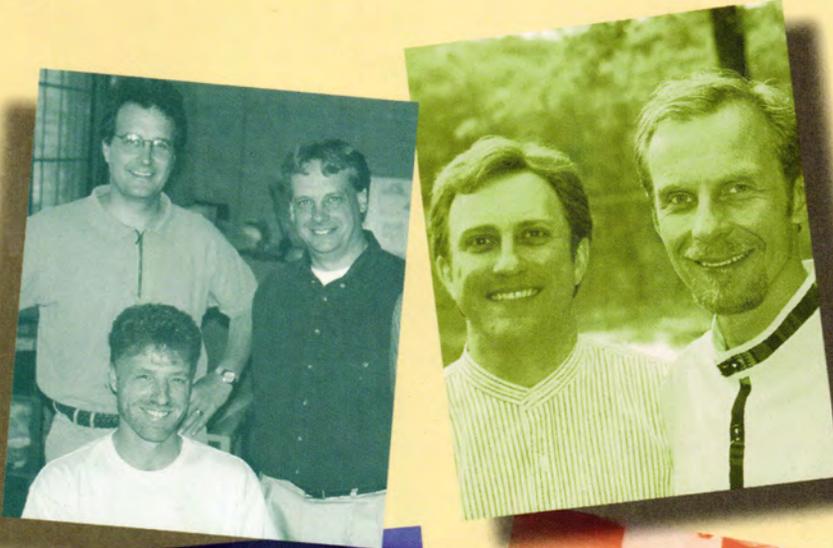


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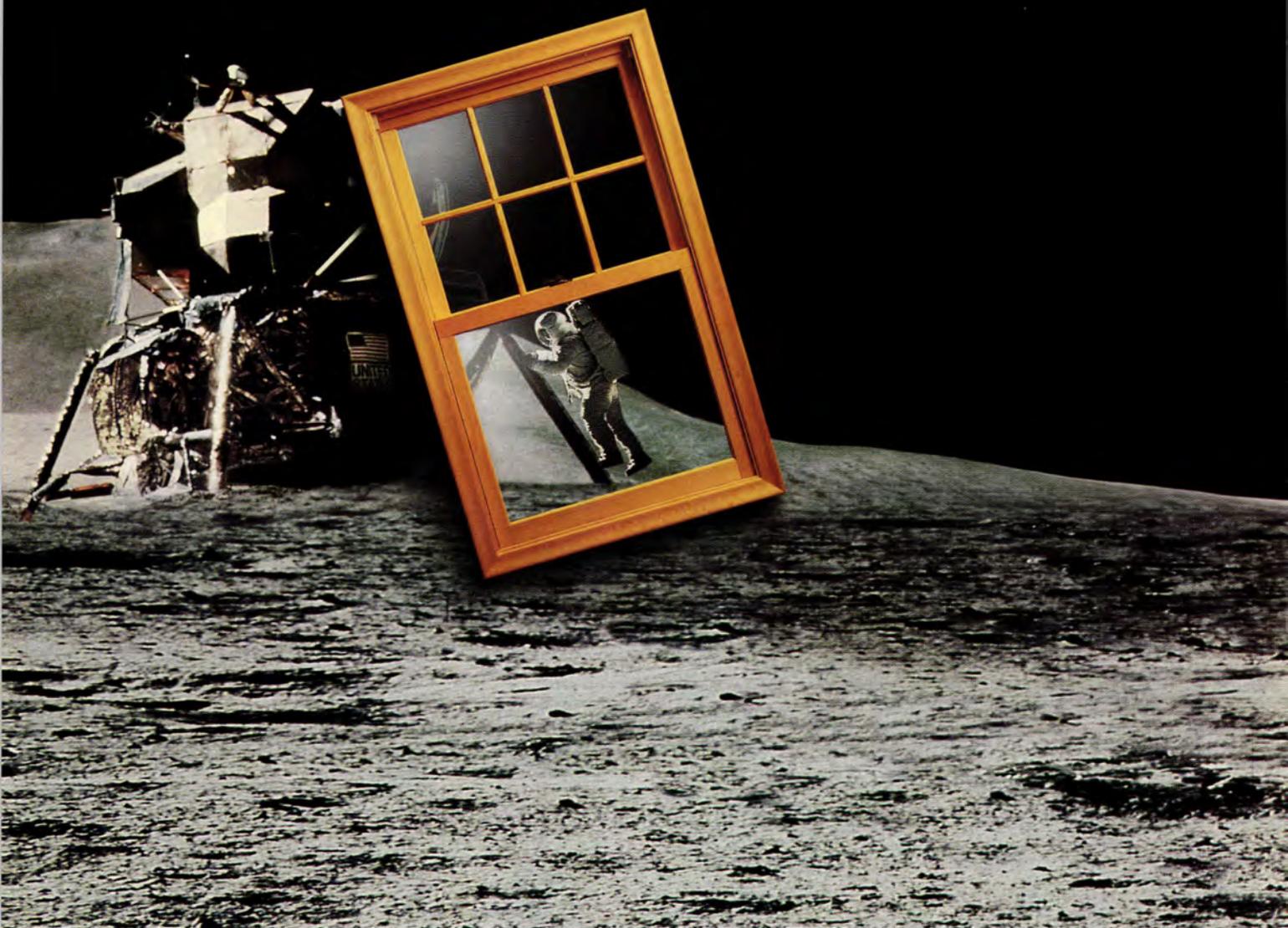
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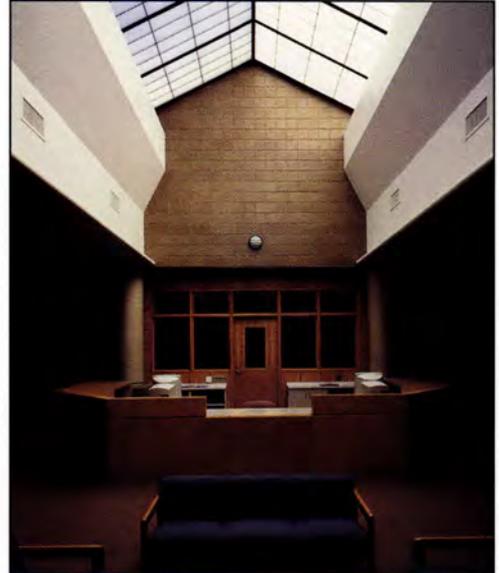
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Four small architecture firms on the move
Photographer: Don F. Wong

