymouth, MN; Gander Mountain, Lakeville, MN; Sandstone Federal Correctional Facility, Sandstone, MN

■ **SEBESTA BLOMBERG**  
 2381 Rosegate  
 Roseville, MN 55113  
 Tel: 651/634-0775  
 Fax: 651/634-7400  
 www.sebesta.com  
 Established 1994  
 Other Offices: Boston, MA; Chicago, IL; Ames, IA; Rochester, MN; Rosslyn, VA; Dallas, TX; Colorado Springs, CO; Shanghai PR China  
 Contact: Brad Kafka

—  
 James J. Sebesta PE  
 Paul J. Blomberg PE  
 Rebecca T. Ellis PE  
 John A. Carlson PE  
 Dean R. Sharpe PE  
 Oleksa P. Breslawec PE

—  
 Firm Personnel by Discipline  
 Mechanical Engineers 77  
 Electrical Engineers 26  
 Chemical Engineers 5  
 Civil Engineers 4  
 Structural Engineers 2  
 Environmental Engineers 4  
 Architect 1  
 Other Professional 73  
 Administrative 31  
 Total 223

—  
 Sebesta Blomberg is a specialty engineering and management consulting firm providing services to institutional, industrial, health-care, energy and government markets nationwide. Services include: utility infrastructure modernization and optimization, building systems design and analysis, com-

Continued on next column

missioning, architectural lighting, controls and automation, process engineering, power generation, transmission and distribution, facilities management support, training and documentation, and construction services.

—  
 University of Minnesota, Minneapolis, MN; The Pentagon, Arlington, VA; 3M, Saint Paul, MN; University of Maryland at College Park, College Park, MD; Mayo Foundation, Rochester, MN; Minnesota Historical Society, Saint Paul, MN

■ **SHORT ELLIOTT HENDRICKSON INC. (SEH)**  
 Butler Square Building, Ste. 710C  
 100 N. 6th Street  
 Minneapolis, MN 55403  
 Tel: 612/758-6700  
 Fax: 612/758-6701  
 www.sehinc.com  
 Established 1927

—  
 Other MN Locations: St. Paul, Minnetonka, St. Cloud, Brainerd, Duluth, Virginia, Grand Rapids, Gaylord, Glencoe, Rochester and Worthington

—  
 Other Locations: Chippewa Falls, Rice Lake, Wausau, Madison, Appleton and Milwaukee, WI; Chicago, IL; Lake County and Gary, IN; Sioux Falls, SD; Bozeman, MT; Cheyenne, WY; Boulder, Denver, Westminster, Fort Collins and Pueblo, CO; Cedar Rapids, IA (Satellite Office)

—  
 David Pillatzke PE  
 Brad Forbrook AIA  
 Nancy Schultz AIA  
 Doug Parrott PE  
 John Hinzmann PE  
 Steve Gausman AIA

—  
 Firm Personnel by Discipline  
 Civil Engineers 263  
 Structural Engineers 10  
 Mechanical Engineer 2  
 Electrical Engineers 17  
 Architects 17  
 Other Professional & Eng. 93  
 Technical 243  
 Administrative 125  
 Total 770

—  
 Full-service professional consulting firm specializing in civil, structural, electrical, mechanical, traffic, transportation, environmental and waste resources engineering, architecture and landscape architecture; GIS; community planning and construction administration. Projects include industrial/educational/institutional sector projects.

Continued on next column

U.S. Fish and Wildlife Interpretive Center, Oak Harbor, OH; Mound Public Safety Facility, Mound, MN; Airport Control Tower, St. Cloud, MN; Fortune Bay Golf Resort Club House, Vermillion, MN; Arrival/Departure Building, Redwood Falls, MN; Government, Forestry and Maintenance Facility for Washburn County, Shell Lake, WI

■ **SLL/LEO A DALY**  
 730 2nd Avenue South, Ste. 1100  
 Minneapolis, MN 55402  
 Tel: 612/338-8741  
 Fax: 612/338-4840  
 E-mail: gnfern@leoadaly.com  
 www.leoadaly.com  
 Established 1915

—  
 Other Offices: Atlanta, GA; Dallas, Austin, Fort Worth, Houston, San Antonio, and Waco, TX; Hong Kong; Honolulu, HI; Las Vegas and Los Angeles, CA; Miami, FL; Omaha, NE; Phoenix, AZ; Washington, D.C.

