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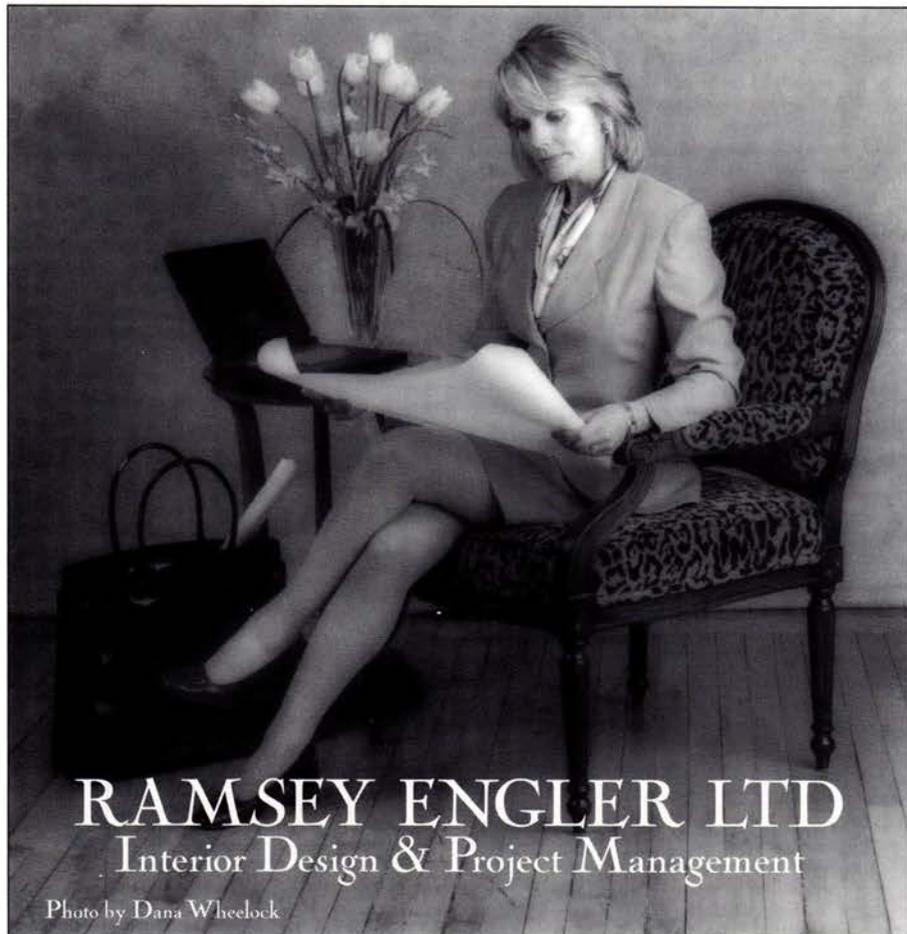
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Firmly commodified and not too delighted

By Bill Beyer

One of my favorite stories in Richard Brautigan's *Trout Fishing in America* describes a trip to the Cleveland Wrecking Yard. Among the salvage items stored in this place is a trout stream, cut up into sections, and available priced by the foot, like lumber or any other commodity. Certain sections are richer in fish than others; one even comes with a bridge. Insects are free with a 10-foot minimum purchase. Birds are 35 cents each, used. Waterfalls are stored in the used-plumbing department, priced individually.

Vitruvius, writing in the first century B.C., in *The Ten Books on Architecture*, spoke of essential architectural attributes, which have been variously translated as "firmness, commodity and delight," or "durability, convenience and beauty." (Commodity is from the Latin word *commodus*—fit, convenient, useful.) Commodity was a good thing then. In our more aggressively commercial culture it has evolved into a pejorative term for interchangeable or standardized items of little value. Lumber, corn and soybeans are commodities, as are common nails. Prices are set on the world market. You buy commodities based on price alone, because quality is assumed to be roughly equal, or irrelevant. HMOs are commonly said to have commodified medical services.

Architects' construction documents, plans and specifications have been the subject of standardization over the years, to the general benefit of the architectural profession and building industry. Architects' drawings

Although often viewed as a commodity, the practice of architecture in its truest form is a continuum of discovery and investigation

now appear almost generic, all perfectly plotted with the aid of the computer. The CADD sweatshops of southeast Asia are a reality, with workers busily stitching scupper details together while we sleep and zapping them back to us electronically. The production of architects' drawings has been commodified, but the content remains widely variable.

The drafting skills once necessary to render elegant pencil-on-linen, hand-lettered construction drawings are no longer evident or necessary today. The art of drafting was not perfect, however: The passage of light through linen or vellum to fix the drawn image on blue-line paper involved some loss of line quality. Today ink-jet printers crisply lay down black on white every time. Digital memory conveniently stores every jot and title for future use.

Time used to be necessary just to make the drawing. Now the time must be consciously taken. Drawing time was training/thinking time. Ideas of connection were rolled around in our minds, and parts became more perfectly formed and connected as hands slowly applied understanding to linen. The time it once took to develop, trace and retrace details now can be replaced by a few keystrokes. Without special attention, such sudden images can lose their embodied understanding.

Architects produce more drawings and more massive specifications for projects these days, but don't seem to communicate intent any better. Perhaps we confuse the clarity and perfection of machine drafting with actual content, much as we confuse the exchange of information with communication. Drivel rendered beautifully is nothing more than attractive drivel. True communication requires understanding and connection; neither of these are quickly or easily achieved.

Information and knowledge seem to be increasingly used interchangeably. They are not the same. Information is useful stuff, but knowledge implies comprehension and understanding. Has our electronically commercial culture finally driven us toward the commodification of knowledge itself? I don't believe real knowledge can be priced or valued by unit measure. Commodification short-changes the relational qualities of understanding and separates the knowing from the doing.

In AIA's national newsletter, the drums are beating out the latest message that architecture is a "knowledge-based" profession. Are there any ignorance-based professions? Has the meaning of professionalism finally become so debased that we have to utter this vacuous twaddle? Do we really differentiate and elevate our profession by claiming to be knowledge-based, or do we only advertise our desperation?

The profession of architecture is like the trout stream, alive and ever-changing, sparkling with eddies of information and ripples of intellectual challenge. The water level is rising and the current increasing. The pesky insects of change buzz in our ears. In spite of the trends of commodification, our stream cannot be effectively cut into sections and sold off. Architecture is a continuum of discovery and investigation, a river of challenge and of delight. It must be learned and practiced whole, by wading in and engaging the current while enjoying the beauty.

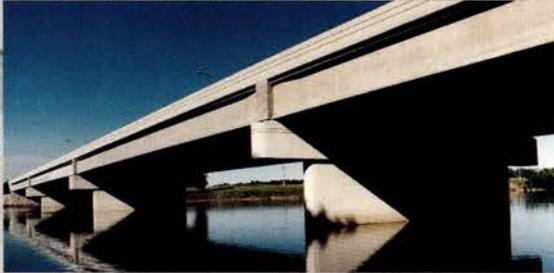


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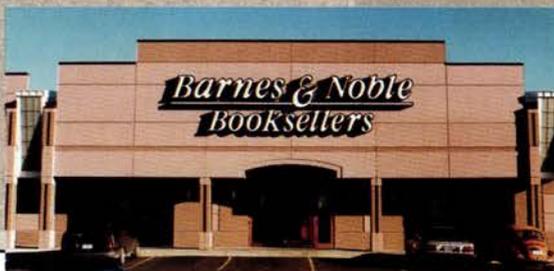
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Delhi Coronet Band Hall**Delhi, Minn.****1896**

Many towns in western Minnesota owe their origin to railroads that needed a “stop”—a place for support facilities at various intervals along newly laid tracks. Favorable geography lured speculators and settlers to turn prairie soil into productive enterprise. In the late-19th century, Delhi grew from a railroad stop into a typical southwestern Minnesota village, with flour mills, a creamery, blacksmith shops, hotels, livery stables, general-merchandise stores and a bank. Churches, schools and houses clustered around these commercial buildings on Third Street.

In 1896 a local musical organization, the Delhi Coronet Band, built a wood-framed, 1-story band hall with a simple “false-front” incorporated into the gabled roof and crowned by an open belfry housing a cast-iron bell. Drop-lap siding clads the 24-by-64-foot structure. This simple architectural expression survived well beyond the structure’s initial use.

In the late-19th century, coronet bands provided a creative expression for young farmers, as well as an important part of popular culture. Brass instruments were readily obtainable and their wide-horned rims were built-in



ROBERT ROSCOE

amplifiers that rendered music with a veritable civic presence. In its active years the Delhi Coronet Band Hall also served community meetings, elections and weekend dances. Its rooftop bell announced fire calls.

Today the band hall sits silently alone, amid wide expanses of grass where commercial buildings once bustled with activity. At some time in the early 20th century, advances in rail transportation and consolidation of agricultural markets made Darwinian winners and losers out of small towns throughout southwestern Minnesota. The bank building down the street, now used for storage, is the only other survivor of Third Street’s turn-of-the-century streetscape.

The only active buildings in Delhi today are the newish vinyl-wrapped houses whose inhabitants work in nearby Redwood Falls and other surrounding towns, a few churches and various commercial activities in small, scattered prefabricated metal buildings.

The Delhi Coronet Band Hall remains standing, its wood frame a bit racked, with some of its once-decorous, stamped-metal ceiling peeled away from roof framing that shows occasional bits of daylight. Young musicians no longer brass off for the townspeople. Today, the coronet band hall’s only civic function is its service as a raw sarcophagus for Delhi’s old Model T firetruck that sits near the stage like an Egyptian sun chariot ready for its ultimate voyage.

The village council a few years ago deliberated over renewing the hall, but ultimately voted to raze it. That, fortunately, didn’t happen. Last summer the city hired a contractor to power wash the walls to prep the building for painting. The power washer went to work and got the job done. The painter never showed up. For now, the band hall waits in limbo.

Robert Roscoe

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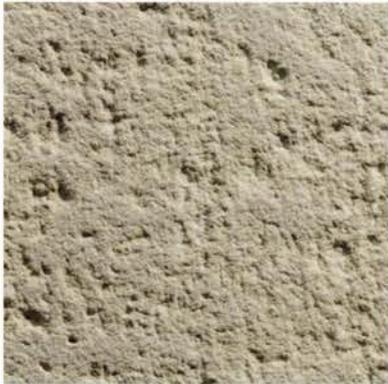




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Answer _____



Answer _____



Answer _____

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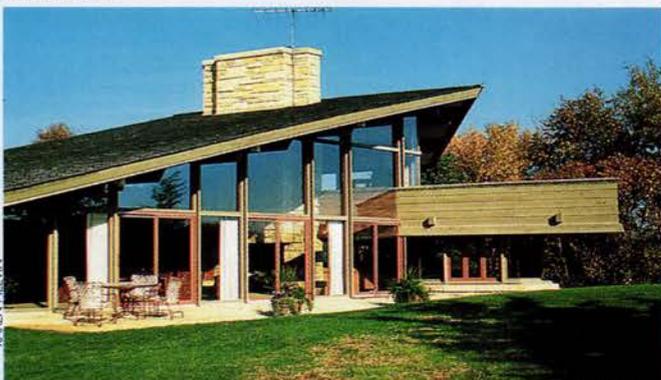
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Five projects from a pool of 100 submissions received 1997 AIA Minnesota Honor Awards. The jurors, who favored the small and intimate over the large and impersonal, were most impressed with buildings that reflected a consistently high level of detail, a "quality of restraint yet exuberance."

Winners are a **Prairie House Renovation** (featured May/June '95) in Hamel, Minn., by Mulfinger, Susanka, Mahady & Partners; "The Whim" Guest House in Pepin County, Wis., by Stageberg Beyer Sachs; the Chanhassen Pedestrian Bridge in Chanhassen, Minn., by Meyer, Scherer & Rockcastle; Gooseberry Falls State Park Visitor Center/Highway Rest Area (featured this issue) in Two Harbors, Minn., by Salmela Fosdick Ltd.; and Brandenburg's Ravenwood Studio in Ely, Minn., by Salmela Architect, initiated by Salmela Fosdick.

The three jurors included **William Bruder** of New River, Ariz., **Wendy Evans Joseph** of New York City, and **Mehrdad Yazdani** of Los Angeles.

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SIMULATION, IMITATION AND DECEPTION [fly fishing]
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THE FORMAL DESIGN OF FESTIVALS [the Olympic Games] DESIGNING FOR DISABILITIES + CAPABILITIES [mono-ski + racing wheelchair]
FORMS FOR RITUAL & TRADITION [Sumo Wrestling] THE ETHICS OF DESIGNING THE BODY - THE AESTHETICS OF ATHLETICS
BETTER PERFORMANCE WITH BETTER THEORY [Biomechanics and the physics of the curve ball]
FAILURE AND SUCCESS IN DESIGN [the bike that was so successful it failed] DESIGNING INSTRUMENTS OF MEASUREMENT
DESIGNING THE SPORTS LANDSCAPE - THE STREET AS A PLAYING FIELD - KEEPING GEESE OFF THE GOLF COURSE
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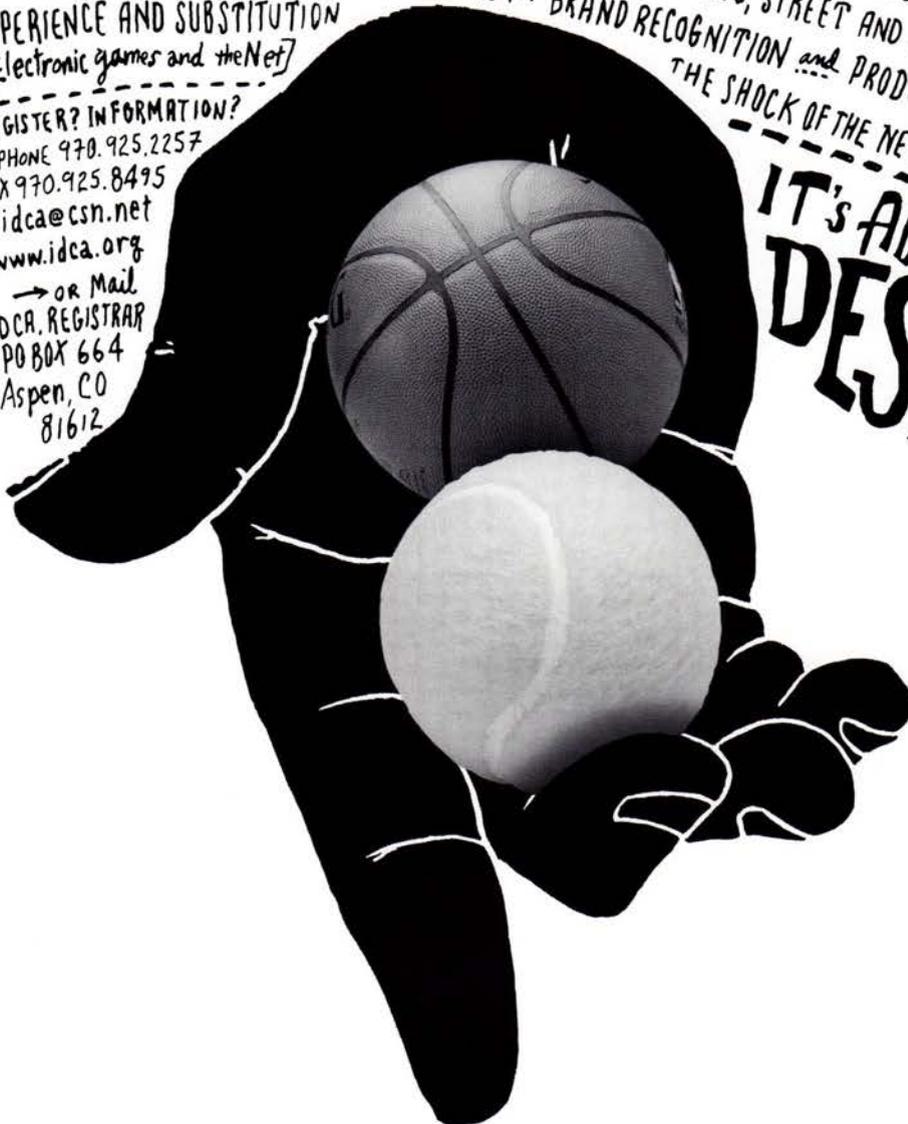
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RAFFERTY RAFFERTY TOLLEFSON, one of Minnesota's most prominent architecture firms, is the 1997 recipient of the AIA Minnesota Firm Award. The architectural association chose RRT for its high-quality design work across a spectrum of building types. The 23-person firm, which has won more than 60 local and national architectural design awards since its founding in 1961, is particularly well-known for its liturgical work. Notes Bill Beyer, 1997 AIA Minnesota president, "A legacy of consistent design excellence, combined with an ethic of service to the profession across two generations made [this]...an easy choice."

Pillsbury redux



FOR THOSE LAMENTING the demise of Ralph Rapson's famed 1962 Pillsbury House, which was razed last winter along Lake Minnetonka, you now can scan a new CD-ROM for a virtual tour of the modernist classic. Produced by Lisa Nebenzahl Productions, the *Jewel on the Lake* is available through Walker Art Center and Minneapolis Institute of Arts bookstores, or by calling (612) 866-0600.



ARCHITECTS are fond of flexing their design muscles outside of strict building design, as seen with this fanciful series of art lamps by Joseph Krumpelmann and Eric Amel. The two designers, working by day at Minneapolis architecture firms, pursue individual and collaborative lamp ventures through their freelance studio Rosencrantz and Guildenstern. The lamps clearly draw inspiration from architecture, functioning as both decorative elements and explorations in architecture. For more information, call Krumpelmann at (612) 373-4620.

Calendar

Furniture Mix
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Minneapolis
Through Jan. 10

Thirteen furniture artists tackle innovative solutions to traditional furniture design. For more information, call (612) 338-1668.

The Unseen Wanda Gag
Frederick R. Weisman
Art Museum
University of Minnesota
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Through Jan. 25

Watercolors, pen-and-ink drawings and hand-written diary pages showcase the work of this native Minnesota artist and illustrator. For more information, call (612) 625-9494.

New England Hearth and Home
Minneapolis Institute of Arts
Through Jan. 25

Two companion exhibits explore the influences of New England decorative arts and collectibles in Minnesota. For more information, call (612) 870-3000.

The Indian Sari:
Draping Bodies, Revealing Lives
The Goldstein
McNeal Hall
University of Minnesota
St. Paul
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Robert Colescott:
Recent Paintings
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Karal Ann Marling

With a new exhibit and accompanying book, this University of Minnesota professor examines the cultural and architectural influences of the wonderful world of Disney

One morning 40 years ago, 13-year-old Karal Ann Marling helped her younger brothers color pictures on a cereal box during breakfast. Her mother submitted the pictures in a contest and young Karal Ann won a trip to Disneyland. Her dream had come true. Walt Disney's new theme park had opened two years earlier in Anaheim, Calif. In Disneyland, animator and

moviemaker Walt Disney had created a kid-friendly world of amusements, doll-house buildings, model trains and "lands" (Fantasyland, Adventureland, Frontierland, Tomorrowland) that celebrated the child's point of view.

But adults have found Disneyland appealing, too, argues Marling, now curator of an exhibition at the Walker Art Center titled "Designing Disney's Theme Parks: The Architecture of Reassurance." The buildings' turn-of-the-century façades and forced perspectives (first stories are full-scale, the second and third stories are 5/8 scale) offer feelings of comfort and control. Disneyland's pedestrian orientation (all cars are parked outside its gates) and public transportation (a train carries passengers along the perimeter of the park) put people back on their feet.

A berm surrounding the park shields it from the outside world. Disney's "hub and wienie" layout ("wienie" being Disney's term for tall vertical elements or "visual treats" that aid orientation) ensures no one gets lost. And Main Street U.S.A., the gate-

way to Disneyland through which all visitors pass, represents the American ideal of a safe, harmonious community. Together, these components give the visitor a sense of reassurance not readily available in the outside world, Marling says.

Since opening in 1955, Disneyland has become an international symbol of America's blithe spirit, spawning variations in Orlando, Tokyo and Paris. But while it represents the dream vacation to many people, critics have vilified Disneyland as fascist and fake, as a horrific encapsulation of the dregs of American culture. One French critic even described Disneyland Paris as a "cultural Chernobyl." For Marling, them's fightin' words.