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The essential architect

“Hear first the four roots of all things: shining Zeus, life-bringing Hera, Aidoneius and Nestus whose tear-drops are a well-spring for mortals.” —Empedocles, “On Nature”

By Bill Beyer

Philosophy gives us ways to think about the world, and the ancient Greeks thought a lot about it. Empedocles—philosopher, poet and overall colorful character born about 492 B.C.—spent his time thinking about the big picture. In his poem, “On Nature,” he theorized that fire, air, earth and water were the four essential and immutable roots or elements of the world. Mixed with love and strife, they could account for all earthly phenomena. He thought hard enough to propose proportional formulas of elements. For human bone, it was 2 parts water, 4 parts fire, 2 parts earth; for flesh, a divinely balanced 1:1:1:1.

The doctrine of four elements was later taken up and refined by Aristotle. He expanded it by imagining that above the sphere of the moon, the substance of the heavens was a totally different, fifth and superior element (a quint-essence), called ether. The Aristotelian essences continued to be a plausible theory of everything until the Renaissance.

Fire heats our homes and cooks our food at the hearth, that essential image of human domesticity. It consumes all by combining with air; it drives the sun and the stars and gives us light. Fire sweeps prairies and woodlands, killing and renewing living systems; it melts the earth itself, recycling crust to magma, extruding new rock, restarting the cycle. In buildings, fire is the enemy. We sprinkle, compartmentalize, alarm and evacuate. We build with fire-resistant construction, then stuff our buildings full of toxic, combustible furnishings and unpredictable humans.

Earth is the unremarkable stuff of mud pies, common as dirt. As children we play in the earth, we dig, we pile, we plaster. Backyard sandboxes are our first shots at imagining and building the world. We build on, in and with earth and rely on it for support. Sometimes it doesn't want to support our buildings, and lately when we look for places to build on the earth, we find them fouled by our earlier activities.

We take air for granted because it is largely invisible, except in Los Angeles where it often resembles earth. Air passes visible light of sun, moon and stars, and thwarts invisible UV rays by invisible ozone. Air blasts rocks and earth and reshuffles the pieces. At Colorado's Great Sand Dunes National Monument, massive, monumentally spooky piles of windblown earth make a sandbox deep enough to bury Manhattan. We cast our burnt offerings to the winds and they infallibly return to earth and water in unkind ways. As we coddle ourselves with fine-tuned, efficient thermal comfort and seal ourselves indoors, we learn how nasty air can become.

Water is the very stuff of life; we are full of it, we drink it, we wash and swim in it. We put it on plants so they grow to feed us, and use it to wash away the sins of civilization. A hundred years before the edgy pluralism of Empedocles, Thales of Miletus had logically thought water to be the singular, primordial element. (His follower, Anaximenes, bet on air.) Water also bedevils us in every form: liquid, solid and vapor. It leaks through our roofs, walls and clothing, and condenses in unwanted locations. It freezes and thaws, tears at the fabric of buildings and supports the growth of tiny organisms hostile to human health.