—  
 Robert E. Egge AIA  
 Charles M. Ault PE  
 Howard F. Goltz AIA  
 Jerome A. Ritter AIA

—  
 Firm Personnel by Discipline  
 Civil Engineers 2  
 Structural Engineers 12  
 Mechanical Engineers 16  
 Electrical Engineers 12  
 Architects 35  
 Other Professional 2  
 Administration 17  
 Total 96

—  
 SLL/LEO A DALY (formerly Setter Leach & Lindstrom) offers civil, structural, mechanical, electrical and technology-engineering services with a full complement of registered professionals in each discipline. As a full-service architecture, engineering and interior design firm of 1100, LEO A DALY has a wealth of experience designing a broad range of new construction and renovation projects.

—  
 Fairview Red Wing Medical Center, Red Wing, MN; Veterans Affairs Medical Center, Tomah, WI; Education Center, Ellsworth Air Force Base, SD; Visitors Quarters, Kunsan Air Force Base, Republic of Korea; SYSCO Foods, Fargo, ND; Safeway Inc., Auburn, WA

■ **STEEN ENGINEERING, INC.**  
5430 Douglas Drive North  
Crystal, MN 55429  
Tel: 763/585-6742  
Fax: 763/585-6757  
E-mail: steen@steeneng.com  
Established 1993

—  
Mark R. Brengman PE  
Steven M. Youngs PE  
Eugene A. Striefel

Firm Personnel by Discipline	
Mechanical Engineers	7
Electrical Engineers	6
Technical	4
Administrative	3
Total	20

—  
Steen Engineering provides all aspects of Mechanical and Electrical Engineering design from feasibility studies to construction administration for its clients. We have design experience in corporate, municipal, medical, hospitality, institutional and retail - providing HVAC, plumbing, fire protection, lighting, power distribution, life safety, automatic temperature control, energy and analysis and deficiency studies.

—  
Bloomington Care Center, Bloomington, MN; White Rock Bank, Red Wing, MN; City Bella Grammercy, Richfield, MN; Hotels/Motels (AmericInn, Country Inn & Suites, Hilton and Marriott), Nationwide; Numerous Independent, Assisted and Skilled Nursing Facilities, Nationwide; Buffalo Wild Wings, Nationwide

■ **STRUCTURAL DESIGN ASSOCIATES, INC.**

6860 Shingle Creek Parkway Ste. 201  
Minneapolis, MN 55430  
Tel: 763/560-5300  
Fax: 763/560-5400  
E-Mail: sda@sdaeng.com  
www.sdaeng.com  
Established 1989  
Other Office: Brainerd, MN

—  
Gregory J. Duerr PE  
—  
Firm Personnel by Discipline  
Structural Engineers 6  
Technical 3  
Administrative 1  
Total 10

Continued on next column

Structural Engineers providing design, construction documents, reports, and construction administration services for projects in the educational, industrial (manufacturing, warehousing, equipment supports, and repairs), commercial, municipal, medical, and renovation fields. Services provided to Architects, Owners, Contractors, Developers and others.