Today a professor of art history and American studies at the University of Minnesota, as well as a curator of other exhibitions, Marling is a historian with a passion for what she calls "ordinary people's aesthetic standards and taste." She has celebrated cultural icons of the middle class in her books *Graceland: Going Home with Elvis* (1996), *As Seen on TV: The Visual Culture of Everyday Life in the 1950s* (1994) and *Blue Ribbon: A Social and Pictorial History of the Minnesota State Fair* (1990). In "The Architecture of Reassurance," she casts a fresh eye on Disneyland and examines its influence on contemporary American architecture. *Architecture Minnesota* talked with Marling about architecture that reassures and Disney's legacy.

Disneyland architecture, with its skewed perspectives and cartoon angles, strikes me as an architecture of illusion. How did you come to find reassurance in it?

One thing Walt Disney wanted to do with Disneyland was counter what he saw as not-so-good stuff going on outside the park. In particular, as a great lover of Los Angeles, he was increasingly dismayed by the chaos in the city, particularly after the Second World War. It's ironic that the creation of the Santa Ana freeway let people come to Disneyland, but it also atomized spaces that were already becoming progressively more atomized in the years after the war.

So one of the things Disneyland helped to create was a kind of public experience, a public space, that was lacking in southern California as downtown L.A. disappeared and became insignificant, as householders drove one by one to their own homes in the suburbs where there aren't any sidewalks. One of the key issues here is common space and pedestrianism; the fact that Disneyland forces you out of your automobile and makes you walk, and that walking becomes a pleasurable experience, but also becomes in many cases the only kind of common culture and common use of space that people experience beyond the edges of the freeway.

Also, Walt had spent lots of time in cities around the world. I think he was intrigued by the fact that Paris, in particular, was such a walkable city, largely because you could see your destination. There were landmarks

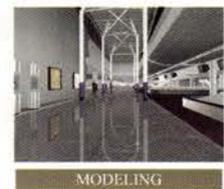
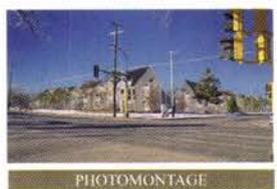
Continued on page 46

... now **imagine** how color delineates the columnar elements which focus on the semi-circular atrium that is bifurcated by a corrugated stripe that leads the inhabitants to the core of the vertical access points. This will undoubtedly work well with these samples on my material boards ...



Some projects may require more than fancy words, sample boards and colored blue lines. . .

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Charting alternatives

Many trained and licensed architects are discovering career moves outside of traditional practice

By Camille LeFevre

As with life in general, one thing is fast becoming clear about the profession of architecture: Change is inevitable. With increasing frequency, clients are expecting architects to be more flexible, to act as coordinators or facilitators of problem-solving teams and to take on responsibilities formerly considered outside the sphere of "traditional" practice. In response, many of today's trained and licensed architects are adapting by choosing professions long seen as beyond the architectural mainstream.

"Right now, about 15 to 25 percent of national AIA members are involved in activities other than the traditional firm," says Richard W. Hobbs, vice president of professional practice at AIA national in Washington, D.C. Of the organization's some 50,000 members, he says, "about 2,000 members are in construction-management activities, about 1,500 work as corporate architects, 3,000 are in design-build, about 1,500 are in facility management and about 1,000 work as public architects. As the world becomes more sophisticated, the number of specialties will continue to grow. Because architects are understanding and fulfilling changing client needs. And AIA is saying we must be totally open and flexible to meet those needs."

Not only are architects today addressing changes in the profession, the architects of to-

morrow are keenly aware of the shifting horizon. A survey conducted by the University of Minnesota's College of Architecture and Landscape Architecture (CALA) found that close to 20 percent of students entering the college had non-traditional career paths in mind, says Thomas Fisher, dean of CALA. Similarly, Fisher adds, a national survey of AIA's student membership indicated that a majority of their projected career possibilities were outside of traditional practice, and ranged from World Wide Web design and animation, to industrial and clothing design, and community activism.

"More and more students are looking at design education as a way of learning about and operating in the world," Fisher says. "We teach a rigorous curriculum of form, aesthetics, politics, and social, economic and cultural issues—filtered through a discipline that teaches people to think visually. So in the next century, certainly in the next 10 years, that interest in and demand for design education will continue to increase with people moving out from it in a number of different directions."

To prepare students, CALA has retooled its undergraduate degrees to be more liberal-arts oriented, and made its master's degrees the accredited ones. Still, studies indicate that a degree and a license don't mean a person will prac-

tice architecture. Dick Swett, an architect and former member of the federal House of Representatives from New Hampshire, speaks frequently on how architecture is a field of study well-suited to leadership preparation, Fisher says.

"I've heard him say that a leader is someone who is a visionary, can see the whole, can get diverse groups of people working together toward a common good, who brings real tangible change," Fisher says. "That's exactly what architects are trained to do. He was urging us to stop thinking about our role as just producing professionals that follow traditional routes, and begin to think of architecture as leadership training for people who will also become political leaders and community activists."

For architect Margot Fehrenbacher, principal designer with planning and economic development for the city of St. Paul, "architecture school is where you learn a kind of creativity that you can carry into any job that needs creative solutions. Clients today are demanding more services because they need more problem solvers," she continues. "Who is more perfect for that than architects? Architects are trained to look at problem solving in creative ways. We're taught to think outside of the box."

As an urban designer, Fehrenbacher says that she's

Continued on page 60



**U.S. Department of Agriculture
Northern Crop Research Center, Fargo, ND**
 "We wanted...(the structure) to tie into other buildings at the University, so we used a color of brick found on the adjacent structure, plus two other colors predominant on campus. The patterning of the brick draws from the Scandinavian tradition of enlivening utilitarian structures with color and pattern, creating visual interest during the long northern winters."
 – Loren Ahles, AIA, Project Designer
 – Hammel, Green and Abrahamson, Inc., Minneapolis
 Photography: Tom Hlavaty



Burnsville Marketplace – Burnsville, MN
 "Brick was chosen as the primary facing material...for all the long established, practical advantages; durability, low maintenance and cost effectiveness. Equally important...were the major aesthetic benefits...Brick was consistent with the surrounding context. The inherent design flexibility of unit masonry coupled with the available ranges of color and texture ensured us that Burnsville Marketplace would indeed age with interest."
 – John Gould, AIA, Director of Design
 – KKE Architects, Inc., Minneapolis
 Photography: Lea Babcock



**Bailey Elementary School
– South Washington
County Schools, ISD 833,
Dan Hoke, Superintendent**
 "Brick brought the appropriate scale to this building for a sense of strength and warmth. Its color provides a pleasing contrast to the brightly colored steel elements, and its long-term durability adds value."
 – James Rydeen, FAIA, President
 – Armstrong, Torseth, Shold and Rydeen, Inc., Minneapolis
 Photography: Ralph Berlovitz

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**MINNESOTA
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Gooseberry Falls State Park is the first major scenic attraction along Minnesota's North Shore from Duluth. Here the best ingredients of the North Shore's allure merge in the rugged woods abutting the jagged shoreline of Lake Superior. Most people stop at Gooseberry because of the

LASTING VALUE

natural features offering outdoor activities. The park, however, also hosts some of Minnesota's finest architecture with a collection of sturdy, stone-and-timber park buildings constructed during the Great Depression by the Civilian Conservation Corp. In the 65 years since completed, these pavilions, shelters and outbuildings remain integral park elements. Framed with material drawn from the surrounding landscape, the buildings are an organic, natural part of the setting.

Designing lasting architecture is no easy task in our disposable culture. By European standards, 65 years is not a long time; but in the relatively young Upper Midwest, that's old. In downtown Minneapolis, the Conservatory shopping center on Nicollet Mall is set to come down, even though it's only 10 years old. A couple blocks away, the historic 1910 Shubert Theater on Hennepin Avenue's Block E may kiss the dust soon, despite preservationists' arguments to save this abandoned performance house. The fate of the Federal Reserve Bank Building, a 1972 landmark designed by Gunnar Birkerts, teeters in limbo now that the Federal Reserve has moved to new quarters on the banks of the Mississippi River. Yet the park buildings at Gooseberry Falls look as if they will last another 65 years and beyond. A building achieves longevity for many reasons. Good design is only one reason. Often a building simply outlives its usefulness—and down it goes.

Yet strong design is always the best safeguard against the uncertainties of the future. Gooseberry Falls State Park banked on good design 65 years ago, and it paid off with lasting buildings. The park again has invested in architecture with a new visitor center (page 20) that surely will last decades. Strong or innovative design, unfortunately, is never a guarantee. If it were, Ralph Rapson's acclaimed 1962 Pillsbury house on Lake Minnetonka would still be standing.

Each year AIA Minnesota conducts an Honor Awards program (page 11) to recognize new buildings by Minnesota architects. The jurors evaluate the buildings based on their current function. They also speculate about how these structures will survive the years. Will the buildings be viable in the future? No one can predict, but as one juror commented about the Scandinavian-influenced Ravenwood Studio in northern Minnesota, "It looks as though it had been left here by Leif Ericson himself."

Surely if something seemingly transcends the centuries, it has lasting value.

Among other criteria, architectural value is determined by the owner and users. Douglas County, Wis., saw value in renewing its 80-year-old courthouse (page 26). Now the county's original 1918 investment is maturing with the promise of additional decades of use. Several Twin Cities colleges are wagering on the future by opening new campus buildings (pages 34-45). Will they last 80 years? That depends on how adaptable they are to a constantly changing marketplace. Douglas County renewed its lease on historic architecture by adapting old architecture for contemporary uses.

A building's value also is realized through quality design, construction and material. But frequently buildings must evolve to survive when they no longer function as first intended. Through creative thinking about adaptive reuse, we can save more of our older buildings, rather than simply toss them out with the evening trash.

ERIC KUDALIS

P.S. Speaking of lasting value, Architecture Minnesota recently won three publication awards through the Minnesota Magazine Publishers Association. We are proud of the many contributors who help make Architecture Minnesota a successful magazine.



A visitor center/rest area continues
Gooseberry Falls State Park's rustic
architectural tradition

northern
RESPITE

By Eric Kudalis

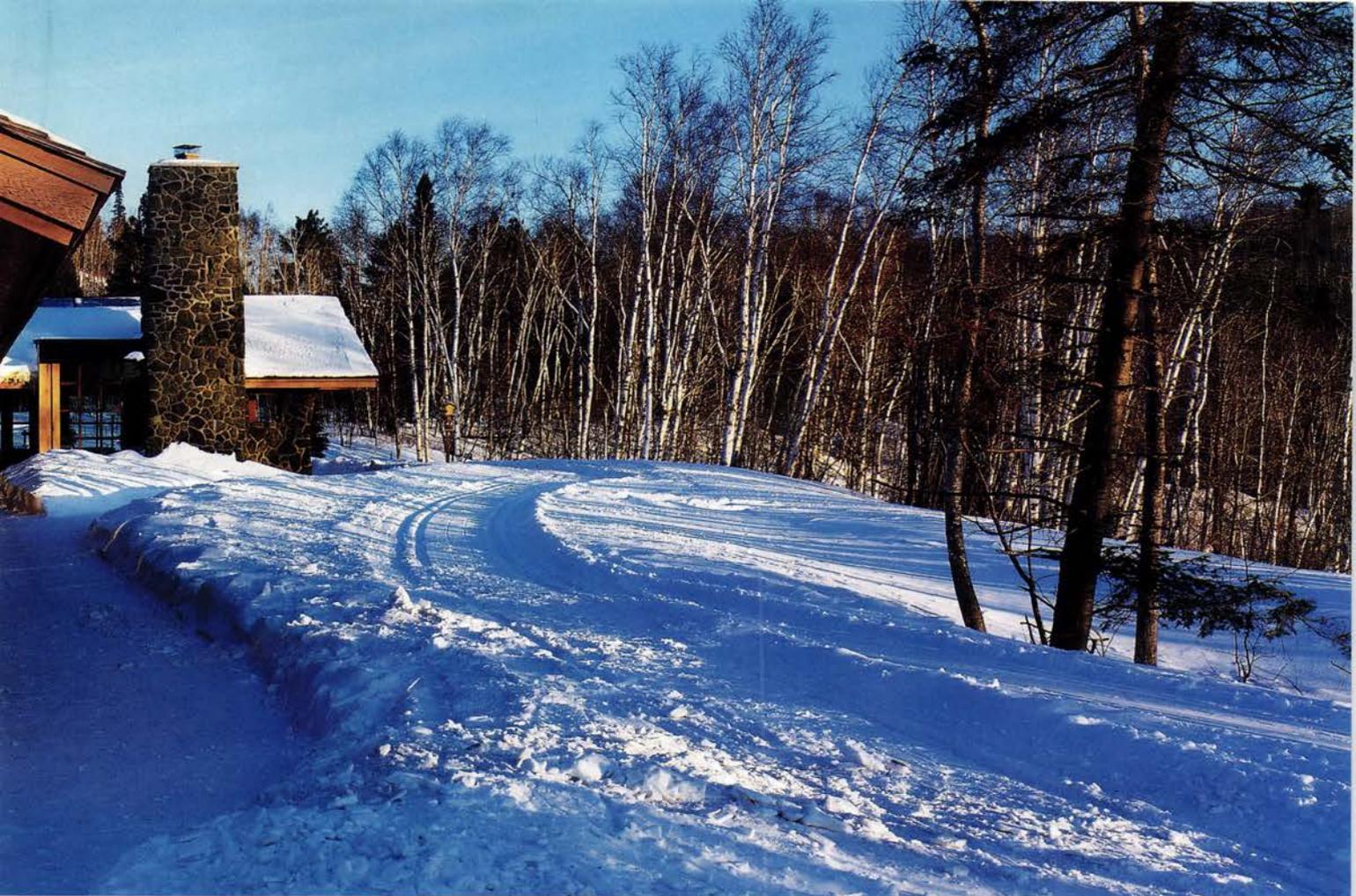
David Salmela calls himself a modernist. For those familiar with his award-winning homes, that statement may seem a bit odd. If anything, Salmela seems more a traditionalist or neotraditionalist as many of his homes reflect the Scandinavian architectural vernacular popularized by Edwin Lundie a generation before him. As with Lundie's work, Salmela's projects possess the warm textures of indigenous stones and finely crafted wood. His houses are judiciously sited—almost hidden—amidst the thickets of Minnesota's rustic northern landscape. They are warm, welcoming, comforting.

Yet his architecture is modern, if by modern we mean an unfettered aesthetic in which minimal materials and

straightforward planning effectively create lasting pieces of design. His houses are modern, but they are Minnesota modern. Salmela says that if he were living in a different part of the country, his houses would look different. Well, thank goodness he lives here and his designs look the way they do. When you see one of his houses, you think, "Ah, yes, that's Minnesota." They fit so comfortably on the landscape that surely they must have sprouted and grown with the trees, braved the whip of subzero temperatures and monster blizzards, and flourished.

Salmela's latest endeavor, however, is not a house at all, but a visitor center and rest area at Gooseberry Falls State Park. Designed with Cheryl Fosdick while part of Salmela Fosdick Ltd., Gooseberry Falls State Park Visitor Center/Highway Rest Area is the first major stop north of Duluth along Minnesota's North Shore drive, where the pines of the North Woods meet the jagged, rocky edge of Lake Superior stretching from Duluth to Canada. When Minnesotans flock to the North Shore, they find rustic cabins and roadside fish huts, but they also find—much to the chagrin of many—the chains and generic resorts capitalizing on the region's growing tourist trade.

Despite some gauche new arrivals, the North Shore's architectural tradition is well preserved in the splendor of Edwin Lundie's heavy-timber Lutsen Resort of 1949, Holstead and Sullivan's shingle-style Naniboujou Lodge of 1929, and the many stone-and-timber park struc-



tures built by the Civilian Conservation Corp during the Great Depression. Salmela Fosdick Ltd.'s Visitor Center/Highway Rest Area fits securely into the tradition of these great buildings.

Gooseberry Falls State Park is one of Minnesota's most popular parks, a 1,662-acre preserve with five waterfalls tumbling from the Gooseberry River, hiking and snowmobile trails, and a well-preserved collection of CCC park buildings. The 10,500-square-foot visitor center/rest area evokes the era of the CCC buildings, when care and thought equaled timeless architecture that blended seamlessly with the environment. Salmela says that he looked to many of these stone-and-timber structures throughout the park for inspiration, yet he notes that the new building was never meant as a knock off. This is a modern building with multiple functions. Salmela's challenge was to create a contemporary park structure that accommodates various functions, evokes an updated sensibility, yet still relates to the rugged, woody site and the park's traditional earthy architecture.

Funded through the Minnesota Department of Transportation and Minnesota Department of Natural Resources,



PETER KERZE

The colonnade (above), running the length of the visitor center (top), is the centerpiece of the rustic state-park building.



the \$1.7 million visitor center pulls seven different functions under one roof. In addition to bathrooms (one reason many stop in the first place), the building houses an interpretive center and adjacent presentation room, visitor-information desk, gift shop, an open gathering space (or Trail Center) anchored by a stone fireplace, and the usual administrative, storage and support facilities.

For Salmela, siting is everything. The visitor center is hidden in the woods midway between the surface-parking lots just off Highway 61 and the waterfalls. The building slowly reveals itself at the end of a winding, landscaped footpath; first we see a portion of its sloping cedar-shake roof and stone base, then more, until we finally come upon

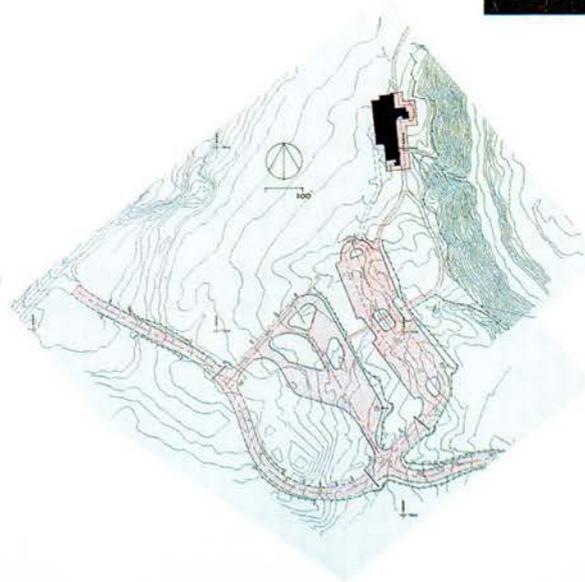
the whole building as we stand on the bluestone court or walk under the colonnade along a wood-framed glass wall.

Nothing is exceptional or unusual about the basic design; even Salmela admits that it's a fairly straightforward building. But what shoulders the building above the ordinary is its attention to detail and thoughtful use of first-rate materials. Here quality radiates from every square inch, from the heavy-timber framing and stone base to the exterior cedar siding, redwood door and window framing, bluestone court, interior fir finishes and black terrazzo floors.

Much of the material is recycled. The timber posts and beams, for instance, come from 19th-century West Coast



PETER KERZE



The visitor center is sited at the end of a landscaped path by Coen + Stumpf (above and plans left). Walls of windows (top) open the center to the surrounding woods and river. The building's simple wood-clad, gabled form (opposite) contrasts with its snowy setting.



PETER KERZIE

warehouses, while the exterior redwood windows and doors come from the old wine vats of a California winery. The heavy stone base is from just down the road, literally, as it was blasted out of the hills during a highway-tunnel project. Wood and stone—just what you expect in a rugged North Shore setting.

What you don't expect is the interior steel I-beam spanning the 40-foot-long Trail Center. Because of the span, Salmela couldn't use a timber beam without planting a post in the center of the room, which he says he was

happy to do. Yet park personnel wanted to keep the room unobstructed; thus the steel beam. Despite the beam's seeming textual incongruity, it fits in comfortably. The black color is in sync with the black terrazzo floors, exposed hardware, and dark-tone stone contrasting with the light-tone wood; and the steel echoes the nearby steel replacement bridge, currently under construction over Gooseberry River.