In our bare instant of occupancy in the history of this earth, human comfort and convenience have been our grails. Control of extreme heat and cold, of wind, fire and flood, have helped extend our lives. We have comfortably and conveniently consigned our multiplying wastes to the air, water and earth; out of sight, out of mind. In our quest for lives of ease, the pendulum has now swung so that many of us spend little time breathing unconditioned air, almost never see or feel the actual earth under our feet, and seldom see fresh water running free or fresh. Open fires are deemed dangerous and regulated by law. Essential balances are out of whack. We are, literally, out of touch.

While our world views and theories of everything are slightly more sophisticated than the early Greeks', the operations of the four original “elements” are still the things with which architects are concerned. We are stretched between the big picture of world water quality and the small picture of roof flashing details. After 10,000 years of building for human habitation, leaky roofs persist and running rivers are throttled by dams. A certain humility should apply, but hubris is the more convenient, and comfortable, condition.

Among Aristotle's ethical legacies was “the golden mean,” a concept of balance and moderation in all things. As architects battle to tame or harness fire, earth, air and water, we can't become too comfortable, lest we forget the essentials.

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East Phillips Neighborhood Boarded Housing Minneapolis

By Robert Roscoe



Minneapolis's Phillips neighborhood is littered with abandoned homes, many which hold renovation potential.

Environmental activists organized the first Earth Day in 1970, stirring awareness of ecological threats to our planet's air, water, soil, natural resources and endangered species. That year also stirred neighborhood activists, who viewed urban neighborhoods as endangered species threatened by federally financed bulldozers that were clear-cutting wide swaths of older neighborhoods for freeways and razing downtown blocks curb to curb to "renew" our cities. Many citizens reacted by attempting to find ways to outwit the bureaucrats and develop homegrown programs to save these houses. It was from such scenarios that the historic-preservation movement gained

mainstream recognition and working strength. Public agencies followed suit.

Although subsequent preservation success stories continue to be cheered by the media as well as by one-time doubters, many urban observers are seeing retrenchment by public agencies, which again are using bulldozers as an appropriate tool for neighborhood revitalization. The May/June 1999 issue of *Preservation* magazine carries a feature article, "New Wave Demolition," which reports how such factors as shrinking tax bases and crime are propelling city governments to use demolition as a first response to housing deterioration. Writer Allen Freeman quotes Tim Tielman, executive director of the Preservation Coalition of Erie County, N.Y.: "Demolitions are undermining the ability of cities to heal themselves. Densification hurts those who need the most help, removing the ability to walk to stores and making public-transit systems inefficient, which in turn leads to service cutbacks. The disadvantages of the suburbs with none of the advantages of the city. It's a recipe for disaster."

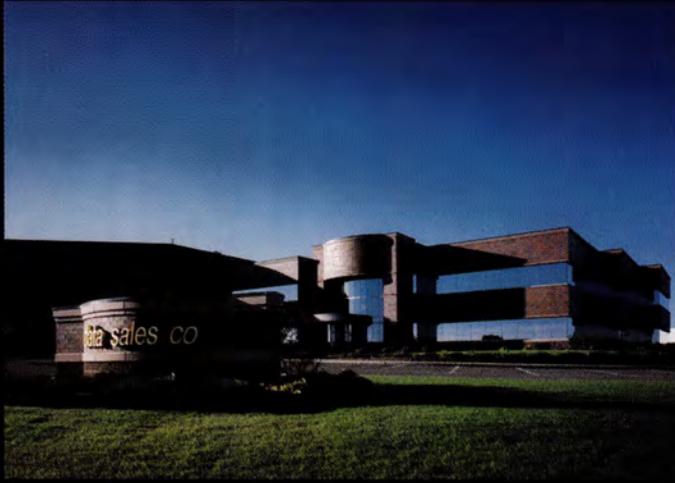
These statements parallel efforts of several Phillips neighborhood residents who have published a list of boarded-up houses in this south-Minneapolis community. Their campaign hopes for a call to action that could reverse government policies that threaten to take out dozens of houses. The Preservation Alliance of Minnesota has nominated East Phillips neighborhood's boarded-up housing to its 1999 list of the Ten Most Endangered Properties.

The 1880s was a period of peak expansion for Minneapolis. Lumber, railroads and flour milling created a labor economy with a cross section of workers classified as craftspersons, laborers, shop clerks and start-up merchants. They lived in folk Victorian and Italianate houses, built in a variety of widths, sizes and ornamental detailing. Phillips neighborhood became emblematic of this working-class population with its immigrants and variegated domestic architecture.

Today the 160-block community is bordered by Interstate 94 to the north, Highway 55 to the east, Lake Street to the south and Interstate 35W on the west. The neighborhood features streets capes of tidy houses and yards. The neighborhood's residents are a diversity of age, ethnic and income groups. Many urban neighborhoods hold a mix of working-class and poor people, and Phillips has much more of the latter than the former. As a result, many of the houses are deteriorated, their once-prim features missing or badly deformed due to deferred maintenance. Phillips has a high number of absentee owners who allow properties to degrade to intolerable living conditions. The area is well known for high crime.