—  
Waconia Middle School, Waconia, MN; Buffalo High School, Buffalo, MN; Green Bay Packaging Addition, Wausau, WI; Conference Center for Andersen Windows, Bayport, MN; Redwood Falls Hospital Addition, Redwood Falls, MN; Brentwood Hills Apartments, Inver Grove Heights, MN

■ **3D/I**  
60 South Sixth Street  
Minneapolis, MN 55402  
Tel: 763/545-1355  
E-mail: degenhardt@3di.com  
www.3di.com  
Established 1953

—  
Other Offices: Albuquerque, NM; Austin, Dallas, Houston, Longview and San Antonio, TX; Los Angeles, Sacramento, San Diego and San Francisco, CA; Miami and Orlando, FL; Phoenix, AZ; Salt Lake City, UT; Washington, D.C.

—  
Robert Degenhardt PE  
Robert Huddleston PE  
Robert Struve PE  
Barry Badinger CCM  
William Huttinga CCM  
Kevin Becker CCM

Firm Personnel by Discipline	
Civil Engineers	12
Mechanical Engineers	9
Electrical Engineers	5
Environmental/Refrigeration Engineers	3
Architects	36
Other Professional	402
Technical	24
Administrative	93
Total	584

—  
3D/I is a company of project managers, construction managers, architects, engineers and environmental consultants. We design, build, manage and consult on projects for educational, government and commercial clients.

Continued on next column

St. Joseph's Medical Center, Brainerd, MN; Westonka Public Schools, Mound, MN; Nobles County Prairie Justice Center, Worthington, MN; Grand Meadow Public Schools, Grand Meadow, MN; Jackson County Courthouse and Justice Center, Jackson, MN; Park Nicollet Health Services, Minneapolis, MN

■ **TKDA**  
1500 Piper Jaffray Plaza  
444 Cedar Street  
Saint Paul, MN 55101-2140  
Tel: 651/292-4400  
Fax: 651/292-0083  
E-mail: deitner.we@tkda.com  
www.tkda.com  
Established 1910  
Other Office: Aurora, IL

—  
Richard N. Sobiech PE  
William E. Deitner PE  
Robert A. Boyer PE  
Gary M. Christensen PE  
Vincent T. Montgomery PE  
Dean A. Johnson AIA

Firm Personnel by Discipline	
Civil Engineers	72
Structural Engineers	9
Mechanical Engineers	8
Electrical Engineers	3
Transportation Engineers	2
Architects	9
Other Professional	4
Technical	66
Administrative	30
Total	203

—  
Planning, design, and construction engineering for mechanical, electrical, structural, municipal, environmental, highway/bridge, railroad, airport, architectural and landscape architectural projects.

—  
Light Rail Transit Maintenance Facility, Minneapolis, MN; Metro Transit Control Center, Minneapolis, MN; Airfield Lighting Electrical Center, MSP International Airport; City of North St. Paul City Hall, Police and Fire Station, MN; Eagan Central Park Community Center, Eagan, MN; Marathon Ashland Petroleum Administrative Building, St. Paul Park, MN

■ **ULTEIG ENGINEERS, INC.**  
P.O. Box 1569  
Fargo, ND 58107  
Tel: 701/237-3211  
Fax: 701/237-3191  
E-mail: info@ulteig.com  
www.ulteig.com  
Established 1944  
Other Offices: Minneapolis, MN; Sioux Falls, SD; Bismarck, ND

—  
Bob McCauley PE  
Dan Sargeant PE  
Walt Gregory RLS  
Mark Sornsin PE  
Todd McInerney PE  
Loren Winters PE

Firm Personnel by Discipline	
Civil Engineering	43
Structural Engineering	20
Mechanical Engineering	5
Electrical Engineering	23
Other Engineering	40
Other Professional/Technical	71
Administrative	18
Total	220

—  
Commercial Electrical for electric, data, emergency power, and security systems; Mechanical Engineering for HVAC automation/temperature control, and plumbing; FIRE Protection Engineering for protection and suppression; Structural Engineering - for variety of buildings and structures; Site Design for commercial and private development, parks and sports complexes; Civil Engineering for water, wastewater, and storm water systems; Hydrology and Hydraulic Services; Municipal Engineering; Airports, Bridges and Transportation Engineering; Survey Services, including legal; topographic; ROW acquisition; construction staking; ALTA; GPS, platting; and underground utilities.