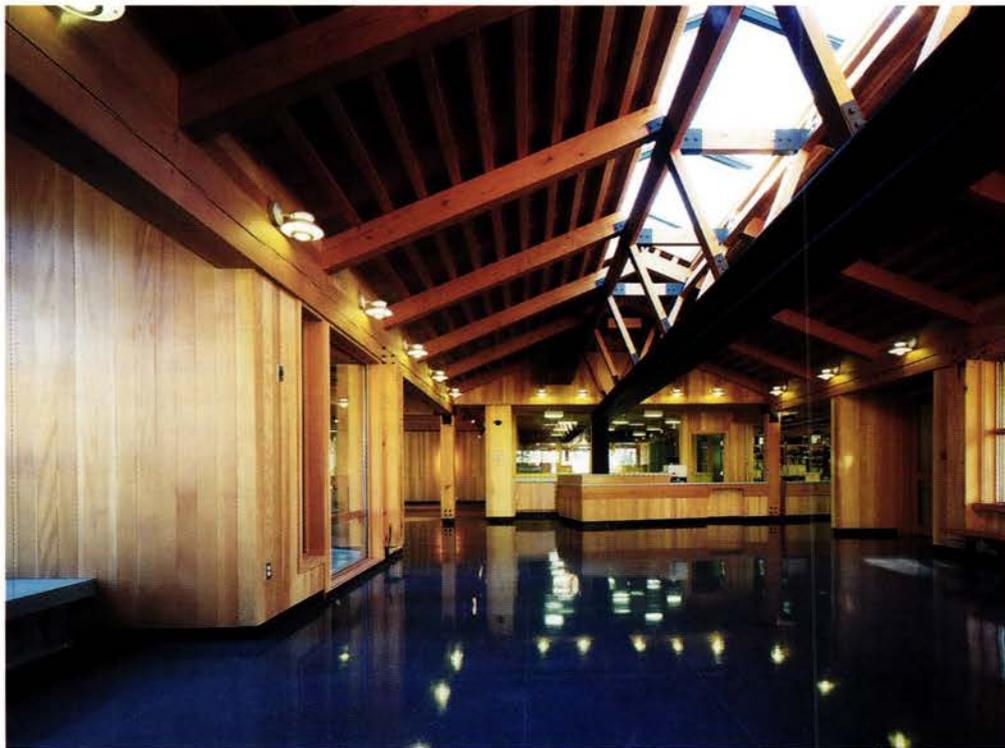
In naming the building a 1997 AIA Minnesota Honor Award winner, the jurors referred to it as an architecture of great resorts and lasting design distinguished by texture, scale and play of materials. The public has embraced the building, as well. Paul Sundberg, park manager, says visitors often congratulate him on wise use of public money. That's quite a switch from the usual public grumbling about tax-dollar spending.

For those traveling Up North, Gooseberry Falls State Park Visitor Center/Highway Rest Area is an instant North Shore landmark.



Honor Award

**Gooseberry Falls State Park
Visitor Center/Highway Rest Area
Two Harbors, Minn.
Salmela Fosdick Ltd.**



The post-and-beam interior (above) includes an interpretive center and theater, Trail Center, gift shop and information area. A steel beam spans the Trail Center (left). The main entry hall runs parallel to the exterior colonnade, divided by a glass wall (opposite). Shimmering black terrazzo floors offset the light-tone wood interior.

A renovated
courthouse
renews small-town
commitment to
classic architecture



JEFF FREY & ASSOCIATES PHOTOGRAPHY

court ORDERS

Superior, Wis., is often considered Duluth's dowdy cousin. While Duluth has dramatically increased its tourist trade recently with a restored Canal Park and newly landscaped lakewalk along the Lake Superior shoreline, Superior has languished in the shadows as the place you go only if you can't find a hotel room in Duluth. Yet the city does have its attractions, among them a few decent downtown restaurants and the freshly revamped Douglas County Courthouse.

The Courthouse, on the National Register of Historic Places, is classic early 20th-century civic architecture, the kind of grand, majestic architectural gesture that gave many hinterland towns instant legitimacy and urban sophistication. Towns, large and small, proudly looked toward the future by constructing great pieces of public architecture—libraries, banks, city halls, courthouses, post offices. St. Paul was no longer an outpost when it threw open the doors of its Cass Gilbert-designed State Capitol in 1905. Owatonna, Minn., certainly was no one-horse-town with its gem of a bank designed by Louis Sullivan in 1908. Superior, likewise, could hang its civic banner high with the completion of the Douglas County Courthouse in 1918.

Built for a then-whopping \$600,000 by the architectural team of J.M. Royer of Urbana, Ill., and E.S. Radcliffe of Superior, Wis., the Beaux Arts-inspired Douglas County Courthouse reminds us of a more lustrous era of public architecture, now seemingly lost in a sea of banal new construction.

The new Federal Courthouse in downtown Minneapolis, for instance, is indistinguishable from the corporate high-rises surrounding it.



The Beaux Arts Douglas County Courthouse (top) includes renewed courtrooms (above) and rebuffed marble atrium (opposite).

Thank goodness 70 or 80 years ago civic leaders had more than corporate image in mind when they christened their public buildings. Beaux Arts may have knocked off ancient and Renaissance architecture, but it sure has great curb appeal.

Sheathed in light-tone limestone and accentuated with a series of Ionic columns spanning the second and third levels along the front façade, the courthouse recently has been updated by Stanius Johnson architects, inc., of Duluth. The firm, which devotes approximately 15 percent of its practice to historic renovation, had a pretty strong palette to start with. Exterior renovation consisted mainly of cosmetic scrubbing and sprucing, in addition to replacing all the windows and adding two new stair towers cloaked in a reinforced concrete that closely match the original limestone.

The brunt of the renovation was inside. Because this is a working courthouse with daily court sessions, the renovation team completed all construction in the evenings over a 2 1/2-year period. The interior assignment balanced restoration with a total gut job. The main lobby, flanked by two marble staircases and encircled with marble columns, is a grand 3-story-high space culminating in an art-glass ceiling. Here the architects sought to undo years of neglect by buffing and polishing the marble, replicating original lighting fixtures and rosebud ceiling patterns, and painting and renewing the trim throughout.

From the atrium, Stanius Johnson converted an 80-year-old office and courthouse into a modern building. Aside from renovating two existing, 2nd-floor courtrooms on either side of the atrium, the team gutted the building, reconfiguring modern offices and support facilities within the classic shell, as well as adding a third courtroom. The architects also carved a narrow, 4th-level office suite out of attic space along one half of the building. From the 4th level, you can open a service door that overlooks the art-glass ceiling.

Douglas County's commitment to good architecture 80 years ago is still paying off. With Stanius Johnson's renovation, the Douglas County Courthouse continues to infuse this small Wisconsin town with civic pride. **E.K.**

**Douglas County Courthouse Renovation
Superior, Wis.
Stanius Johnson architects, inc.**

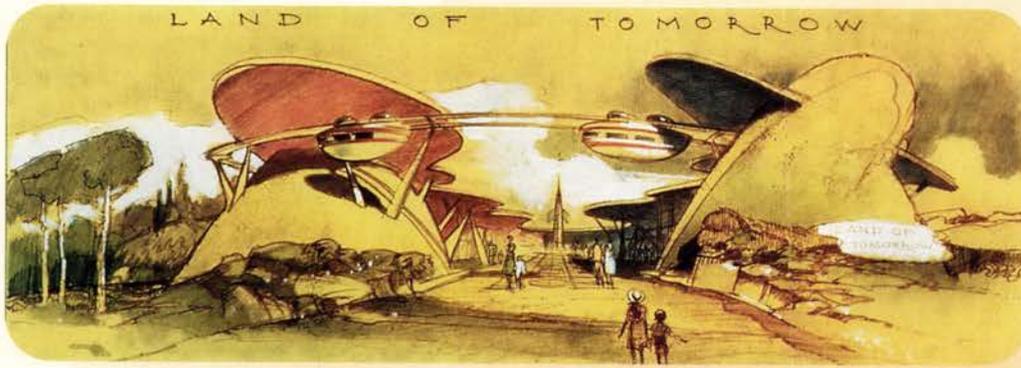




D i s n e y ' s

S
 ince opening in Anaheim, Calif., in 1955, Disneyland—as well as its subsequent sister theme parks—has set the standard of escapist entertainment. Yet Disneyland's influence reaches beyond pure entertainment, inspiring the design of shopping malls, resorts and even the urban landscape. In "The Architecture of Reassurance: Designing the Disney Theme Parks," at Walker Art Center through Jan. 18, more than 350 architectural drawings, models, paintings and plans from the archives of Walt Disney Imagineering reveal the creative process behind the theme parks. As guest curator Karal Ann Marling argues, "This process—Disney's distinctive approach to re-presenting the past, the present and the future in concrete form—has helped to transform our responses to architecture and the city." This sampling offers glimpses into the magic of Disney.

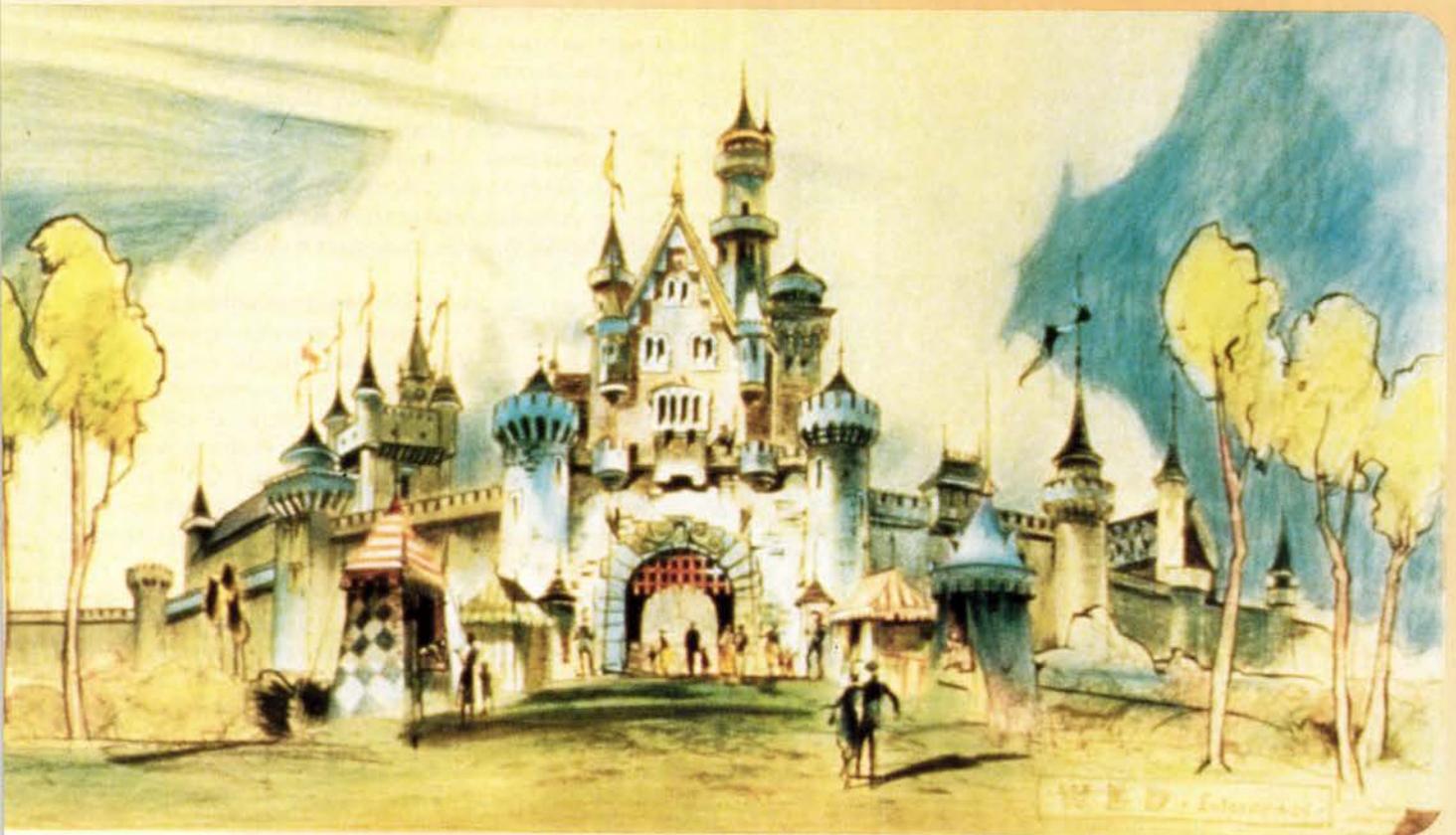




Color study for façade of Snow White ride in Fantasyland (opposite top). Tomorrowland (left) in colored pencil and watercolor shows monorail system and "Wienie" rocket in background, while watercolor drawing repainted in acrylic (below) shows detail of monorail system.



M a g i c



The ultimate Disney "Wienie," a watercolor of Sleeping Beauty Castle (above) with its soaring turrets. Another Disney attraction is this color study for entrance to Frontierland from the Hub (opposite bottom).

London

A visit to the **Globe Theater**, **Wimbledon** and the **Isle of Wight** is a walk through literary England

By Bette Hammel



BETTE HAMMEL

Shakespeare's famed Globe Theater (above) is reborn with a performance of *Henry V*. Standing-room audience watches the performance from the "pit."

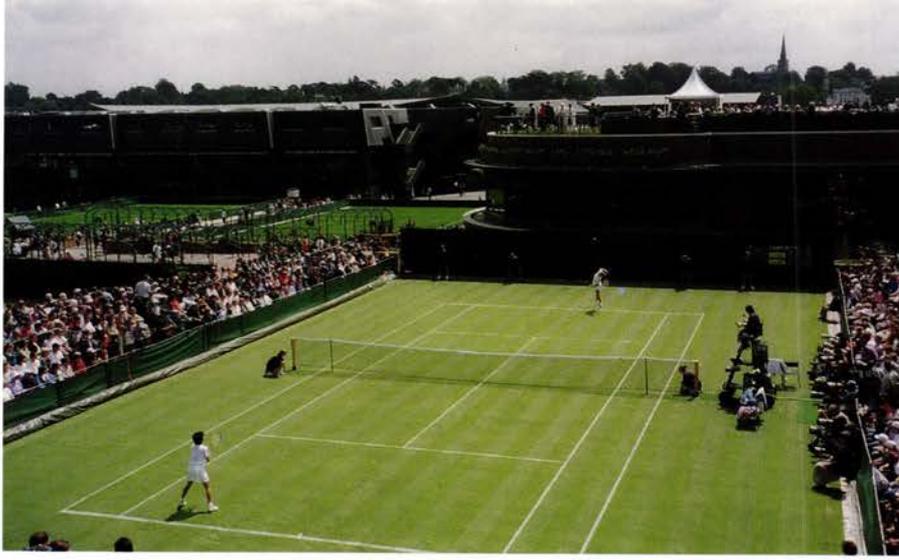
The Globe Theater on the south banks of London's Thames River is a Shakespearean step back in time. At this 1997 replica of the 1599 original Globe, Shakespeare's language comes to life without the benefit of sets, props or high-tech lighting. Standing in a spring drizzle at a performance of *Henry V*, I was so carried away by the authenticity of the scene and the powerful acting that I could visualize English troops crossing the channel only to be cut down by the French, while the King agonized over the bloody conflict.

With standing-room tickets procured at the last minute, a friend and I were fortunate to experience a Globe production in June shortly after it opened. And it IS an experience. Here is theater the way Shakespeare himself staged it. Roof-covered bleachers with backless seats surround an open-pit area flanking the stage, allowing standees to be close to the performers. When we grew tired of standing, we leaned against the nearest bleacher railing. The curtainless stage, topped with a thatched roof, projects into the semi-circular, roofless area, supported by two marbled, wooden columns with gilded capitals. Actors, wearing rich and colorful Shakespearean costumes, entered through a curtain at the back and overhead. In a balcony, three trumpeters announced the entrance of the King.

It's easy to spot the Globe from pedestrian walkways along the Thames. At first glance, the theater's exterior resembles white stucco with timber trim. We soon learned that the exterior coating is actually ground limestone with goat's hair, and that the polygon-shaped structure is built of English oak right up to the thatched roof. No wonder critics have called the new Globe "a remarkable reconstruction of Shakespeare's original wooden 'O'." Such modern amenities as restrooms and coffee bars are available in an adjoining brick building connected to the theater via a covered walkway or an outdoor plaza.

A relative's gift of two tickets to Wimbledon brought me to London in the first place. It was a perfect excuse to revisit London with tennis friend Peggy Watson, see the latest architecture, theater and more English gardens. Clutching our two-day tennis tickets when we arrived in late June, we were greeted by almost continuous London rain that week.

Fortunately, the sun shone brightly over Wimbledon on the second day of play (our first). The complex encompasses two major, partially roofed stadiums, countless green-grass outdoor courts with bleachers, huge scoreboards and assorted food pavilions. At the entry, row upon row of festive tents striped in green and white Wimbledon colors greeted us. On a grassy hillside, purple and white petunias decorated a picnic area. Strawberries and cream (or its substitute, frozen yogurt) were the order of the day with accompanying champagne, or tea and crumpets served in the tea pavilion.



Our seats were in historic Centre Court, originally opened in 1922. Recently remodeled with a sweeping new roof, the oval-shaped, open-air stadium now holds more than 13,000 fans, a new royal box and improved broadcast booths. Nearby is Wimbledon's newest stadium, Court No. 1, accommodating 11,400. Watching such tennis stars as Michael Chang and Sanchez Vicario was exciting, but experiencing Wimbledon itself was the real thrill. As English journalist Simon Barnes wrote, "It is not the strawberries that make Wimbledon great....Wimbledon happens to be one of the finest theatres of sport in the world."

Thanks to the legendary "tube" (London's subway), we whisked around London visiting such famous museums as the Tate, National Gallery and the British Museum, shopped at Harrods, and naturally indulged in a few of London's fine restaurants.

The current building craze in London is shiny new restaurants, especially those designed by Sir Terence Conran in former automobile "garages" or other historic buildings. One of the hot spots is Bluebird. Located on Kings Road in Chelsea, Bluebird is much more than a fine restaurant with a striking design. It is a Gastrodome, combining a European-style food market, informal cafe and bar, kitchenware shop, wine merchant, bakery and flower mart under one roof. Designers have created a vivid atmosphere on all three floors of this converted 1923 building, once Europe's largest motor garage, where the racecar "Bluebird" was assembled. With an art-deco exterior and its Bluebird banner flying, the restaurant-market announces itself as a destination. A long, narrow skylight across the roof lights up the stylish blue, white and stainless-steel interior. The sophisticated design combined with excellent food and European-style markets downstairs has made Bluebird an instant success. Conran's operates five other restaurant-market shops around London, ranging from Michelin House to the newest one, Orrery.

After enduring a week of rain, we escaped London and headed for the Isle of Wight on the seacoast. By taking a train south to Portsmouth, a ferry to the island, then a short train and bus ride, we arrived in Ventnor in about two and a half hours. I had chosen this South Coast town for its location overlooking the sea and for its famous botanical garden. Victorian brick and stone homes dot the area. We stayed at the Burlington Hotel, a former convalescent home transformed into a bed and breakfast. The Isle of Wight is known for its coastal walks, sandy beaches, picturesque villages, historic sites and yacht harbors. Wight also was Queen Victoria's favorite escape. Her Italian-inspired mansion, "Osborne House," with its lush gardens, is open for tourists. (Portions of the recent film *Mrs. Brown* were filmed here.)

Because we had only two days on Wight, we were eager to start hiking the coastal paths, but again the rains came despite the island's sunny, warm reputation as a favorite vacation spot for northern Brits. Fortunately, a kindly neighbor (a retired travel agent), hearing

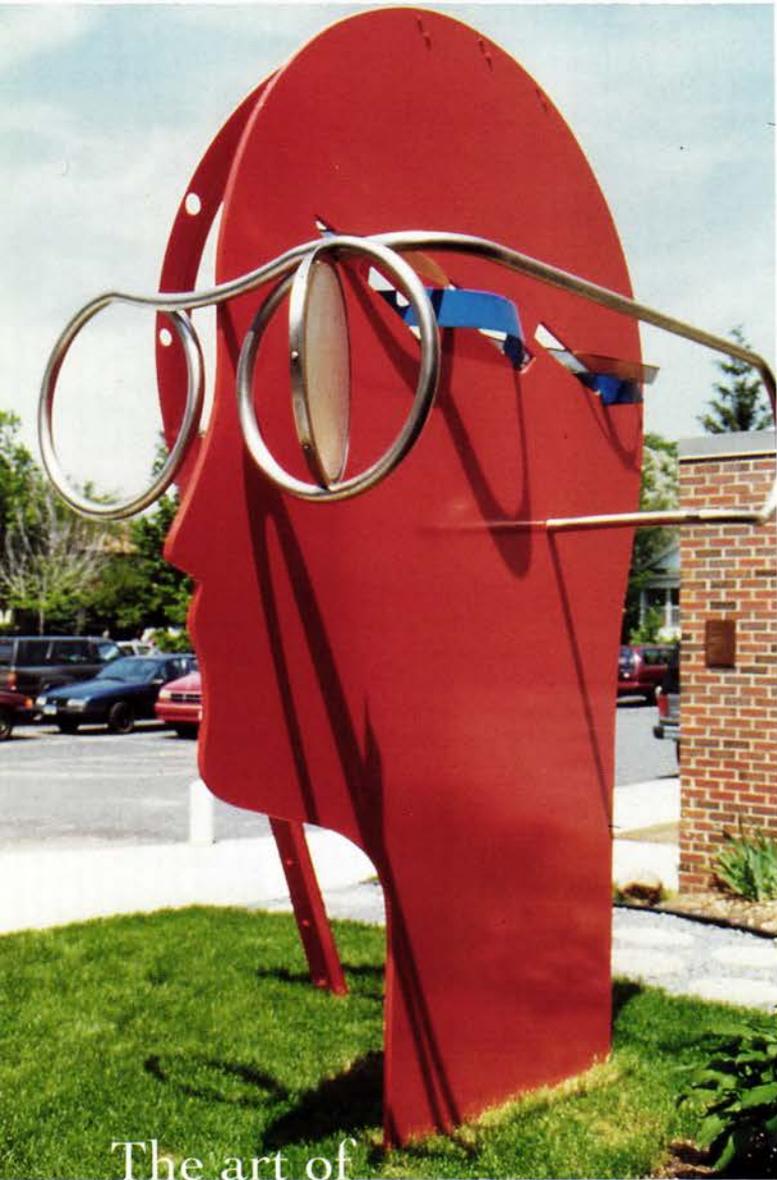
our dismay, intervened and insisted in driving us around "his" island to see Wight's sights. (Wight is small; you can see most of it in a day or two.) Thanks to him, we took in the delightful thatched cottages of Calbourne village, sampled a short coastal walk on the top of the Downs, lunched near the "Needles" (chalky white perpendicular cliffs), explored Tennyson Downs where Alfred Lord Tennyson lived and wrote, and visited Carisbrooke Castle and the busy harbor of Yarmouth. Wight's topography is immensely varied, with a high ridge of chalky downland leading to steep valleys. Spectacular sea views mingle with gentle meadows sprinkled with wild flowers, and beautiful gardens with tropical plants abound. Hiking and biking is popular along 60 miles of coastal paths.

"The air on the Downs is worth sixpence a pint," Tennyson wrote more than a century ago.

True. Like Queen Victoria, I want to return often to "the Garden Isle," the Isle of Wight where from high up on the downs you can look over the English channel and dream about sailing to France.



Tennis is in full swing at one of many outdoor grass courts at Wimbledon (top). Vine-covered, thatched cottage (above) graces the Isle of Wight.



The art of

Alexander Tylevich

For this Russian émigré, integrating sculpture and architecture is the creative core of his work

By Richard L. Kronick



In the age of architectural postmodernism, there's no question that we want our buildings to be adorned with sculpture, paintings and other art. But there are questions about how to forge a productive working relationship between artist and architect, a relationship sometimes mired in clashing egos.

Clients often chose one of several approaches in applying art to architecture.

The Percent For Art Program, for instance, conveniently separates architect and artist in any publicly funded building project. The architect simply leaves space at primary focal points; sculptors or other artists later fill in the voids. Ego clashes are adroitly avoided, but there is almost zero chance for true integration. A prominent local example is the Minnesota History Center. A year after Hammel Green and Abrahamson completed the building, environmental artist Andrew Leicester of Minneapolis created a contiguous but decidedly disengaged outdoor sculpture garden.

A much more gutsy strategy is to hire a broadly talented person who can design a building that is architecture and sculpture in one. The prime example in Minnesota is Frank Gehry's remarkable Frederick R. Weisman Art Museum, the art container as art. The problem with this approach is that people with Gehry's combination of architectural skill, sculptural vision and chutzpah are exceedingly rare.

A third strategy is to find a sculptor with experience in architectural practice, and who can work directly—and sympathetically—with architects during the building-design process. One such person is Alexander Tylevich.

Tylevich, who immigrated to St. Paul from Minsk, Byelorussia in 1989, has impressive credentials in both architecture and sculpture. He received a bachelor's degree from the Minsk Architectural College, a master's degree from the Byelorussian Polytechnic Institute, and

studied privately with sculptor Zair Asgur. Tylevich was elected a Fellow of the Architectural Association of the USSR (analogous to Fellow of the American Institute of Architects) at age 29, and was a winner of the Soviet Architectural Association's First Prize for his design of the Minsk Historical Center. In addition, he co-authored a master plan for the Minsk City Center and designed numerous prominent structures in Byelorussia, including the Minsk city-government building and four subway stations. As an architect in the former Soviet Union, he often created sculptures for buildings of his own design, as well as by other architects.

But over his 20-plus years in Minsk, Tylevich also endured the endemic frustration of the Soviet Union's waning years. The Communist Party—which was the client for almost all buildings and simultaneously the overseer of all design, contracting and subcontracting—looked for reasons why every building should be designed, redesigned and redesigned again. With ideological baggage thrown on top of a weighty bureaucracy, there was a continuous and extravagant waste of creativity, time and money. Paper architecture became an end in itself. Tylevich says it was common for projects to go through as many as 10 complete sets of specifications before they were built. And even then, he says, "Designs and the buildings constructed from them were rarely twin brothers. In the USSR, most ideas were only partly realized."

When he arrived in the United States, Tylevich found that he couldn't prac-

ALEXANDER TYLEVICH

tice architecture because of his limited proficiency in English, lack of CADD experience and unfamiliarity with American business practices. Nine years later, his English is charmingly inflected, his computer skills have caught up and he is an American citizen. He is happy that circumstances channeled him into a new career as a full-time sculptor. "Most of my education was in architecture, but I think sculpture is in my soul," he says.

"Soulful" is an apt descriptor of Tylevich's work. Whether for a secular or religious client, his sculpture speaks to spiritual values.

He works closely with several architects and designers. One is Rafferty Rafferty Tollefson Architects (RRT) of St. Paul, which specializes in churches. Working with RRT, Tylevich has created sculptures that combine equal parts history, spirituality and archi-

tectural-design sense.

The most recent example is The Meditation Place, a chapel at Fairview-University Medical Center in Minneapolis. To grace RRT's interior architecture, Tylevich designed a granite offering table and the room's center piece, a bronze and brass sculpture entitled "Tree of Life." The image of a tree was chosen as a multicultural religious symbol.

Tylevich elaborated on the multicultural theme in several ways. Apropos of a medical institution, the tree's trunk is transformed into the double helix of DNA. At the base of the helix is a fig leaf and seed pod, traditional symbols of the Buddha. Along the spiraling strands are life forms—leaves, sticks, flowers, snails, fish and birds—all streaming upward. The tree grows from a fountain that spills into a granite pool, thus producing The Meditation Place's am-

bient background sound. Integration of structure and art is seamless.

Craig Rafferty, design principal at RRT, feels strongly about the collaborative approach he uses with Tylevich. "You will always have the most successful project if the architect and sculptor are working together," Rafferty says. "That is superior to the situation where either one is imposing ideas on the other." He laments the typical separation between architect and artist in public-building projects. "There is a tendency to put off hiring the artist until the last moment. I think the project always suffers as a result."

Whether in religious or secular settings, another of Tylevich's persistent themes is inspiration. This is exemplified in his 1992 project for the Winona Aviation Technical College in Winona, Minn., where he worked with Architectural Alliance of Minneapolis. Seeking to infuse the everyday activity of both students and faculty with heroic spirit, Tylevich created a group of related works entitled "The Process of Becoming Airborne."

The central object is a brightly colored 30-foot-high triumphal arch over the building's main staircase. The arch's cross section is that of an airfoil that incorporates airplane wing ribs and struts. In a nearby alcove are large bronze images of Charles A. Lindbergh and his airplanes, as well as a ceremonial table made of wing ribs. The table's glass top is removable. At graduation time, students and faculty sign their names on the glass, which is then hung in a nearby place of honor.



ALEXANDER TYLEVICH

Not yet a household name in the Twin Cities art world, Tylevich surely will win more local and national attention with his recent and upcoming projects beyond Minnesota's borders. Wherever his work takes him, though, Tylevich says he will continue to look for opportunities that combine art and architecture. "The best situation," he says, "is where I can work with the architect from the very beginning of the design process. That way, everything is architecturally tight. I am happy to contribute something most architects cannot do by themselves."



STEVEN BERGERSON



ALEXANDER TYLEVICH



ALEXANDER TYLEVICH

Montessori Vision (opposite top) at Lake Country School in Minneapolis, 12-foot-high, cast fiberglass, plate glass and stainless steel; Tree of Life (left) and granite offering table within The Meditation Place at Fairview-University Medical Center, Minneapolis, cast-bronze, fabricated brass and granite base; The Process of Becoming Airborne (top) at Winona Technical College, painted steel, perforated steel and aluminum.

The Carlson School of Management squeezes onto the University of Minnesota's West Bank campus



business MINDED



KOYAMA PHOTOGRAPHIC

Since first leap-frogging the Mississippi River in the early 1960s, the University of Minnesota has built its West Bank campus in a decidedly modernist vein. Unlike the classically inspired scale of the East Bank's main Mall, the West Bank is a collection of corporate-like buildings that just as easily could fit into a suburban office park. The grassy lawns and columnar buildings of the East Bank are replaced with concrete plazas and dull façades of the West Bank. Ralph Rapson's 1971 Rarig Center is perhaps the most architecturally significant building on the West Bank, yet its concrete interior lacks traditional warmth.

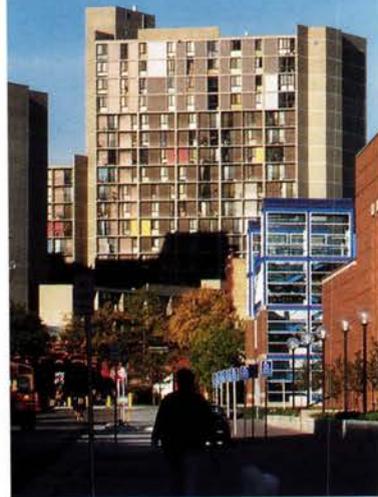
In addition, the West Bank buildings feel tightly packed in. The much larger East Bank, on the other hand, feels roomier with its grassy Knoll and classical Mall.

Now adding to the tight fit is the 243,000-square-foot, five-level Carlson School of Management, designed by Ellerbe Becket of Minneapolis. Built on a triangular site at the corner of 19th Avenue South and Fourth Street, the Carlson School bumps elbows with the Humphrey Institute just to the north and Wilson Library and Rarig Center to the east.

"We wanted to create a distinctive statement on the West Bank, although we wanted to fit in," says Richard Varda of Ellerbe Becket. "We wanted a forward-looking building."

The building certainly sets its sights on the future rather than looking to past academic architectural traditions. As with the other West Bank buildings, this is modern architecture, with a sleek, glass-and-brick exterior that adopts the high-tech look of the business world. The management school had been located in neighboring Blegen Hall since 1963, but had long-since outgrown that facility and was scattered throughout several buildings. Administrators and students complained that there was no real sense

of community for the management school. Night students especially felt alienated, arriving in the dark and leaving in the dark without any central place to call home. In addition, the electronic and computer revolution had changed the whole process of business education, and the school's facilities couldn't properly accommodate all the new technology.





The Carlson School of Management curves along 19th Avenue and Fourth Street (opposite top). Upper floors of the glass, metal and brick building cantilever out over the West Bank campus (above and opposite).



DON F. WONG

could have been an overpowering monolith if handled by a less skilled architect. Ellerbe Becket did much to tame the massive scale. By breaking the building in two halves and connecting them with a glass-enclosed atrium, the architects lightened the load, and by varying the façade treatments they created visual interest. This is not your standard rectilinear shoe box. The straight edge along Fourth Street curves around the corner at Fourth and 19th. On the northeast side, the top floors cantilever out to form a covered underpass, while the glassy north façade curves along a

The new \$45 million building provides a state-of-the-art facility while bringing all students, faculty and administrators under one roof. For the management school, the building is an opportunity to increase its visibility nationally and locally. After all, business schools are big business, and to remain competitive they need high-profile, up-to-date buildings, as this one certainly is. In addition to the fully wired classrooms and lecture halls, the building contains break-out rooms, a 250-seat auditorium, faculty and administrative offices, food services, boardroom, an executive-education center and computer labs.

The heart of the Carlson School is the atrium. The light-filled, oval-shaped atrium connects the two curving halves of the building while providing a primary gathering place that was sorely missing in the management school's old home. Here, students and faculty surely must feel at home.

From the exterior perspective, the building is less welcoming. Ellerbe Becket designed the school to reinforce the city grid along 19th Avenue and Fourth Street. But because the building is so big and the site so tight, it's difficult to stand back and get a good overall look at the structure. Approaching from Wilson Library, you see only a wedge of the building bursting from its constrictive site.

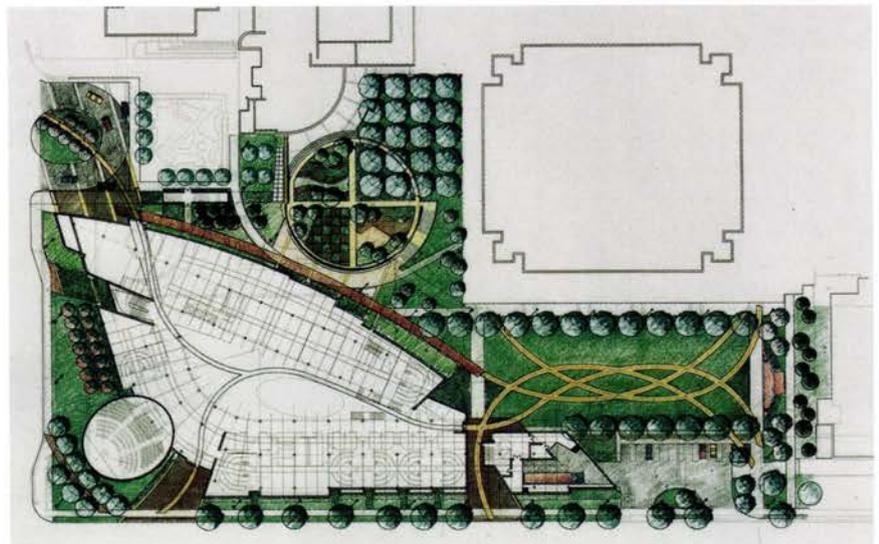
Yet the building's whopping size, dictated by an extensive program,

sunken landscaped plaza between the management school, Humphrey Institute and library.

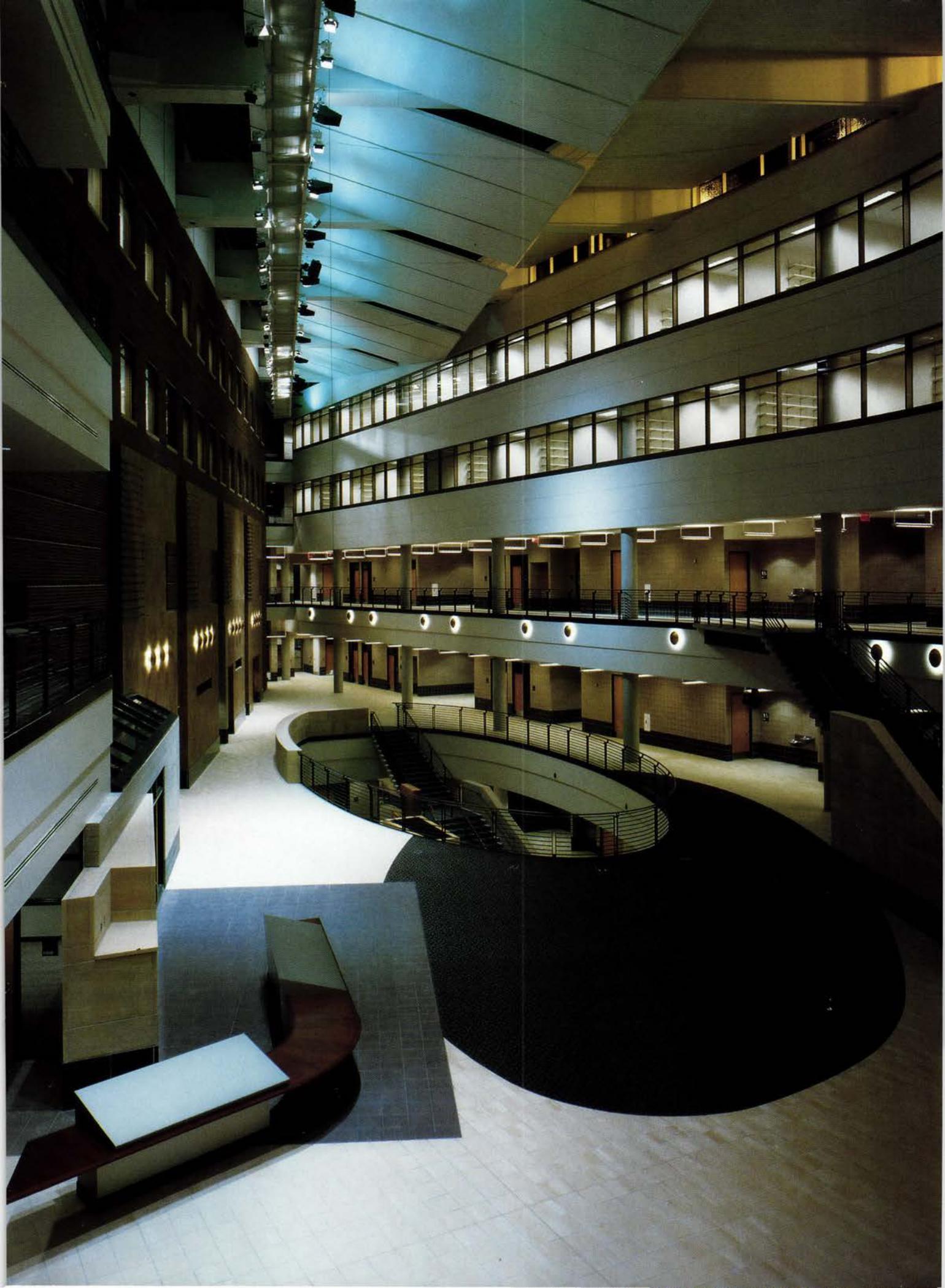
As the University of Minnesota continues to build up its West Bank campus, the Carlson School of Management makes the best of a difficult site. Ellerbe Becket has given the university a new building that will provide decades of good business.

E.K.

**Carlson School of Management
University of Minnesota
Minneapolis
Ellerbe Becket**



The building is comprised of two curving forms (plan above) connected by an atrium (opposite). The facility includes a 250-seat auditorium (top).



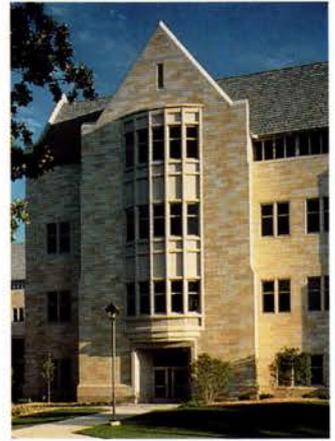


The collegiate-Gothic science center includes two separate buildings clad in a multitone limestone (above). The science center faces two landscaped plazas on either side of the complex. Windows in Owens Hall (opposite center) overlook the second plaza. Windows (opposite top) reflect traditional Gothic detailing.



DOAN WONG

The Frey Science & Engineering Center bridges a gap at the University of St. Thomas' St. Paul campus



strictly SCIENCE



The University of St. Thomas surely is a growing Twin Cities school, if the number of new buildings sprouting up around its two campuses is any indication. Several years ago the Catholic university opened a downtown Minneapolis building, designed by Opus Architects & Engineers, to house its business school, and has just broken ground on an addition by Opus that further will establish a true sense of campus in its downtown setting.

The flagship St. Paul campus, an attractive grouping of limestone-clad, collegiate-Gothic buildings at the corner of Cretin and Summit avenues, also has seen growth in recent years. In 1987 the university acquired land and buildings from the St. Paul Seminary to form a south campus diagonally across the intersection from the main campus. This collection of red-brick buildings, used primarily for offices and administrative functions, had little aesthetic sense of connection to the main campus—at least until the completion this past fall of the \$37 million, 210,000-square-foot Frey Science & Engineering Center.