—  
Bismarck Municipal Airport Terminal, Bismarck, ND; King Science Hall Addition, Minnesota State University at Moorhead (MNSCU System), Moorhead, MN; Joint Use Facility, Moorhead/Clay County/MNDOT; St. Joseph's Hospital, Brainerd, MN; New Horizon Day Care Center, Minneapolis Metro Area, MN; Jonathon Montessori School, Chaska, MN

**VAN SICKLE, ALLEN & ASSOCIATES, INC.**

2955 Xenium Lane North, Ste. 10  
Plymouth, MN 55441  
Tel: 763/559-9100  
Fax: 763/559-6023  
E-mail:

sstangeland@vansickleallen.com  
www.vansickleallen.com  
Established 1978  
Other Offices: Hutchinson, KS

Richard Van Sickle PE  
Scott Stangeland PE  
S. (Shawn) Shahriar PhD, PE  
Keith Jacobson PE  
Gene Haldorson  
Bernie Jansen

Firm Personnel by Discipline

Civil Engineers	3
Structural Engineers	14
Technical	14
Administrative	4
Total	35

Structural and Civil Engineering services for commercial, corporate, educational, retail, government, health care, hotel, senior housing and parking facilities.

Engineering and planning for industrial and agribusiness including food and dairy processing facilities; shipping and handling facilities; grain storage, handling and processing; ethanol facilities; manufacturing; and power plants.

New Guthrie Theater, Minneapolis, MN; Fort Snelling Army Reserve Building, Fort Snelling, MN; University of Minnesota Morris, Morris, MN; Meridian Crossing, Richfield, MN; Sysco Food Warehouse Expansion, Moundsview, MN; Apple Valley City Hall, Apple Valley, MN

**WENZEL ENGINEERING INC.**

10100 Morgan Avenue S.  
Bloomington, MN 55431  
Tel: 952/888-6516  
Fax: 952/888-2587  
E-mail: weien@mcleodusa.net  
www.wenzelengineering.com  
Established 1990

Lowell E. Wenzel PE  
Patricia A. Cole PE  
Jeff A. Segar PE  
Steve Rivard PE

Firm Personnel by Discipline

Structural Engineers	4
Technical	1
Administrative	1
Total	6

Continued on next column

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.

Iowa State Capitol Renovation, Des Moines, IA; American Indian Resource Center, Bemidji State University, MN; Marketplace Lofts, Hopkins, MN; Lamoreaux Building Addition, Minneapolis, MN; Pfizer Corporation, Holland, MI; Leech Lake Tribal College, Cass Lake, MN

**WESTWOOD PROFESSIONAL SERVICES, INC.**

7599 Anagram Drive  
Eden Prairie, MN 55344  
Tel: 952/937-5150  
Fax: 952/937-5822  
E-mail: wps@westwoodps.com  
Established 1972

Other Offices: St. Cloud and Brainerd, MN

Dennis Marhula PE  
Dwight Jelle PE  
Martin Weber LS  
Paul Greenhagen LS  
Richard Wiebe LA  
Bruce Grivna LS

Firm Personnel by Discipline

Civil Engineers	17
Other Professional (LA & RLS)	24
Technical	68
Administrative	11
Total	120

Westwood is a Minnesota-based, full-service engineering consulting firm, specializing in land development, and providing planning, landscape architecture, surveying, civil engineering and traffic services to private and public agencies. Westwood was established in 1972, and now operates three Minnesota offices, with the headquarters in Eden Prairie and branch offices in St. Cloud and Brainerd, MN

Continued on next column

West Ridge Market, Minnetonka, MN; Super Targets, Lakeville and Blaine, MN; Evermoor, Rosemount, MN; Liberty on the Lake, Stillwater, MN; Cobblestone Lake, Apple Valley, MN; Minneapolis Traffic Operations Project, Minneapolis, MN