Located at the southwest corner of Cretin and Summit, the science center bridges the gap between the south and main campuses. With a similar collegiate-Gothic design



DON F. WONG

is more varied as the architects chose three different tones of southern-Minnesota limestone. The alternating strips of limestone add texture and interest to the façade. In addition, a clerestory along the roof line lightens the appearance of the roof, which is made of concrete tile that resembles slate.

Budget, perhaps, didn't allow for a grand interior gesture, such as a soaring lobby or inviting public space. Instead, the interior is essentially corridors of classrooms, laboratories

wrapped in a limestone façade, the new building blends with the main campus. Two landscaped sculpture courtyards in front and back of the science center reinforce the pedestrian connection between the two halves of campus.

Designed by Holabird & Root of Chicago with Opus Architects & Engineers of Minneapolis, Frey Science Center is actually two separate buildings connected by a skyway. The 90,000-square-foot O'Shaughnessy Science Hall houses such "dry" sciences as geology, mathematics and engineering, while the 120,000-square-foot Owens Science Hall houses such "wet" sciences as physics, biology, chemistry and laboratories. In all, the two buildings combine the science departments—once scattered among three separate buildings—into a single complex of 35 classrooms, 76 laboratories, 117 offices, a 115-seat auditorium, and a greenhouse.

Under Holabird & Root's guidance, the complex is a graceful interpretation of traditional Gothic architecture. While many of the older campus buildings appear monochromatic in their yellow tones of limestone, Frey Center

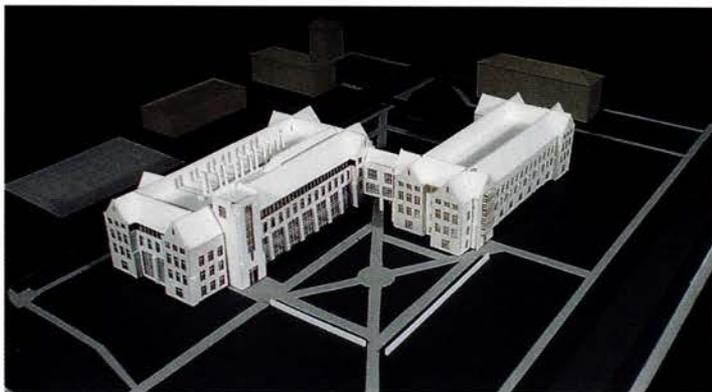
and offices. Yet Opus Architects & Engineers, overseeing interior design, managed to surmount the building's by-the-numbers interior with colorful and stylized terrazzo floors along the public spaces of each of the two building's



four floors. Basing these brush strokes of color on stories from the Book of Genesis, Opus turned the terrazzo floors into the interior's visual icing. One pattern, for instance, interprets life's origins as vegetation, fish and birds spilling from an egg.

Unique to this building project was the university's commitment to combining art, architecture and landscaping, with two courtyards, five outdoor sculptures, hand-chiseled signage, indoor art pieces and stained glass surrounding a 5th-floor tower in Owens Hall. Many of the art pieces were designed by local artists.

This commitment to art and architecture has given St. Thomas a valuable new building. *E.K.*



O'Shaughnessy Hall (right in plan) houses the dry sciences, while Owens Hall (left in plan) houses the wet sciences. Interior spaces include laboratories (top) and an auditorium (middle) in Owens Hall, and brightly colored terrazzo floors (opposite) in corridors throughout the two buildings.

Frey Science & Engineering Center
University of St. Thomas
St. Paul
Holabird & Root (Design Architect)
Opus Architects & Engineers (Architect of Record)



A campus library shines
at Augsburg College

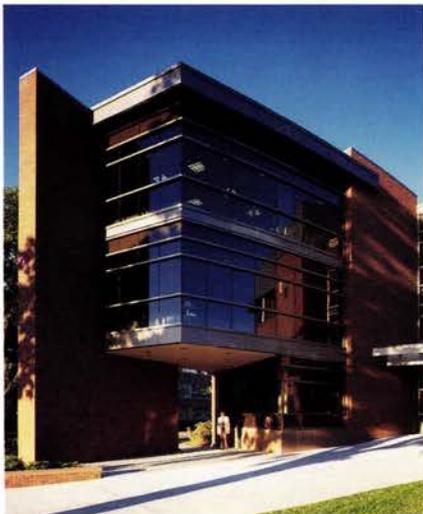
reference ROOMS



DON F. WONG

For many Twin Citians, the most salient Augsburg College landmark is a high-rise dormitory with the college's name wrapped around the top, visible to motorists passing on I-94. This small Lutheran college, wedged between the freeway and Riverside Avenue in Minneapolis, is somewhat overshadowed by the neighboring West Bank campus of the University of Minnesota and the sprawling Fairview-University Medical Center complex. Augsburg's muscular neighbors are part of the college's appeal, though, as administrators note that the Twin Cities are an extension of Augsburg's 23-acre campus.

Indeed, the campus has a decidedly urban texture, even though it surrounds a landscaped square that offers some respite from the busy surrounding highways. While



the high-rise dormitory probably will remain the college's unwitting marker for some time to come, Augsburg has a more distinguished architectural contender in the 73,000-square-foot James G. Lindell Family Library, designed by BWBR Architects of St. Paul. This striking campus addition replaces a bland, modernist box that served as the college's library since 1954.





Augsburg's library is a lively combination of glass, metal and brick. The entrance (above) faces Foss chapel and performing-arts center, forming a foci of student activity. Glass walls (opposite bottom) open the interior to the street and campus; the more staid brick side (opposite top) is turned away from the street.





“We wanted it to feel like a good, old-fashioned library—but one with the latest technology,” says Elaine R. Cline, former director of the library and information technology.

The latest it has, with a multimedia computer-development lab, multimedia

classroom, library-instruction classroom that doubles as a public computer lab, a curriculum library for teacher education, various study spaces, archives and special-collections room, art gallery and storage space. And though its collection of 175,000 volumes may seem meager to someone attending a college larger than 2,500 students, Augsburg is part of a network of seven private-college libraries sharing resources.

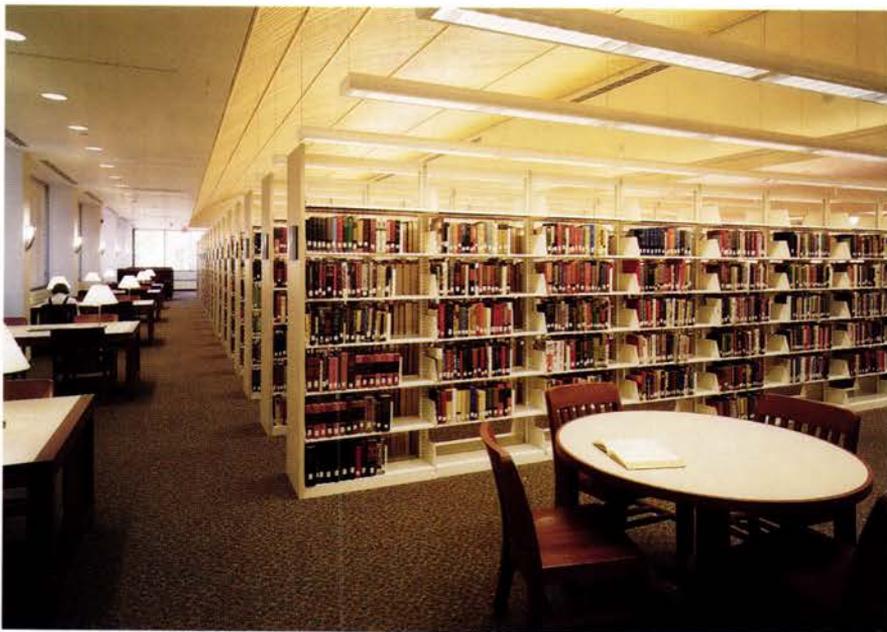
The 1954 library, which is being remodeled as offices, is here replaced with a welcoming 4-level facility that reinforces a loci of student activity already established by the Foss chapel and performing-arts center directly across 22nd Avenue. The library bridges the world of modern technology and traditional campus architecture. The glass and metal exterior treatment looks up-to-date, yet the warm-tone brick plants the building firmly in classic campus design. Because of so much glass, the interior is visible to passersby.

This interior-exterior visual connection is perhaps the building’s strongest trait. A

glass-roof spine cuts through the center, filling all levels with light. The upper two levels overlook the spine, connecting them to the main level, while a circular, glass-top rotunda ushers additional light into a lower-level student lounge. Interior brick further blurs the line between inside and outside. As for that requested “good, old-fashioned” look, BWBR took its cue from classic library reading rooms and included a barrel-vaulted, wood ceiling under the stacks on the upper level. Unfortunately, the book stacks grouped toward the center of the floor obscure ceiling views. The floor would work better if the stacks were pushed to the sides and study carrels lined up under the wooden ceiling, in classic library fashion.

Even so, the library is a valuable college addition. Augsburg’s campus, while clean and pleasant, is not particularly noteworthy. This new library certainly lends the campus distinction among its bigger urban neighbors. *E.K.*

The James G. Lindell Family Library
Augsburg College
Minneapolis
BWBR Architects, Inc.



A glass-roof spine (opposite and top) cuts through the center of the library. Books are stacked under a barrel-vaulted wooden ceiling (above) on the top level. A circular rotunda (plan) ushers light to the below-grade level.

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up close

Continued from page 15

scattered around the city quite deliberately as part of its planning. Disneyland also does that; it lets you steer from one point to another through the use of a tall vertical element.

You're referring to what Disney called the "hub and wienie" plan?

Exactly. Another thing: The visual overstimulation of the city, created by capitalism, is something Walt found baleful; that one store will be absolutely different from the one next door, to create a competitive climate. Also, skyscrapers make the city an alienating kind of place. Whereas Disney kept his scale—despite the use of forced perspective—almost uniformly domestic. And he kept the buildings all of a piece; for example, the colors were planned for a whole street, not one building by one building, and that creates a feeling of inherent harmony that's also at odds with the city outside of the theme park.

So Disneyland architecture is really an attempt to soothe or comfort the harried visitor.

I think soothing or comforting is too mild a term. I think it was an effort to create an alternative environment that could reassure the visitor that the world was more or less under control. The world of the 1950s, spatially and architecturally anyway, seemed to be spinning in another direction.

Since it opened in 1955, Disneyland has influenced American architecture from shopping malls to Los Angeles's City Walk to new-town development. Psychologically and architecturally, why has Disneyland exercised so potent an influence?

Because we feel so very good in this space, and millions of people pay a lot of money to come from vast distances to be in these spaces because they feel the same way. Because at Disneyland, people are in one of the few places in the world where they feel in control. And clearly that's not something architects are very good at giv-

Continued on page 48

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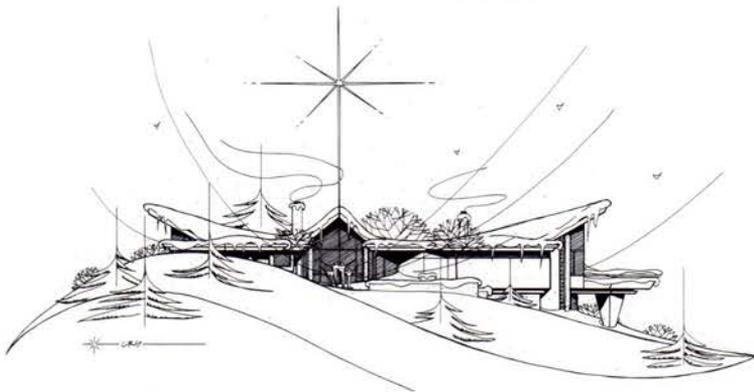
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up close

Continued from page 46

ing people. In fact, I would suggest, to be heretical about it, that vernacular architects are in general much better about that. The slub who is building tract housing in the suburbs or gated communities, or putting front-porch detailing on a house or a little decorative fence around a yard, is probably giving people a better feeling of psychological comfort. All of the things Walt Disney did—and these builders are probably doing them for the same reasons—were instinctual rather than theoretical.

Do the criticisms that Disneyland has withstood come from the same place as current criticisms of ventures like City Walk and new-town planning?

High modernism holds that the only thing that's good for you is a nice straight line and getting rid of any illusion to narrative in architecture. That's just an artificial set of principles. We don't have to believe that for a minute.

Nine times out of 10 it's the modernists who are launching the criticism. But people don't buy it. People like to have houses that remind them of their grandma's house, or of what they saw on their summer vacation or of pleasant experiences they've had. New Urbanism creates real comfort zones. Architecture, I believe, ought to be for people.

How did Disney find architects to create his buildings?

By and large his buildings were not created by architects. The closest thing to an architect who worked for Walt Disney was Marvin Davis, who worked on the site plans for Disneyland. Marv tells the story that when he and his fellow architects were getting out of architecture school at UCLA in the '30s, there were no jobs for architects. So, many young men of his generation went to work as art directors in Hollywood studios; they went to work building fake buildings or movie sets. Most of the architecture in Disney theme parks comes out of art directors' work. For the last 35 years, those art directors haven't necessarily

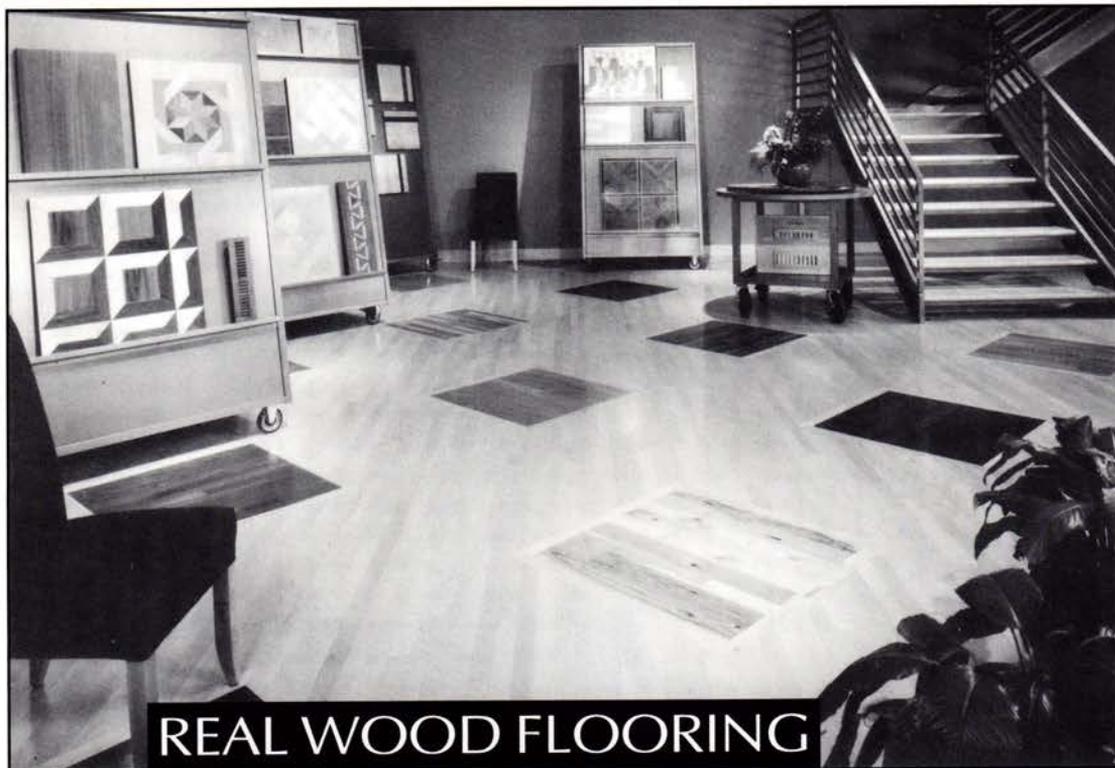
been architect-trained.

The usual process in making a Disney building is to first start with a finished rendering of the building in context, showing how people are using it and responding to it, and how it tells a story. If everybody thinks that's a cool idea, they hire a contractor and everything is then negotiated between the contractor and the art director who created the first image.

The other medium they use is models, which they use for an astonishing variety of reasons. Some of the models are created to sell ideas. A lot of them are meant to be boxed in plexi-cases and taken to the site to show a contractor how to build a building that doesn't have a right angle in it.

The model of the Disneyland Paris castle in the exhibition, made for promotional use, is one of many castle images. How did the icon of castle become the heart and soul of Disneyland?

Originally Walt put his castle in the center of his park—and this is specula-



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tion on my part—to signal the fact that you were about to walk over a drawbridge and into a fantasyland. At the time the park opened, he was working on a movie yet to be released called *Sleeping Beauty*; in which a castle was the most prominent motif. Also, one of Walt's greatest background designers for his animation, Herb Ryman, had been doing extraordinary renderings of castles, many of them based on medieval manuscripts. So I think Walt was absolutely captivated by castles.

What's more interesting is that once Walt committed himself to building the castle, people responded to it so strongly that the image suggested dreams come true. Fantasy played an important role in the lives of people in the 1950s. They were very regimented in their work environments. The alternative was unbridled fantasy; things like fairy godmothers and castles figure prominently in the advertising, filmmaking and iconography of the '50s.

It's also interesting that the castle should have become the logo for all the

Disney parks. What the castles ultimately say is that these parks are about collective creative fantasies. And we shouldn't forget that. You can almost chart how grim daily life has become since the 1950s by how big the Disney castles are getting. The smallest one is Anaheim [1955] and the largest one is Paris [1992].

Disney wrote in a draft proposal that Disneyland was to be "the essence of America as we know it...the nostalgia of the past, the exciting glimpses of the future." He included the phrase "the complexities of the present," but then crossed it out. Does this anecdote sum up the legacy he's left on contemporary architecture?

Bill Clinton is the only human being on the planet who takes his vacations at a "think tank." Most of us recoil from that idea and that's been true since the days of ancient Rome. People do not like to go on vacation and run their calculators or worry about world peace. I think it's so

important that people lighten up when they come to see this exhibit. Or when they think about theme parks. Disneyland is a place to go on vacation. It's a place that is meant to soothe and instruct, and make you feel decent about yourself.

We should recognize that where Disneyland does influence the world maybe architects ought to take notice, and ask whether they've failed their clients by imposing their personalities too strongly without thinking enough about what their clients might like. Walt Disney was somebody quite ordinary who figured things out for himself and lots of other people liked it. It just irks me that no one has paid any attention to what people seem to prefer in great numbers.

When I went to school you would just be killed if you didn't spend your whole time studying large male architects wearing round black glasses. The house that you lived in was of no concern, for example. I find the house we live in of enormous concern. And clearly, Walt Disney did, too. **AM**



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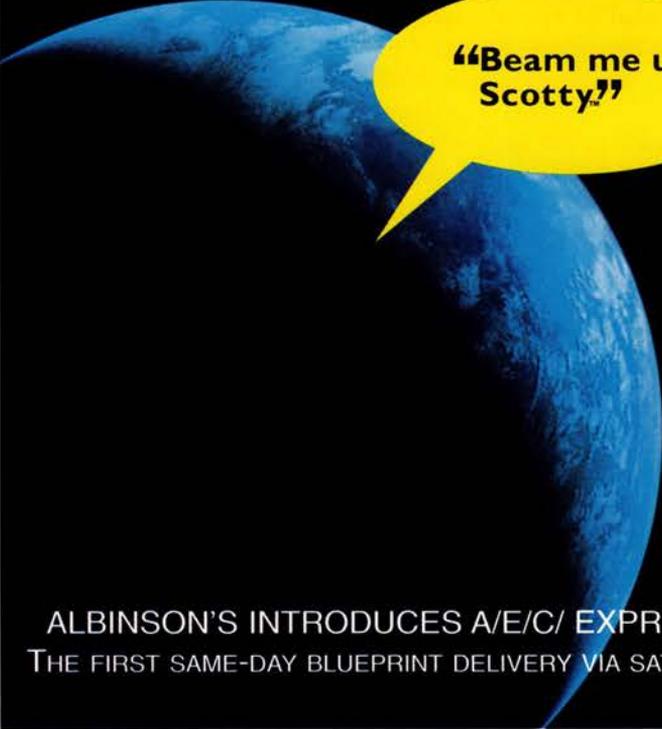
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Coming

March/April

**AIA Minnesota's Honor Award Winners
Environmental Architecture**

A Directory of Landscape Architecture Firms

**For advertising information
Call Judith Van Dyne at 612/338-6763.**

With this issue, *Architecture Minnesota* presents our sixth directory of those Minnesota firms which provide consultative engineering services. Principals of these firms are members of the Consulting Engineers Council of Minnesota or of AIA Minnesota.