**WIDSETH SMITH NOLTING**

2000 Industrial Park Road South  
Baxter, MN 56425-2720  
Tel: 218/829-5117  
Fax: 218/829-2517  
E-mail: wsnbrd@wsn-mn.com  
www.msn-mn.com

Established 1975  
Other Offices: Alexandria, Bemidji, Crookston, MN; Grand Forks, ND

Bruce Buxton PE  
Don Anderson PE  
Reed Becker AIA  
Kevin Donnay AIA  
Paul Richards AIA  
David Kildahl PE

Firm Personnel by Discipline

Civil Engineers	22
Structural Engineers	3
Mechanical Engineers	4
Electrical Engineers	1
Sanitary and Transportation Engineers	3
Architects	14
Other Professional Technical	61
Administrative	18
Total	140

WSN is a fully-integrated engineering, architecture, land surveying and environmental services firm. Our engineering group includes: Civil - primarily municipal and water resources; Structural - project specific, industrial and bridges; Mechanical/ Electrical - HVAC, plumbing and lighting. Our complete team solves a variety of design and construction issues from planning to completion.

ISD 181 Forestview Middle School, Baxter, MN; Sanitary District (ALASD) System Improvements, Alexandria Lakes Area, MN; City of Crookston Well System Improvements, MN; Tastefully Simple, Inc. Office and Warehouse Renovation and Expansion, Alexandria, MN; Crow Wing County CSAH 20, MN; Water Tower #3, Bemidji, MN

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Donald Borcharding PE, RLS  
Chris Colby AIA, CID  
Jose Rivas AIA  
Scott Samuelson PE  
Robert Ellis

Firm Personnel by Discipline

Civil Engineers	24
Other Engineers	36
Architects	5
Other Professional	47
Technical	30
Administrative	26
Total	168

Municipal, transportation, land development, geo-technical, environmental and structural engineering including streets, water supply and storage, storm sewer systems, highways, airports, subdivision design, water and wastewater treatment, and environmental studies, bridges, box culverts, buildings and other structures. Surveying activities for engineering, land and geodetic control surveys.

Rochester Fire Station #3, Rochester, MN; Somerby Golf Community, Byron, MN; Barnes & Noble/Food Court, Apache Mall, Rochester, MN; Merchants Bank, Rochester, MN; IOWA/DOT Rest Areas; Highway 52 Design Team, Rochester, MN

**The M.I.N.D. Institute**

University of California-Davis Medical Center  
 Location: Sacramento, CA  
 Client: University of California  
 Firm-of-record: Hammel Green and Abrahamson, Inc.  
 Project principal: Stephen Short, AIA  
 Project manager: Bill O'Malley, AIA  
 Design principal: Bill Blanski, AIA  
 Project architect: Jim Butler, AIA  
 Additional project-team members:  
 Craig Bailey; Krista Biason; Vlad Chahovskoy, AIA; Ilde DeAlba, AIA; Mark Donatelle; Rich Firkins; Ryan Fish; Gary Fishbeck; George G. Gorbatenko Jr.; Tao Ham; Creed Kampa, AIA; Joe Krumpelmann, AIA; Peter Haag, Steve Peper; Emanouil Spassov; George Strand; Chris Vickery; Megan Wang

Construction manager: ProWest PCM, Inc.

Interior design: HGA

Landscape architecture: HGA

Mechanical engineering: HGA

Lighting designer: HGA

Plumbing: Nelson & Associates

Electrical engineering: HGA

Telecommunications: M. Neils Engineering, Inc.