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

In Minnesota, you will find there is a wealth of engineering talent available for your next project. Study this directory and call either the Consulting Engineers Council at 612/922-9696 or AIA Minnesota at 612/338-6763 for additional information and assistance.

Peter A. Rand, FAIA
Publisher

LEGEND

- PE Professional Engineer
- PG Professional Geologist
- AIA American Institute of Architects
- FAIA Fellow, American Institute of Architects
- ASLA American Society of Landscape Architects
- FASLA Fellow, American Society of Landscape Architects
- RLS Registered Land Surveyor
- CIH Certified Industrial Hygienist
- AICP American Institute of Certified Planners

■ **ALLIANT ENGINEERING, INC.**
100 Portland Avenue, #275
Minneapolis, MN 55401
Tel: 612/333-4445
Fax: 612/333-4484
Established 1994

Dean Dovolis AIA
Brian Johnson AIA
John Ruggieri ASLA
John Dillingham PE

Firm Personnel by Discipline

Civil Engineers	3
Landscape Architect	1
Technical	2
Administrative	1
TOTAL	7

Alliant Engineering is a multi-disciplinary consulting engineering firm specializing in the areas of civil design and construction, transportation planning and engineering and municipal engineering. Alliant Engineering also performs master planning and landscape architectural tasks for both public and private clients.

MPHA Northside Phased Demolition Project, Minneapolis, MN; Mount Hope Drive Plans, Specs & Estimate, St. Paul, MN; Three Fires Subdivision, Lac du Flambeau, WI; Bluff Homes Redevelopment, St. Paul, MN; PEI Building Expansion, Blaine, MN

■ **AMERICAN ENGINEERING TESTING, INC.**
2102 University Avenue W.
St. Paul, MN 55114
Tel: 612/659-9001
Fax: 612/659-1379
E-mail: act@amengtest.com
Internet: www.amengtest.com
Established 1971

Terry E. Swor PG
Donovan K. Stormoe PE
Richard D. Stehly PE
Mike Schmidt PE
Jeff Voven PE

Firm Personnel by Discipline

Civil Engineers	11
Structural Engineers	1
Metallurgical	1
Geologist	6
Geotechnical	10
Chemical	1
Environmental	6
Other Professional	25
Technical	32.5
Administrative	19
TOTAL	125

Continued on next column

Activities: Geotechnical - Borings, monitor well installation, field and laboratory tests, engineering analysis and reports. Environmental - Site assessments, air emissions control, remedial investigations, corrective action design, waste management, import studies. Materials - Engineering evaluation and consultation, field and laboratory testing, quality control observation and testing, non-destructive testing. Petrographic - Forensic hardened concrete analysis, aggregate and material testing.

Federal Reserve Bank of Minneapolis, Minneapolis, MN; University of Minnesota Basic Science and Biomedical Engineering Building, Minneapolis, MN; IBM-First Bank Place, Minneapolis, MN; State Farm North Central Regional Headquarters, Woodbury, MN; Remediation of Manufactured Gas Facility, Rochester, MN

■ **ARMSTRONG, TORSETH, SKOLD AND RYDEEN, INC.**
4901 Olson Memorial Highway
Minneapolis, MN 55422
Tel: 612/545-3731
Fax: 612/525-3289
Established 1944

James E. Rydeen FAIA
Paul W. Erickson AIA
Gaylen Melby PE
Jim Lange PE
Terry Stofferahn PE
Philip Behrend PE

Firm Personnel by Discipline

Civil Engineers	2
Mechanical Engineers	17
Electrical Engineers	10
Architects	51
Other Professional	18
Technical	7
Administrative	9
TOTAL	114

Mechanical and Electrical engineering for educational facilities, churches, and public buildings. Civil engineering for site design and storm water management, and Technical Design for video, voice, data and security systems. Designs with energy conservation measures including passive solar, heat recovery systems, geo-thermal heat pumps, variable air volume, desiccant-based cooling and energy management systems.

Red Wing High School, Red Wing, MN; Wayzata High School, Wayzata, MN; Friendly Hills Middle School, Mendota Heights, MN; North Trail Elementary School, Farmington, MN; Maple Grove Senior High, Maple Grove, MN

■ **BKBM ENGINEERS, INC.**
219 North 2nd Street, #200
Minneapolis, MN 55401
Tel: 612/333-7101
Fax: 612/342-9482
Established 1967 (as Bakke & Kopp)
Other Offices: Marshall and Rochester, MN, Sioux Falls, SD

Charles L. Ballou PE
Thomas J. Downs PE
Ronald J. LaMere PE
John A. Clark PE

Firm Personnel by Discipline

Civil Engineers	1
Structural Engineers	16
Mechanical Engineers	4
Electrical Engineers	1
Technical	16
Administrative	4
TOTAL	42

Civil, electrical, mechanical and structural consulting services for buildings and bridges. Design of heating, ventilating, air conditioning, electrical power distribution, lighting systems, and energy management studies for industrial, commercial and institutional facilities. Structural design and investigations for buildings, bridges, heavy and special structure design together with field surveying including construction management service. Historic building preservation. Evaluation studies, Building Commissioning, Railroad engineering, Bridges-track-facilities.

Lakeville High School, Lakeville, MN; Carver County Government Center, Chaska, MN; ADC Telecommunications Office and Manufacturing Facility, Shakopee, MN; Marshall Municipal Utilities, Marshall, MN; Rochester Public Library, Parking Ramp and Skyway, Rochester, MN

■ **DAVID BRASLAU ASSOCIATES, INC.**
1313 5th Street SE, Ste. 322
Minneapolis, MN 55414
Tel: 612/331-4571
Fax: 612/331-4572
Established 1971

Dr. David Braslau PE

Firm Personnel by Discipline	
Acoustical Engineers	1
Other Professional/Technical	1
Administrative	1
TOTAL	3

Architectural and performance space acoustics, building and partition noise isolation, environmental noise control, exterior facade attenuation for aircraft and other sources, sound system design, industrial noise control, acoustic and noise measurements, control of vibration, blasting and small arms ranges, land use compatibility, environmental assessments, impact statements and indirect source permits.

Conference Room (acoustics), Metropolitan Airports Commission, Minneapolis-St. Paul International Airport, MN; Brookdale Covenant Church (acoustics and sound system), Brooklyn Center, MN; Practice Integration Project (EIS), Mayo Foundation, Rochester, MN; Marriott Residence Inn (noise control), Roseville, MN; Silicon Motor Speedway/Mall of America (noise control), Bloomington, MN

■ **BRW, INC.**
700 Third St. South
Minneapolis, MN 55415
Tel: 612/370-0700
Fax: 612/370-1378
Established 1956
Other Offices: Denver, CO; Milwaukee, WI; Newark, NJ; Orlando, FL; Phoenix, AZ; Portland, OR; Salt Lake City, UT; Seattle, WA; San Diego, CA

Richard P. Wolsfeld	PE, AICP
Craig Amundsen	AIA, AICP
Gary Ehret	PE
Tony Heppelmann	PE

Firm Personnel by Discipline	
Civil Engineers	82
Structural Engineers	12
Transportation Engineers	32
Architects	3
Environmental Planners, Hydrologists, Landscape Architects, Urban Planners, Archaeologists, Graphic Designers, Historian, GIS/Visualization	140
Technical	73
Administrative	77
TOTAL	419

BRW is a multidisciplinary consulting firm of more than 450 employees which stresses high-quality professional services and innovative approaches to problem solving. The firm provides professional consulting services in the areas of civil and structural engineering, land use planning and development, site design, utilities design, landscape architectural design, environmental analysis, transportation planning and design, traffic engineering, Intelligent Transportation Systems (ITS), Geographic Information Systems (GIS), and archaeology.

Newark-Elizabeth Rail Link, Newark, NJ; Mall of America Access and Transportation, Bloomington, MN; Centennial Lakes Multi-Use Development, Edina, MN; Old Country Buffet Site and Structural, Multiple Locations; North Minneapolis Upper Mississippi River Master Plan, Minneapolis, MN

■ **CAIN OUSE ASSOCIATES INC.**
1310 East Highway 96
White Bear Lake, MN 55110
Tel: 612/426-9549
Fax: 612/426-5048
Internet: CainOuse@aol.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	7
Administrative	2
TOTAL	14

Mechanical and Electrical Consulting Engineering to the Construction Industry. Project types include housing, medical, nursing, industrial, entertainment, retail, food service, government and exterior lighting.

Black Bear Casino, Cloquet, MN; Cook County School, Grand Marais, MN; Public Works Facilities Phases 1 and 2, Minneapolis, MN; McDonald's Restaurants, Multiple Locations; 29th Street Greenway Lighting, Minneapolis, MN

■ **CARROLL, FRANCK & ASSOCIATES**
1357 Highland Parkway
St. Paul, MN 55116
Tel: 612/690-9162
Fax: 612/690-9156
E-mail: CARRFRAN@TC.UMN.EDU
Established 1985

Anne R. Carroll MP
Bruno M. Franck Ph.D., PE

Firm Personnel by Discipline	
Structural Engineers	1
Writing/Communication Consultant	1
TOTAL	2

Structural engineering services for religious, educational, residential, and industrial buildings. Expertise in the design of exposed architectural structures and architectural structures with wood. Design and construction for wood, steel, concrete and masonry buildings. Technical writing of reports, analyses, government regulations, permits, specifications, etc.

Continued on next column

Mephin Abbey, Remodeling and Addition, Moncks Corner, SC; Brandenburg Residence, Ely, MN; Dayton's Residence, Minneapolis, MN; Minnesota Astronomical Society's Onan Observatory, Carver County, MN; Beautiful Savior Lutheran Church, New Hope, MN

■ **CLARK ENGINEERING CORPORATION**
621 Lilac Drive North
Minneapolis, MN 55422-4674
Tel: 612/545-9196
Fax: 612/541-0056
Established: 1938
Other Offices: Aberdeen, Rapid City and Sioux Falls, SD; Fort Meyers, FL

Larry G. McMurtry PE
Hadi Sajadi PE
Michael A. Fowler PE

Firm Personnel by Discipline	
Civil Engineers	17
Structural Engineers	18
Land Surveyors	4
Technical	35
Administrative	10
TOTAL	84

We provide professional services in Civil Engineering and Land Surveying nationwide from offices in Minnesota, South Dakota and Florida. Our specialties are: Structural Engineering, Municipal Engineering, Transportation Engineering, Surveying, Construction Services, Facility/Site Development

New South Central Elementary School, Minneapolis, MN; Indian Prairie High School, Naperville, IL; Parkland High School, Allentown, PA; Pueblo of Isleta Casino, Isleta, NM; Hormel Meat Processing Plant, Osceola, IA

DARG BOLGREAN MENK, INC.

7575 Golden Valley Road., #210
Golden Valley, MN 55447
Tel: 612/544-8456
Fax: 612/544-8914
E-mail:
darg@WORLDNET.ATT.NET
Established 1966.

Lloyd W. Darg PE
Gene Bolgrean PE
Harry D. Menk PE

Firm Personnel by Discipline	
Civil Engineer	1
Structural Engineers	4
Technical	2
Administrative	1
TOTAL	8

Complete structural engineering services for commercial/retail, office/warehouse, academic, industrial, governmental, medical/health, housing, religious and parking facilities. With expertise in steel, concrete, masonry and wood, DBM has engineered new construction, additions and renovations/restorations for the architectural profession, owners, developers, contractors, and fabricators.

New High School, Le Center, MN; Minnetonka Hills Golf Clubhouse, Minnetonka, MN; Habersham Apartments, Savannah, GA; Best Buy Store, Philadelphia, PA; Cargill Office, Fargo, ND

DOLEJS ASSOCIATES INC.

1624 N. Riverfront Drive
Mankato, MN 56001
Tel: 507/625-7869
Fax: 507/388-9225
E-mail: dolejs@ic.mankato.mn.us
Established 1977
Other Offices: Burnsville, MN

Joseph M. Dolejs PE
David A. Kroells PE

Firm Personnel by Discipline	
Mechanical Engineers	1
Technical	9
Administrative	1.5
TOTAL	12

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.

Waseca Junior High School, Waseca, MN; Burnsville Post Office, Burnsville, MN; Burnsville Co-op Housing, Burnsville, MN; Hosanna! Lutheran Church, Lakeville, MN; Mankato City Hall, Mankato, MN

DUNHAM ASSOCIATES, INC.

8200 Normandale Blvd., Ste. 500
Minneapolis, MN 55437
Tel: 612/820-1400
Fax: 612/820-2760
E-mail:
arnefa@dunhamassociates.com
Internet: dunhamassociates.com
Established 1960
Other Offices: Rapid City, SD;
Las Vegas, NV

George F. Dunham PE
Kathleen Kolbeck PE
Dale Holland PE

Firm Personnel by Discipline	
Structural Engineers	10
Mechanical Engineers	14
Electrical Engineers	10
Building Code Specialist	1
Lighting Specialist	1
Technical	85
Administrative	13
TOTAL	134

Continued on next column

Founded in 1960, Dunham Associates provides mechanical, electrical and structural engineering services to commercial, institutional, industrial and public sector markets. These include: aviation, assisted living, biotechnology, casinos, clean rooms, corporate facilities, corrections, education, government, healthcare, hospitality, manufacturing facilities, parking structures, pharmaceutical and retail. Our three offices are located in Rapid City, SD, Minneapolis, MN and Las Vegas, NV. We are registered in all 50 states.

Minneapolis/St. Paul International Airport, Luther Home and Services for the Aged, University of Minnesota Twin Cities Laboratory, Elk River School District, Methodist Hospital, Hennepin County Public Works Facility, Soaring Eagle Casino and Hotel, Microvena, Excelsior-Henderson, Shelly's Back Room and REGIS Hairstyling.

ELLERBE BECKET

800 LaSalle Avenue
Minneapolis, MN 55402
Tel: 612/376-2000
Fax: 612/376-2271
Internet: www.ellerbebecket.com
Established 1909
Other Offices: San Francisco, Phoenix, Kansas City (MO), Washington, DC, Moscow, Seoul, Jakarta, Tokyo, Wakefield (UK)

Bob Degenhardt PE
Randy Wood PE
Doug Maust PE
Al Wenzel PE
Jay Rudberg PE

Firm Personnel by Discipline	
Civil, Structural, Mechanical, Electrical Engineers	169
Landscape Engineer	1
Architects, Interior Design, Landscape/Urban Planning, Facility Consulting	370
Technical	87
Administrative	100
TOTAL	746

Continued on next column

Ellerbe Becket provides integrated engineering, architecture and construction services worldwide to corporations, developers, health care providers, colleges and universities, government agencies and entities, sports teams, and entertainment providers.

Carlson School of Management, University of Minnesota, Minneapolis; Science Museum of Minnesota, St. Paul, MN; Target Headquarters, Minneapolis, MN; Mayo Clinic Practice Integration, Rochester, MN; Ronald Reagan Building and International Trade Center, Washington, DC; Bank One Ballpark, Phoenix, AZ

EMANUELSON-PODAS, INC.

6607 18Th Avenue S.
Richfield, MN 55423
Tel: 612/866-8424
Fax: 612/866-8426
Established 1957

Paul Emanuelson PE
Dennis Leslie PE
Mike Webert PE

Firm Personnel by Discipline	
Mechanical Engineers	4
Electrical Engineers	3
Administrative	1
TOTAL	8

Full service Engineering firm. Preparation of mechanical and electrical plans, specifications and reports for building construction. Mechanical work includes plumbing, heating, ventilation, air conditioning, controls, sprinkler systems. Electrical work includes lighting, power, communications and controls.

Lifetime Fitness Health Clubs; St. Therese Church, Deephaven, MN; National Guard Armory, Inver Grove Heights, MN; City of Rogers Fire Station, MN; Old Chicago Restaurants, Duluth and Roseville, MN

■
ENGAN ASSOCIATES:
ARCHITECTS AND
ENGINEERS, P.A.

316 W. Becker Avenue, PO Box 956
 Willmar, MN 56201
 Tel: 320/235-0860 or 800/650-0860
 Fax: 320/235-0861
 E-mail: enganarchitects@willmar.com
 Established 1979

Stan L. Simon PE
 Richard P. Engan AIA, CID, CSI
 Jeffrey M. Nagel AIA, CID

Firm Personnel by Discipline

Mechanical Engineers	1
Architects	2
Interior Designer	1
Technical	5
Administrative	2
TOTAL	11

Engan Associates: Architects and Engineers, P.A. provides mechanical engineering services. Specializing in personal service for plumbing, heating, ventilating, air conditioning, energy management, fire protection, and heat recovery.

Madelia Community Hospital,
 Madelia, MN; Gloria Dei Lutheran
 Church, Redwood Falls, MN; St. John
 Lutheran Nursing Home, Springfield,
 MN; MinnWest Bank, Ortonville, MN;
 Johnson Memorial Hospital and Clinic,
 Dawson, MN

■
ENGINEERING DESIGN GROUP
OF MN, INC.

547 Lovell Avenue
 Roseville, MN 55113-4605
 Tel: 612/481-9195
 Fax: 612/481-9195
 E-mail: EDGMN@AOL.COM
 Established 1988

Sean K. Hallett PE

Firm Personnel by Discipline

Civil Engineers	1
Structural Engineers	1
Technical	.5
Administrative	1

Continued on next column

Analysis, design, documentation, and inspection and/or forensic investigation of Commercial and Industrial Facilities, Residential, and Curtain Wall structures both new and restoration of existing. Analysis, design, and documentation and/or forensic investigation of material Handling Support Systems including but not limited to Bridge Cranes, Jib Cranes, and Mono Rail systems, Amusement Rides, Heavy equipment foundation engineering, Hazardous explosive containment structural engineering, Multi-State Registration.

Pam Oil Facilities, Clover Leaf Creameries, Douglas Metal Specialties, Industrial Air Systems, Grossfield Residence, Fjelstad Residence

■
ERICKSEN ELLISON and
Associates Inc.

2635 University Ave. W., Ste. 200
 St. Paul, MN 55114-1231
 Tel: 612/641-0311
 Fax: 612/641-0029
 E-mail: mail@eeaengineers.com
 Established 1954

Bruce K. Johnson PE
 William F. Thiess PE
 Richard A. Hoag CPM
 James H. Art PE

Firm Personnel by Discipline

Mechanical Engineers	5
Electrical Engineers	2
Registered Communications/ Distribution Designer (RCDD)	1
Technical	38
Administrative	5
TOTAL	51

Continued on next column

Mechanical and electrical design of HVAC, plumbing, fire protection, specialty lighting, power, voice/data communication, and security/surveillance for a variety of building types. EEA has extensive experience in design of correctional facilities, libraries, educational facilities, data processing centers, manufacturing/industrial facilities, clean rooms, aircraft engine test facilities, and airports.

Gateway/Alumni Center, University of Minnesota, Minneapolis, MN; Grand Rapids High School, Grand Rapids, MN; Ridgedale Library and Courts Expansion, Minnetonka, MN; Mille Lacs County Jail and Sheriff's Office, Milaca, MN; Hamline University-Sports Health and Recreation Facility, St. Paul, MN

■
ERICKSEN ROED &
ASSOCIATES, INC.

300 First Avenue N., Ste. 420
 Minneapolis, MN 55401
 Tel: 612/342-9210
 Fax: 612/342-9214
 Established 1985

Alfred G. "Bud" Erickson PE
 Thomas E. Amundson
 James D. Roed PE
 Robert A. Curtis PE

Firm Personnel by Discipline

Structural Engineers	12
Technical	11
Administrative	3
TOTAL	26

Full service professional structural engineering relating to construction documents and specifications on commercial, medical, industrial, sports facilities, aircraft hangers, engine maintenance shops, test cells, seismic masses and retail facilities. Construction observations, reports and forensic engineering.

Continued on next column

Target Center Arena, Minneapolis, MN; AT&T Tower, Minneapolis, MN; Minneapolis Federal Courthouse, Minneapolis, MN; North Memorial Medical Center, Minneapolis, MN; Super America - Lyndale Avenue, 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	6
Electrical Engineers	4
Technical	1
Administrative	1.5
TOTAL	12.5

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 (R13) with "Softdesk" building services.

Aircraft Rescue Fire Fighting Training Facility, Lake Superior College, Duluth, MN; Science Building Addition and Renovation, College of St. Scholastica, Duluth, MN; Biofilter Odor Control Systems, Western Lake Superior Sanitary District, Duluth, MN; Addition and Remodeling, Virginia Secondary Schools, Virginia, MN; Supplemental Vent and A/C, Darland Administration Building, University of Minnesota, Duluth, MN

GAUSMAN & MOORE ASSOCIATES, INC.