Civil engineering: Omni-Means

Structural engineering: Anderson & Doig

Interior color advisor: AJ Paron-Wildes

Face brick: Coming Donahue

Exterior stone: Vetter Travernelle

Casework: Fisher Hamilton

Wall covering: Maharam

Flooring systems/materials: Lee's and Bentley

Window systems: Walters and Wolf

Metal panels: Urata

Concrete: Pacific Erectors

Translucent panels: Knoll Imago

Millwork: Artisans

Photographer: Richard Barnes

**Northern Illinois Medical Center Ambulatory Care Center**

Location: McHenry, IL

Client: Centegra Health System; vice president, operations, Sandi Davis

Architect: BWBR Architects, Inc.

Principal-in-charge: C. Jay Sleiter, AIA

Project manager: Ananth Shankar, AIA

Project architect: Jeff Krueger

Design leader: Jim Davy, AIA

Medical planner: Glenn Manni

Interior designer: Susan Clark

Staff architect: David P. Leighly, AIA

Code reviewer: Roger Larson, AIA

CAD technician: Pete Mikkelsen

Construction administrator: Brad Fitzsimmons

Structural/mechanical/electrical engineering:

KJWW Engineering Consultants, P.C.

Engineering principal-in-charge: Paul VanDuyne

Structural engineer: Dan Huntington

Mechanical engineer: Paul Parry

Electrical engineer: Richard Gilson

Civil engineering: Smith Engineering

Consultants, Inc.

Project manager: Timothy Hartnett

Project engineer: Joseph Vavrina

Construction manager: M.A. Mortenson

Company

Principal-in-charge: Greg Werner

Construction executive: Larry Arndt

Project manager: Bill Igel

Field engineer: Ryan Poropet

Landscape architect: Douglas Hills Associates

Landscape architect: Douglas Hills

Owner's representative: Hammes Company

Senior project executive: David Connolly

Project executives: Rodney Casey, Bob Droese

Structural steel/erector: McFarland

Manufacturing Co./J.P. Cullen & Sons

Excavator: Snelten, Inc.

Face brick and stone contractor: Jimmy'Z

Millwork and cabinetwork contractor: Redbud

Ridge Custom Shop, Inc.

Flooring systems/materials: Johnson Flooring Company

Wall and ceiling finishes: International Decorators, Inc.

Window systems: Prime Architectural Metal and Glass

Architectural metal panels: MetalMaster/RoofMaster, Inc.

Concrete work: Bolter Construction

Company, Inc.

Mechanical contractor: Sherman Mechanical, Inc.; Martin Petersen Company

Electrical contractor: Carey Electric

Contracting, Inc.

Photographer: Philip G. Prowse

**Northwoods Dental**

Location: Plymouth, MN

Client: Scott Scharf, D.D.S.

Architect: Paul Meyer Architects, Inc.

Principal-in-charge: Paul Meyer, AIA

Project team: Tom Wasmoen AIA, Todd Donskey

Design/build mechanical: Horwitz, Inc.

Design/build electrical: Egan-McKay Electrical Contractors, Inc.

Interior finishes: Beth Nordstrom, BDH&Young

General contractor: Scott Builders, Inc.

Stone: cultured stone by Brock White;

Installed by Hollenback & Nelson, Inc.

Cabinetwork: Damschen Wood, Inc.

Flooring & ceiling materials: Minnesota Acoustics, Inc.

Painting & wallcovering: Swanson & Youngdale, Inc.

Dental millwork & equipment: Patterson Dental Supply, Inc.

Photographer: Landmark Photography & Design

**Gasterland Residence**

Location: Minneapolis, MN

Client: Hans and Barb Gasterland

Architect: McMonigal Architects, LLC

Principal-in-charge: Rosemary McMonigal, AIA

General contractor: Luloff Inc.