1700 W. Highway 36
700 Rosedale Towers
Roseville, MN 55113
Tel: 612/639-9606
Fax: 612/639-9618
E-mail: info@gausman.com
Internet: www.gausman.com
Established 1935

Other Offices: Brainerd and 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	6
Electrical Engineers	7
Technical	21
Administrative	10
TOTAL	44

FIELD OF PRACTICE: Mechanical, Electrical, Fire Protection, Lighting, Energy Conservation, Renewable Energy, Audio/Visual and Data; ACTIVITIES: Mechanical and electrical engineering, including design of heating, ventilating, air conditioning, fire protection, plumbing, lighting, power, security and communication and computer systems for all building types. We also provide engineering studies, life safety studies, renewable energy system design, energy audits and energy retrofit design.

Fred Meyer Stores, Nationwide; United States Postal Services, Nationwide; University of Minnesota-Morris, Morris, MN; Vision-Ease Lens, Inc., Ramsey, MN; Winona State University Library, Winona, MN

HALLBERG ASSOCIATES, INC.

2207 Third Street
White Bear Lake, MN 55110
Tel: 612/429-5655
Fax: 612/429-6215
Established 1984

Joseph W. Hallberg PE
James R. Penkivech PE
Larry R. Jensen PE

Firm Personnel by Discipline

Mechanical Engineers	4
Electrical Engineers	5
Technical	11
Administrative	3
TOTAL	23

Continued on next column

Mechanical, electrical and facility management engineering services for educational, commercial, institutional and correctional facilities. Mechanical services include HVAC and plumbing design, and ventilating audits and remedial system modification to improve indoor air quality. Electrical services include design for power distribution, lighting, fire alarms, security systems and technology infrastructure.

The new Elementary School, Minneapolis, MN; Minnetonka High School, Minnetonka, MN; Kenyon-Wanamingo High School, Kenyon, MN; USSB UPS Upgrade, Oakdale, MN; Super Valu Regional Office Remodeling, Atlanta, GA

HAMMEL GREEN AND ABRAHAMSON, INC.

1201 Harmon Place
Minneapolis, MN 55403
Tel: 612/337-4100
Fax: 612/332-9013
Internet: www.hga.com
Established 1953
Other Offices: Rochester, MN; Milwaukee, WI

Roger Santelman PE
Steve Bieniek PE
David Marshall PE
Kermit Olson PE
Harry Wilcox PE

Firm Personnel by Discipline

Civil Engineers	11
Structural Engineers	24
Mechanical Engineers	43
Electrical Engineers	30
Industrial Engineer	1
Architects	159
Interior Designers	15
Technical	38
Administrative	49
TOTAL	370

HGA Engineering, in addition to serving clients through the full-service A/E approach, has a broad independent client base. HGA engineers pride themselves on using their creativity and innovation to develop workable cost-effective solutions to engineering challenges. Each discipline is highly capable and intent upon providing the best possible service to all clients.

Ceridian Corporation, Bloomington, MN; Discovery Bay at the Marine Education Center, Minnesota Zoo, Apple Valley, MN; Minneapolis/St. Paul International Airport, St. Paul, MN; Fine Arts Interdisciplinary Resource (F.A.I.R.) School, Robbinsdale, MN; Performing Arts Center, Florida State University, Tallahassee, FL

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

6115 Cahill Avenue
Inver Grove Heights, MN 55076
Tel: 612/451-4605
Fax: 612/451-0917
Established 1985

Jim Krech PE
Dan O'Brien AIA
Brady Mueller AIA
Brian Wass AIA

Firm Personnel by Discipline

Structural Engineers	3
Architects	4
Interior Designer	1
Technical	8
Administrative	1
TOTAL	17

Structural engineering for commercial, industrial, medical, retail, agri-facilities and residential projects. We offer Auto-CAD and have a current library of structural design software. Services are provided for architects, owners, contractors, and various agencies.

McDonough Community Center, St. Paul, MN; Oaks of Mainstreet, Hopkins, MN; Resource Plastics, Eagan, MN; ADDCO, Inc., St. Paul, MN; Merchants State Bank, North Branch, MN

L S ENGINEERS, INC.

200 South Main Street
LeSueur, MN 56058
Tel: 507/665-6255
Fax: 507/665-6818
E-mail: lseng@ic.le-seueur.mn.us
Established 1989

Robert L. Sprengeler PE
William P. Lehnertz PE

Firm Personnel by Discipline

Structural Engineers	5
Technical	4
Administrative	1
TOTAL	10

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 waste water plants. Full range of services including feasibility studies, investigations, construction documents, cost estimates, and field observations.

Continued on next column

Seneca Foods Warehouse, Blue Earth, MN; Bethany College Men's Dorm, Mankato, MN; Taylor Corporation Office Building, Mankato, MN; Best Buy Stores in MN, FL, IN, IL, TX, IA, VA; Sun Country Hanger, Minneapolis, MN

LARSON ENGINEERING OF MINNESOTA

3524 Labore Road
White Bear Lake, MN 55110
Tel: 612/481-9120
Fax: 612/481-9201
E-mail: LAG@LARSONENGR.COM
Internet: WWW.LARSONENGR.COM
Established 1979
Other Offices: Naperville, IL; Appleton, WI; Atlanta, GA

Lee Granquist PE
Kesh Ramdular PE
Henry Voth PE

Firm Personnel by Discipline

Civil Engineers	3
Structural Engineers	14
Technical	8
Administrative	4
TOTAL	29

Larson Engineering specializes in the structural design of industrial and commercial buildings of all types, with additional specialization in curtain wall design, pavement design and maintenance, crane design, materials handling, machine design and civil engineering.

Northfield Elementary School, Northfield, MN; Boeing Mechanized Painting Platforms, Seattle, WA; Kuala Lumpur City Center Curtainwall, Kuala Lumpur, Malaysia; Hennepin Technical College Pavements, Brooklyn Park, MN; Church of St. Joseph, Lino Lakes, MN

LHB ENGINEERS & ARCHITECTS

21 West Superior Street, Ste. 500
Duluth, MN 55802
Tel: 218/727-8446
Fax: 218/727-8456
E-mail: info@lhbcorp.com
Internet: http://www.lhbcorp.com
Established 1965
Other Offices: Minneapolis, MN

Harvey H. Harvala PE
William D. Bennett PE
David M. Sheedy PE
William J. Zerfas PE
Lauren A. Larsen PE

Firm Personnel by Discipline

Civil Engineers	7
Structural Engineers	6
Mechanical Engineers	5
Electrical Engineers	1
Architects	18
Landscape Architects	2
Certified Interior Designers	3
Registered Land Surveyors	2
Technical	24
Administrative	17
TOTAL	85

Civil, structural, mechanical, electrical engineering and surveying services for municipal and other governmental agencies, as well as industrial, commercial, educational and health care facilities. Typical project types include streets, roadways, highways, bridges, utilities, trails, parks, site development, M/E systems, parking structures, fuel transmission systems and structural investigation and feasibility studies.

City Streets Improvement Program, Duluth, MN; Moose Lake Sewer System Study, Moose Lake, MN; Municipal Services Building Indoor Air Improvements, Superior, WI; Esko K-12 School, Esko, MN; Lakehead Pipe Line Pump Stations, Various Locations from MN through IL

LIGHTOWLER JOHNSON ASSOCIATES INCORPORATED

700 Main Avenue, Ste. 40
Fargo, ND 58103
Tel: 701/293-1350
Fax: 701/293-1353
E-mail: LJA@rnet.com
Internet: lightowlerjohnson.com
Established 1954

Frank L. Kratky AIA
Dennis S. Martin PE
Stevan G. Dewald PE
Winton D. Johnson PE
Joseph Lightowler, Jr. PE

Firm Personnel by Discipline

Civil Engineers	3
Mechanical Engineers	4
Electrical Engineers	2
Architects	2
Technical	6
Administrative	3
TOTAL	20

Specialized consulting engineering for state institutions, municipal government, schools, colleges and universities, and private commercial-industrial clients. Mechanical, civil and electrical engineering for water distribution, wastewater treatment, municipal and county road replacement, power plant construction and modernization, heating-ventilating-air conditioning systems, land survey and plat layouts, electrical power distribution, lighting systems, energy management systems, energy conservation studies and parking ramp structures.

Soybean Processing Plant, Volga, SD; Central Power Plant, Concordia College, Moorhead, MN; Water Distribution System, Clinton, MN; Streets Replacement, Canby, MN; Steam Distribution Systems, MN Correctional Facility, St. Cloud, MN

LUNDQUIST, KILLEEN, POTVIN & BENDER, INC.

1935 W. County Road B₂
St. Paul, MN 55113
Tel: 612/633-1223
Fax: 612/633-1355
E-mail: vKnut@lcpb.com
Internet: www.lcpb.com
Established 1969

Leonard Lundquist PE
Peter Potvin PE
Gayland Bender PE
John Killeen PE

Continued on next column

Firm Personnel by Discipline

Mechanical Engineers	6
Electrical Engineers	4
Technical	24
Administrative	7
TOTAL	41

LKPB is a mechanical and electrical consulting engineering firm, founded in 1969, working with a broad range of clients in a number of project environments, including public and private academics, Fortune 500 corporations, health care, senior assisted-living complexes and municipal organizations.

50 Meter Olympic-Size Natatorium, Middlebury College, Middlebury, VT; New Science Building, St. John's University, Colleagueville, MN; Lawson Software Base Building and Parking Ramp, St. Paul, MN

MATTSON/MACDONALD, INC.

1516 West Lake Street
Minneapolis, MN 55408
Tel: 612/827-7825
Fax: 612/827-0805
Established 1983

Wesley Mattson PE
David MacDonald PE
Stephanie Cross PE

Firm Personnel by Discipline

Structural Engineers	5
Technical	2
Administrative	1
TOTAL	8

Structural Engineering Services for commercial, educational, industrial and institutional buildings. Design of new buildings, building expansion and renovation, restoration of existing buildings. Experienced in the restoration and adaptive re-use of historic buildings.

Earle Brown Conference Center, Brooklyn Center, MN; 5th Precinct Police Headquarters, Minneapolis, MN; Lac Qui Parle High School, Madison, MN; Mille Lacs Indian Museum, Garrison, MN; Lifetouch Corporate Headquarters, Eden Prairie, MN

MAXIM TECHNOLOGIES INC.

662 Cromwell Avenue
St. Paul, MN 55114
Tel: 612/645-3601
Fax: 612/659-7348
Established 1938
Other Offices: Rochester, MN

Randy Ostraat PE, CIH
Pete Cangialosi PE
Tracy Toepper
John Stieben

Maxim Technologies, Inc./Twin City Testing provides QA/QC testing for all types of construction projects including geotechnical engineering, construction materials testings, drilling and failure analysis. Additional services include environmental consulting, materials testing and analytical chemistry. Maxim offices total 53 nationwide with Minneapots offices located in St. Paul and Rochester.

Maple Grove High School, Maple Grove, MN; Midway Market Place, St. Paul, MN; Sears, Mankato, MN; Faribault Elementary School, Faribault, MN; Hopkins Schools, Hopkins, MN; Civic Center, St. Paul, MN

MCCONKEY & ASSOCIATES, INC.

3144 Hennepin Avenue S.
Minneapolis, MN 55408
Tel: 612/822-6950
Fax: 612/822-8385
E-mail: HMcconkey@aol.com
Internet: America Online
Established 1978

H. James McConkey PE
Richard W. Johnson PE
Christian Soltermann PE

Firm Personnel by Discipline

Structural Engineers	3
Technical	2
Administrative	1
TOTAL	6

Structural engineering consulting services for commercial, industrial, institutional, public and residential building projects. Special designs for bins, stacks, equipment supports, material handling, Rehabilitation and remodeling of existing structures. Structural investigations and reports. Licensed in 24 states.

Interlachen Golf Club Additions and Remodeling, Edina, MN; Excelsior Henderson Motorcycle Plant, Belle Plaine, MN; Lac Court Orielles K-6 School, Hayward, WI; State Bank of Chanhassen, Chanhassen, MN; Stackwoods Restaurant, Lincoln, NE

ME², INC.

1117 East Franklin Avenue
 Minneapolis, MN 55404
 Tel: 612/871-3385
 Fax: 612/871-1746
 Established 1992

Dean Dovolis AIA
 Brian Johnson AIA
 John Ruggieri ASLA
 David Hierseman PE
 Dan Moulton PE

Firm Personnel by Discipline	
Mechanical Engineers	2
Electrical Engineers	2
Technical	3
TOTAL	7

Commercial projects are the mainstay of ME², Inc. Restaurants from one of a kind to fast food prototypes are done on a national level. Retail, banking, airport/airline projects, city/county buildings and educational are also focal points of experience.

KBI Bank Data Center, Chaska, MN; Maple Grove Community Center Pool, Maple Grove, MN; LCO K-6 School, Hayward, WI; Bad River Casino and Hotel, Ashland, WI; Rivers Restaurant, Chicago, IL

MEYER, BORGMAN & JOHNSON, INC.

12 South Sixth Street, Ste. 810
 Minneapolis, MN 55402
 Tel: 612/338-0713
 Fax: 612/337-5325
 E-mail: dmurphy@mbjeng.com
 Established 1955

John E. Meyer PE
 Richard E. Wiehle PE
 Daniel E. Murphy PE
 Michael J. Ramerth PE

Firm Personnel by Discipline	
Structural Engineers	12
Technical	6
Administrative	2
TOTAL	20

Specialize in the design of structural systems and foundations for commercial, industrial, educational, institutional, performing arts and religious facilities. Services are rendered to architects, contractors and owners for all types of projects which require structural engineering services.

Imation Discovery Tech Center, Oakdale, MN; Minnesota Library Access Center, University of Minnesota, Minneapolis, MN; State Capitol Structural Restoration, St. Paul, MN; H. B. Fuller Laboratory Addition, Vadnais Heights, MN; Minneapolis Institute of Arts, 1997 Addition, Minneapolis, MN

MICHAUD COOLEY ERICKSON

333 S. Seventh Street, Ste. 1200
 Minneapolis, MN 55402
 Tel: 612/339-4941
 Fax: 612/339-8354
 E-mail: michaudcooley.com
 Established 1946

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

Firm Personnel by Discipline	
Mechanical Engineers	51
Electrical Engineers	31
Administrative	16
TOTAL	98

MCE designs mechanical, electrical, lighting, and special systems for corporate, medical data processing, high-tech R&D, retail, industrial educational, public, and commercial buildings. Examples of special systems include: security and surveillance, life/safety, fire protection, audiovisual and sound reinforcement, paging and intercom, cable or master television antenna signal distribution.

Imation, Oakdale, MN; Woodwinds Health Campus, Woodbury, MN; 800-Bed Close-Custody Correctional Facility, Rush City, MN; Children's Museum, St. Paul, MN; (New) Federal Reserve Bank, Minneapolis, MN

MJP ASSOCIATES

4362 Oakmede Lane
 White Bear Lake, MN 55110
 Tel: 612/426-7037
 Fax: 612/476-6643
 E-mail: yukonone@aol.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 including investigative studies, feasibility studies, value engineering related to alternative structural systems, structural analysis and design, preparation of contract documents and construction observation.

KTCA's Hometown "House with Character, Minnetrista, MN; Altman Residence, Minnetonka, MN; Colvin Residence on White Bear Lake, MN; Davis Residence on Bald Eagle Lake, MN; Burrell Residence in Chanhassen, MN

The MountainStar Group, Incorporated

7800 Metro Parkway, Ste. 218
 Minneapolis, MN 55425
 Tel: 612/851-3085
 Fax: 612/851-3086
 E-mail: mstar@pclink.com
 Internet: www.mountainstarfire.com
 Established 1988
 Other Offices: Londonderry, NH

Michael A. O'Hara PE
 Robert J. James CUFCl

Firm Personnel by Discipline	
Fire Protection Engineers	5
Technical 1	
Administrative	1
TOTAL	7

MountainStar provides code consulting on building codes, fire and life safety, and ADA to facility owners and the design and construction community. The company's performance-based philosophy provides for acceptable levels of code compliance relative to the building's unique function and purpose, and allows for freedom of design and efficient use of building materials.

NIKE, Memphis, TN; Grand Casino, Mille Lacs, MN; Virginia Regional Medical Center, Virginia, MN; Excelsior Henderson Motorcycle Co., Belle Plaine, MN; Banta Warehouse, Kansas City

ORR-SCHELEN-MAYERON & ASSOCIATES, INC.

300 Park Place East
 5775 Wayzata Blvd.
 Minneapolis, MN 55416-1228
 Tel: 612/595-5775
 Fax: 612/595-5773
 E-mail: OSM@wwave.com
 Established 1992

Jack L. Hunter PE
 John M. Menter PE
 Dale A. Tranter PE
 Robert C. Kilgore PE
 Richard J. Nelson PE

Firm Personnel by Discipline	
Civil Engineers	8
Structural Engineers	5
Mechanical Engineers	9
Electrical Engineers	5
Other Engineers: Transportation, Environmental, Water Resources	8
Architects	9
Other Professional: Marketing, Interior Design, Survey, Modeling	17
Technical	46
Administrative	15
TOTAL	122

Continued on next column

Engineers, Architects, Interior Designers, Planners and Surveyors providing services to municipal, governmental, medical, industrial, and corporate markets. Services include mechanical, electrical, structural, environmental, water resources and transportation engineering, architecture, interior design, landscape architecture, simulation modeling, GIS and surveying. OSM provides in-house, multi-disciplinary services on projects of all sizes.

Hoffman Manufacturing Facility, Anoka, MN; HealthEast: St. John's Hospital Addition and Remodeling, Maplewood, MN; New Ulm Center Street Reconstruction, New Ulm, MN; 3M Facility and Chemical Engineering Projects, St. Paul, MN; MN/DOT Transportation Management Center, Roseville, MN

OWENS ENGINEERING SERVICES

930 E. 80th St.
 Bloomington, MN 55420
 Tel: 612/854-3800
 Fax: 612/854-3769
 E-mail: Engineering@OwensCo.Com
 Established 1957

Jim Owens PE
 Roger Martin PE
 Bruce Boerner PE
 Paul Euby PE
 Boris Pevzner PE

Firm Personnel by Discipline	
Mechanical Engineers	12
Electrical Engineers	2
Technical	70
Administrative	3
TOTAL	87

Activities: Design of heating, ventilating, air conditioning, plumbing, fire protection, temperature controls, automation and energy management, power, lighting, communication systems and energy management studies. Building/mechanical and electrical systems evaluations. Facilities utility systems master planning studies. Building mechanical and electrical systems commissioning. Indoor air quality analysis. Heating, ventilating and air conditioning equipment, testing and evaluation.

Marshall Field's Department Store, Madison, WI; Hudson's Department Store, Pontiac, MI; Hudson's Department Store, Toledo, OH; Park Nicollet Clinic Headquarters, St. Louis Park, MN; Fingerhut, St. Cloud, MN

SCHOELL & MADSON, INC.

10580 Wazata Blvd.
 Minnetonka, MN 55305
 Tel: 612/546-7601
 Fax: 612/546-9065
 Established 1956
 Other Offices: Eden Prairie, MN

James Orr PE
 Kenneth Adolf PE
 Theodore Kemna RLS

Firm Personnel by Discipline

Civil Engineers	8
Hydrogeologist	1
Wetlands Specialists	2
Technical	24
Administrative	3
TOTAL	38

Complete wetlands identification, classification and delineation; EASs, EIS, and natural resource services; environmental site assessments, well-head protection, regulatory compliance and permitting; civil engineering system studies, design and construction/contract administration; land surveying, topographic, global positioning system surveys, GIS Services, construction and as-built surveys; quality control soil testing, construction observation and environmental services.

Cedar Point Townhomes, Minnetonka, MN; Kohl's Department Store, Burnsville, MN; Owasso Hills, Roseville, MN; Best Buy, Eden prairie, MN; Blackhawk Forest, Eagan, MN

SEBESTA BLOMBERG & ASSOCIATES, INC.