Structural engineer: Jim Krech, Krech, O'Brien, Mueller & Wass

Energy and systems consultants: Steve Klossner, Mark LaLiberte

Multiple chemical sensitivities consultation: Mary Oetzel

Feng shui: Mary Jane Pappas

Landscape designer: Cole Burrell with Native Landscape Design & Restoration

Landscape contractor: Brubaker Landscape Design

Photographer: Andrea Rugg

**Molecular and Cellular Biology Building**

University of Minnesota - Minneapolis Campus

Location: Minneapolis, MN

Client: University of Minnesota

Architect: Perkins & Will

Principals-in-charge: Chuck Knight, AIA

(Minneapolis); Richard M. Smith, AIA

Project managers: Marianne O'Brien, AIA, Walter Bissonnette

Project architect: Geoff Brooksher, AIA

Project lead designer: Ralph Johnson, FAIA

Project team: Ted Davis, AIA (designer); Randy

Guillot, AIA (designer); Melody Devine

(interiors); Bruce Corzine, AIA, Doug

Pierce, AIA, Trevor Dickie

Structural-engineering team: Ericksen Roed

Mechanical-engineering team: BR+A

Electrical-engineering team: BR+A

Civil-engineering team: Van Sickle, Allen & Associates, Inc.

Lighting designer: BR+A

Interior design: Perkins & Will

Owner's representative: Armlin North

Contractor: Mortenson

Landscape architect: Close Associates

Landscape project team: Andrew Caddock

Face brick: Mn Brick and Tile and Ochs

Stone: American Artstone

Cabinetwork: Haldeman Homme

Window systems: TruTherm

Architectural metal panels: MG McGrath -

Alucobond & Centria

Concrete work: Mortenson

Millwork: Mid-Canada

Photographer: Don F. Wong

**Hazelden Meditation Center**

Location: Center City, MN

Client: Hazelden Foundation

Architect: Meyer, Scherer & Rockcastle, Ltd.

Principal-in-charge: Jeffrey Scherer, FAIA

(design), Thomas Meyer, AIA,

(partner peer review)

Project manager: Paul Hannemann, AIA

Project architects: Paul Hannemann, AIA

Project lead designer: Jeffrey Scherer, FAIA

Project team: Adam Back, Malini Srivastava,

Min Wang, Rebecca Foss

Structural-engineering team: Meyer, Borgman and Johnson, Inc., (Rollie Johnson, project manager)

Mechanical-engineering team: Jack Snow & Associates (Jack Snow, project manager)

Electrical-engineering team: Kaeding &

Associates (Scott Hutchins, project

manager)

Civil-engineering team: Clark Engineering

(Leonard Linton, project manager)

Lighting designer: Carla Gallina (MS&R)

Interior design: Jodi Klammer (MS&R)

Construction manager: Watson-Forsberg

Company (Dale Forsberg, project manager)

Landscape architect: Coen & Stumpf

Associates, Inc. (Shane Coen, project manager)

Landscape project team: Shane Coen and

Nathan Anderson

Stone: Tompkins bluestone, installed by

Axel H. Ohman

Flooring systems/materials: Bamboo flooring

by Architectural Sales of Minnesota

Window systems: Wood/aluminum windows

by H Window

Concrete work: Cast-in-place concrete

foundation by Axel H. Ohman

Construction

Millwork: Douglas fir millwork by Heebink

Architectural Woodwork: installed by

Northside Construction

Photographer: Rik Sferra

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COURTESY KKE

## St. Paul Healing Center for Victims of Torture

*Who:* KKE Architects, Inc., Minneapolis, Minnesota; Rob Grundstrom, Assoc. AIA, project designer.

*What:* This new healing center for the Center for Victims of Torture is the Minnesota-based organization's second facility. CVT works locally, nationally and internationally to heal the wounds of torture on individuals, their families and their communities, and also to stop torture worldwide. The pro-bono project is an extensive renovation and addition to the 1886 Zene Bohrer house in the Historic Hill District of St. Paul. The architectural philosophy behind the renovation is to provide a homelike setting in the meeting and healing rooms, in addition to modern exam and physical-therapy rooms, so clients can receive torture-treatment care and rehabilitative services in a warm and sensitive setting.

*Where:* St. Paul, Minnesota.

*When:* Completed January 2004.

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*Photographs provided by:  
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