5075 Wayzata Blvd.
 Minneapolis, MN 55416
 Tel: 612/546-0494
 Fax: 612/546-0494
 E-mail: info@Sebesta.com
 Internet: www.Sebesta.com
 Established 1994
 Other Offices: Chicago and Champaign, IL; St. Louis, MO; Boston, MA

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

Continued on next column

Firm Personnel by Discipline

Civil Engineers	3
Mechanical Engineers	23
Electrical Engineers	16
Chemical Engineers	2
Architects	1
Technical	28
Administrative	30
TOTAL	103

SB&A is a specialty engineering and management consulting firm providing services to institutional, health care, industrial and public markets nationwide. Services include: utility infrastructure modernization and optimization, building systems design and analysis, commissioning, architectural lighting, controls and automation, process engineering, and power generation, transmission and distribution, facilities support services, construction management.

University of Minnesota, Minneapolis, MN; Mayo Foundation, Rochester, MN; 3M, St. Paul, MN; Minnesota Power, Duluth, MN; Architect of the Capitol, Washington, DC; Kraft Foods, Champaign, IL

SHORT ELLIOTT HENDRICKSON INC.

3535 Vadnais Center Drive
 St. Paul, MN 55110
 Tel: 612/490-2000
 Fax: 612/490-2150
 Homepage: www.sehinc.com
 Established 1927
 Other Locations: Minneapolis and St. Cloud, MN; Chippewa Falls and Madison, WI; Lake County, IN

Gary R. Gray PE
 Brad Forbrook AIA
 Dan Boxrud PE
 Joe Bettendorf PE

Continued on next column

Firm Personnel by Discipline

Civil Engineers	65
Structural Engineers	5
Architects	11
Other Professional	22
Technical	62
Administrative	22
TOTAL (in MN)	187

SEH is a full-service consulting firm offering Architecture, Engineering, Environmental and Transportation Services.

ACGC 7-12 School, Litchfield, MN; Anoka-Blaine Air Traffic Control Tower; Highway 96 Reconstruction; Arlington-Jackson Industrial Park, St. Paul, MN; Empire WWTP Expansion, Farmington, MN

STS CONSULTANTS, LTD.

3650 Annapolis Lane, Ste. 120
 Minneapolis, MN 55447
 Tel: 612/559-1900
 Fax: 612/559-4507
 Established 1948
 Other Offices: Deerfield, IL; Green Bay and Milwaukee, WI; Lansing, MI

Michael T. Russell PE
 James H. Overtoom PE
 Douglas A. Spaulding PE
 Robert L. DeGroot CPC, PE

Firm Personnel by Discipline

Civil Engineers	12
Mechanical Engineers	1
Water Resource/Environmental	5
Other Professional: Scientists in soil, biology, meteorology, toxicology, geology	10
Technical	10
Administrative	7
TOTAL	40

STS Consultants, Ltd. is a 400 person consulting engineering firm offering an integrated package of services in geotechnical engineering, environmental management, water resources and construction technology. Our services include site evaluation and management, facility management, environmental compliance and management, remedial investigation and design, landfill engineering, dam engineering, and construction inspection and testing.

Recreation Renaissance, St. Louis Park, MN; Ridgedale Library, Minnetonka, MN; Remediation of the Federal Courts Building, Minneapolis, MN; Remedial Investigation at TCAAP, Minneapolis, MN

TOLTZ, KING, DUVALL, ANDERSON & ASSOCIATES INC.

1500 Piper Jaffray Plaza
 444 Cedar Street
 St. Paul, MN 55101-2140
 Tel: 612/292-4400
 Fax: 612/292-0083
 Established 1910

Duane T. Prew PE
 Darrel H. Berkowitz PE
 Robert A. Boyer PE
 Richard N. Sobiech PE
 Westly J. Hendrickson AIA, AICP

Firm Personnel by Discipline

Civil Engineers	43
Structural Engineers	12
Mechanical Engineers	6
Electrical Engineers	3
Other Engineers	13
Architects	8
Technical	57
Administrative	24
TOTAL	166

A multidisciplinary A/E firm offering services in civil, electrical, environmental, mechanical, structural and transportation engineering. Electrical, mechanical and structural building systems design in support of our architecture department. Design of municipal utilities, highways, bridges, airports and railroads.

Bio-Solids Storage Facility, St. Cloud, MN; Caterpillar Facility Expansion, Brooklyn Park, MN; Alliant Techsystems Assembly IV Building, Elk River, MN; Sturgeon Lake Road Reconstruction, Red Wing, MN; Minneapolis/St. Paul International Airport Runway 4-22 Extension, Minneapolis, MN

WENCK ASSOCIATES, INC.

P.O. Box 428
1800 Pioneer Creek Center
Maple Plain, MN 55359
Tel: 612/479-4200
Fax: 612/479-4242
E-mail: wenckmp@wenck.com
Internet: www.wenck.com
Established 1985
Other Offices: St. Paul and Duluth,
MN; Grand Rapids, MI; El Paso, TX

Norman C. Wenck	PE
Joseph J. Grabowski	RHSP
Paul D. Josephson	PE
Keith W. Benker	PE
Michael A. Panzer	PE

Firm Personnel by Discipline	
Civil Engineers	8
Mechanical Engineers	3
Electrical Engineers	1
Environmental Engineers	17
Other professional:	
Environmental Scientists	11
Technical	5
Administrative	12
Total	57

Wenck Associates, Inc. is a Minnesota, employee-owned civil and environmental engineering firm dedicated to providing solutions for our clients' concerns. We specialize in wetland management issues, stormwater management, contaminated site remediation, and municipal-related concerns, including street and sewer design. Our expertise includes property assessments; radon, asbestos, and lead management; septic and tank management; and well management services.

Environmental Site Assessments, Real Estate Company, Upper Midwest; Wetland Delineation, Developer, Brooklyn Park, MN; Due Diligence Audit, Brewery, Minnesota; Wetland Reclamation Project from Oil Spill, Grand Rapids, MN; Environmental and Safety Compliance Audit, Recreational Vehicle Manufacturer in MN, IA and WI

WENZEL ENGINEERING, INC.

10100 Morgan Avenue S.
Bloomington, MN 55431
Tel: 612/888-6516
Fax: 612/888-2587
E-mail: WEI@USINTERNET.COM
Established 1990

Lowell E. Wenzel	PE
Patricia A. Cole	PE

Firm Personnel by Discipline	
Structural Engineers	4
Technicians	1
Administrative	1
TOTAL	6

WEI 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.

Maple Grove Executive Office Building, Maple Grove, MN; Addition to Grand Casino Hinckley, Hinckley, MN; Ho Chunk Wellness Center, Baraboo, WI; Climbing Pinnacles, REI Store, Bloomington, MN; Parke-Davis Building, Holland, MI; Boston Store, Underpinning, Milwaukee, WI

WESTWOOD PROFESSIONAL SERVICES

7599 Anagram Drive
Eden Prairie, MN 55344
Tel: 612/937-5150
Fax: 612/937-5822
E-mail: wps@westwoodps.com
Established 1972
Other offices: Buffalo, MN

Dennis Marhula	PE
Martin J. Weber	RLS
Dwight Jelle	PE
Bruce Miller	PE
Allan Klugman	PE
Tim Erkkila	ASLA

Firm Personnel by Discipline	
Civil Engineers	9
Traffic Engineers	3
Landscape Architects	7
Surveyors	3
Economic Dev. Planners	2
Environmental/Wildlife	3
Technical	37
Administrative	7
TOTAL	71

Multi-discipline services in Engineering, Planning, Landscape Architecture, Traffic Engineering, Economic Development, Environmental/Wetlands, Surveying, and Railroad Engineering. Providing Feasibilities and preliminary Planning, Design and Contract Documents, and Construction Services for Residential and Commercial Development, Municipal, Highway, Railroads, and other clients. Reputation for Principal involvement and high level of personal service.

County Road 4 Upgrade, Eden Prairie, MN; West Ridge Market, Minnetonka, MN; Dufferin Park 1-13 Additions, Savage, MN; Mn/DOT Guidestar AUSCI Project, Minneapolis, MN; Woodbury Village, Woodbury, MN

WOLD ARCHITECTS & ENGINEERS

6 West Fifth Street
St. Paul, MN 55102
Tel: 612/227-7773
Fax: 612/223-5646
E-mail: WOLD@MN.USWEST.NET
Internet: www.woldae.com
Established 1968
Other Offices: Elgin, IL

Kevin Sullivan	AIA
Michael Cox	AIA
Norman Glewwe	AIA
Craig Anding	PE

Firm Personnel by Discipline	
Mechanical Engineers	11
Electrical Engineers	7
Architects	43.5
Interior Designers	3
Technical	3
Administrative	12
Total	79.5

Indoor air quality consulting services, HVAC system design, plumbing system design, fire protection systems engineering, energy management engineering, voice/data communications systems, media technologies, design and specifications of primary/secondary electrical systems, and security system design.

City of Mounds View, Mechanical Systems Evaluation and Rehabilitation, MN; Eastview High School, Apple Valley, MN; New Prague High School, New Prague, MN; Steele County Law Enforcement Center, Owatonna, MN; Goodhue County Jail and Law Enforcement Center, Red Wing, MN

insight

Continued from page 17

learned to "deal with problem solving in a big, broad sense. A lot of it is working on vision. It's dealing with big ideas. It's marketing ideas to the community and helping the community look at solutions."

Because she works with many different people, organizations, businesses and neighborhoods, urban design is also "a community-based process," she says. "You have to like people. And you have to have a high tolerance for an involved decision-making process. A house or building may just take several years, while it takes decades to design a city. But it's so fun to hang onto an overriding vision, and then see a community evolve and thrive."

Like Fehrenbacher, architect Della Kolpin worked for several years in traditional firms, then became the first architect to be hired by Best Buy. "I'm the development wing of the company," says Kolpin, director of architecture and store planning for the corporation's real-estate department. Her duties range from site planning, to design, budget and feasibility, through interior-store planning.

"It was scary stepping out of private practice to work with a retail corporation that just plunks boxes out," she says. "But I wanted to see what I could do to add to the exteriors of big boxes, how I could push the prototype, by understanding the retailer and their image." In architecture school, she says, "I learned how to understand a program and to complete a design to fit that program," which is what she does in her job today, as well. "There's always a process and an end result," she says.

In her work, Kolpin adds, she's met business people, developers and people from the construction industry who have architecture backgrounds. "Businesses are changing; corporations are creating their own staffs rather than going out of house," she explains. In forging a new direction in her profession, Kolpin also has learned skills that enhance her own marketability. "In taking this job, I've gained a better understanding of the economics of a project; how the dollars affect the client or myself if I'm acting as the developer," she says. "That piece has made a huge difference to me. I have a better, more solid background for whatever I do in the future."

Franz Hall's training in architecture provided an opportunity for a new career

altogether, and a springboard for launching a business. While working as a staff architect, he took photographs of projects for the firm's marketing department. While working for a different firm, he started a side business photographing for contractors. Eventually, Hall went full-time as a self-employed, architectural photographer.

Hall shoots projects for architects, engineers, developers, contractors and interior designers for their promotional materials, magazine articles and advertisements. "The big advantage to being an architect in my profession is that I understand what my clients are thinking, the terminology they use," he says, "and I have an ability to interpret photographically the images, composition and sculptural elements of the architecture that other photographers may not see."

Architecture school, he says, "is certainly a unique education. It provides you with an intestinal fortitude that you don't get anywhere else; doing all nighters and surviving the juries that tear you to shreds gives you an advantage in the competitive business world. You can hold your ground." Learning how to work through a project from beginning to end with strict deadlines, he adds, is a discipline that carries over into other fields or careers. "Quite a few people I graduated with are now working in fields other than architecture," he adds.

Information technology is the field David Jordani, president of Jordani Consulting Group, chose to work in after years in traditional firms—an era he refers to as "a past life." Using his degrees in computer-graphics systems and architecture, he found the opportunity "to marry my educational and professional background by applying the computer to architectural design." His company provides software development, management consulting and systems-integration services for building owners, government agencies, private organizations and design firms.

"We use information technology to help solve design, construction and facility-management problems for people in the building industry," he explains. While he doesn't see computers as key to the future of the architecture profession, he does believe "design professionals need to understand that they're in the information business and need to manage information effectively."

"Our clients expect it. Our competition is doing a good job of it," he emphasizes. "So firms need professionals who know how to provide effective technology services. Understanding information technology and how it applies to design problems is an opportunity. All of this technology can be leveraged into better services, more profitable services and a broader base of services that can be marketed." The upshot, he adds, is that "architecture is going to become increasingly specialized in order to offer unique services that owners are requiring."

In fact, according to Hobbs, national AIA is currently drafting a redefinition of the architecture profession that "will go way beyond projects to include a broad range of services and related responsibilities," he says. "There will be a relationship approach with various clients and users. Services will be performed through the whole facility lifecycle. And the role of the architect will be as a service facilitator, coordinator and innovator. It's becoming clear that it's no longer meaningful to characterize any architect as engaged in 'alternative careers' or occupying 'nontraditional roles'."

"The great potential for the profession is outside of the box, outside of the traditional firm," Hobbs continues. He predicts that in another decade, national AIA's membership ratio currently at 75 percent in traditional firms/25 percent specializing outside of them, will equalize at 50/50. "This means that within 10 years," he adds, "50 percent of those in the profession will be involved in areas beyond the design and construction of buildings."

National AIA's 22 Professional Interest Areas, groups that provide forums, conferences and information on specialty areas outside of traditional practice, are further legitimizing these architectural career options. "AIA recognizes the expansion of the profession, we're working toward redefining it just as our clients are, and we're providing our members in these specialty areas with the information they need," Hobbs says.

"It's an incredibly exciting time for the profession," Fisher confirms. "At a moment when some in the field are a little bit down about the demand for traditional services, on the other hand a whole new world is opening up. If we can think expansively about ourselves, the opportunities have never been greater." **AM**

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EXHALE,
INHALE,
EXHALE,
INHALE,
EXHALE.

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City of Duluth, Minnesota
City of St. Paul
Dayton-Hudson Corp.
Deluxe Corp.
Donaldson Company, Inc.*

*HB Fuller Co.
Honeywell
Izaak Walton League
Luther Seminary at St. Paul
Milwaukee Insurance
Minneapolis Public Schools
Minnesota Mutual Life Insurance Co.*

*Science Museum of Minnesota
St. Paul Fire and Marine Insurance
Target Stores
Terra Resources, Inc.
University of Minnesota - Twin Cities
Waseca Independent School District 829*

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programs, they are reducing air pollution by using energy-efficient lighting and building technologies. To learn more about these programs, call our toll-free Hotline at 1-888-STAR-YES (1-888-782-7937).





Credits

Carlson School of Management

Location: Minneapolis
Client: University of Minnesota
Architect: Ellerbe Becket
Principal-in-charge: Richard Varda
Project manager: Richard Varda
Project architect: Greg Kozulla
Project designer: Ted Davis
Structural engineer: Mike Shekhner
(Ellerbe Becket)
Mechanical engineer: Rex Rundquist
(Ellerbe Becket)
Electrical engineer: Mark Jacobson
(Ellerbe Becket)
Contractor: Knutson Construction
Interior design: Ira Keer (Ellerbe Becket)
Landscape architect: Randy Manthey
(Ellerbe Becket)
Acoustical consultant: Kvernstoen,
Kehl & Associates, Inc.
Photographers: Koyama Photographic,
Don F. Wong

Douglas County Courthouse

Location: Superior, Wis.
Client: Douglas County Board of
Supervisors
Architect: Stanius Johnson architects, inc.
Principals-in-charge: Kenneth Johnson,
Ronald Stanius, Rickard Stanius
Project architect: Mark Lundberg
Project designer: Kenneth Johnson,
Mark Lundberg
Structural engineer: Krech and Ojard
Consulting Engineers
Mechanical engineer: Foster Jacobs &
Johnson, Inc.
Electrical engineer: Foster Jacobs &
Johnson, Inc.
Contractor: Nor-Son, Inc.
Interior: Stanius Johnson architects
Photographer: Jeffrey Frey

Frey Science and Engineering Center

Location: St. Paul
Client: University of St. Thomas
Design architect: Holabird & Root
Architect of Record: Opus Architects &
Engineers
Principals-in-charge: John Albers (Opus),
James Beird (H&R)
Project manager: Kent Davidson (Opus),
Dennis Vovos (H&R)
Project architect: Ed Gschneidner
Project team: Joe Mamer, Scott Cochrane,
Tim Hannan
Structural engineer: Opus Architects &
engineers
Mechanical engineer: Michaud Cooley
Erickson
Electrical engineer: Opus Architects &
Engineers
Contractors: Opus Corporation
Interior design: Barb Elton
Landscape architect: Ernst & Associates
Acoustical consultant: Frank Snidarich
Photographer: Don F. Wong

Gooseberry Falls State Park Visitor Center/Highway Rest Area

Location: Two Harbors, Minn.
Client: State of Minnesota Department of
Natural Resources, State of Minnesota
Department of Transportation
Architect: Salmela Fosdick Ltd.
Principal-in-charge: David Salmela
Project architect: David Salmela
Project designers: David Salmela,
Cheryl Fosdick
Project team: David Salmela, Cheryl Fosdick,
Jeremy Fryberger, Mora McCusker
Structural engineer: Jurst & Heurichs, Ltd.
Mechanical engineer: Gausman & Moore
Electrical engineer: Gausman & Moore
Civil engineer: LHB Engineers & Architects
Contractor: Reuben Johnson & Son
Interior design: Salmela Fosdick Ltd.
Landscape architect: Coen + Stumpf &
Associates
Photographer: Peter Kerze

James G. Lindell Family Library

Location: Minneapolis
Client: Augsburg College
Architect: BVBR Architects
Principal-in-charge: Stephen Patrick,
Lloyd Bergquist
Project manager: Katherine Leonidas
Project architect: Ken Frey
Project designer: Charles Knight
Project team: Greg Fenton, Dan Noyes
Structural engineer: BKBM Engineers
Mechanical engineer: EEA
Electrical engineer: EEA
Contractor: Kraus Anderson Construction
Interior design: Donald Thomas
Landscape architect: Damon Farber &
Associates
Photographer: Don F. Wong

Contributors

Bill Beyer is a principal of Stageberg Beyer Sachs, Inc., in Minneapolis and 1997 AIA Minnesota president.

Jack El-Hai, who writes our Lost Minnesota column, is a Minneapolis writer whose books include *Minnesota Collects* and *The Insider's Guide to the Twin Cities*.

Bette Hammel, a frequent contributor of *Architecture Minnesota*, writes about architecture and design for various publications.

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Robert Roscoe is a preservation architect who runs his own firm, Design for Preservation. He is also a commissioner on the Minneapolis Heritage Preservation Commission and is editor of *Preservation Matters*, published by the Preservation Alliance of Minnesota.

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Outhouse at 2238 Stewart Ave., St. Paul, 1960s.

As recently as 1950, there were 50 million outdoor privies in the United States. Today, that number has plunged to 4 million—none of them within the city limits of Minneapolis or St. Paul.

At the beginning of the century, however, outdoor privies were common in the Twin Cities. Indoor plumbing did not begin appearing in expensive homes until the 1880s. In 1911 the Minnesota State Board of Health estimated that half of the state's population still used privies, many of them in cities and towns. By 1930, when St. Paul finally completed its public sewer system, outdoor privy use was banned for local city folk and in virtually every U.S. urban area.

A nostalgia lingers for that pre-flush era, however. Those with a keen

memory recall the many fanciful names for the outhouse: the backhouse, dooley, pokey, Johnnie, donnicker, Willie, post office, convenience and back forty (a term of Canadian origin). Some outhouses had one hole, others had two; a few boasted two stories. (One of those rare double-deckers, built in 1870, is preserved at the Bowler Hillstrom House in Belle Plaine.) Several decades ago, Gentile Yarusso, who lived in the now vanished Little Italy district of St. Paul, published a wealth of urban privy lore in his book *The Classics of Swede Hollow*. He recounted the pleasure of a smooth and beveled seat, the route of human waste from Phalen Creek into the Mississippi River, the frequent snow shoveling of the path to the outhouse

and certain distinctive wintertime dangers. "One never knew when using the outdoor privies whether half his hide was going to be left stuck on the cold wooden plank when he was finished," Yarusso recalled. "In the summertime, however, one lingered a little longer in the old time outhouses, even though he was pestered by mosquitoes, flies, wasps, and other insects. Sitting there, one got to know every nail, crack, hole, and knot in the building."

A few Twin Cities outhouses hung on into the 1960s and maybe even the '70s. Recommended reading for anyone seeking a vivid evocation of the world of privies is Ronald S. Barlow's *The Vanishing American Outhouse* (Windmill Publishing, El Cajon, Calif., 1992.) **Jack El-Hai**