To many, these are the usual ingredients that spawn loss of housing stock that affect—and are affected—by market forces. But many Phillips activists contend that it is government inaction, as well as misguided policies, that are the real threats to preservation of the neighborhood's older housing.

Continued on page 42



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Historic watchdog

IN AN EFFORT TO PRESERVE MINNESOTA'S ARCHITECTURAL HERITAGE, the Preservation Alliance of Minnesota announced its annual list of the 10 Most Endangered Historic Properties.



- 1 St. Croix National Scenic Riverway, near Taylors Falls
- 2 Stillwater Lift Bridge, 1931
- 3 W.D. Ammermann Homestead, Rheidertland Township, 1886
- 4 Hibbing General/Rood Hospital, 1919
- 5 Columbian Hotel, Ortonville, 1892
- 6 Boarded Houses, Phillips Neighborhood, Minneapolis, 1880s to 1920s
- 7 Opheum Theater/St. Francis Hotel 1916; Coney Island Buildings, 1858 and 1888, St. Paul
- 8 Alexander Baker/Backus School Complex, International Falls, 1912 and 1936
- 9 Historic Downtown Northfield
- 10 Ivy Tower, Downtown Minneapolis, 1930

Soo renovation



ITS EXTERIOR LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES, the Soo Line Building at 501 Marquette Avenue has been given distinctive new name—501 Marquette Building—presumably to clear up any mail-delivery problems. BDH & Young Space Design of Edina, Minn., working with the building's new owner, Northco and the Taylor-Simpson Group, have upgraded the street-level exterior and the interior skyway level to increase its marketability. Exterior improvements consist primarily of new signage and accent lighting that illuminate the building's architectural detailing. Inside, the architects turned their attention to the oppressively dark skyway level and its narrow corridors. They sought to turn the second level into the building's main circulation spine by opening up storefronts, cutting a new grand staircase into the center leading up from the street level and removing acoustical tiles to raise the ceiling. BDH & Young introduced such classic finishes as bronze storefronts, painted-tin ceiling, terrazzo flooring, decorative bronze railings and a domed ceiling mural.



STEVE BERGERSON

Face value

WALKING BY, you might think the building façade at 517 Marquette Avenue is just another office building in downtown Minneapolis. Step inside its front doors, and you enter a 600-stall garage, billed as the city's most luxurious. Symmes, Maini & McKee of Minneapolis skillfully designed the facility to blend in with the deco detailing of the neighboring Soo Line Building and Rand Tower on either end of the block. More significant, the architects and the garage's developer, Spectrum Group, saved the 1925 Egyptian-style façade, restoring it to its original splendor—or as close to the original as possible with a monolithic skyway piercing its face.



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Drawings and photographs from a selection of Minnesota concept houses. (651) 738-0368.

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Ralph Rapson: Sixty Years of
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The career of Minnesota's most famous modernist, Ralph Rapson. (612) 870-3000

Theatre of Wonders:
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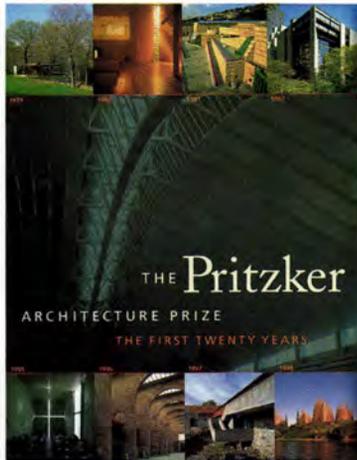
Milestones of Modernism 1880–1940:
Selections from the Norwest
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Minneapolis Institute of Arts
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Correction

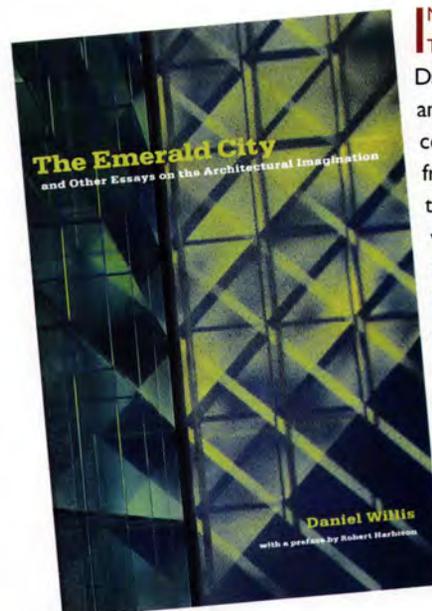
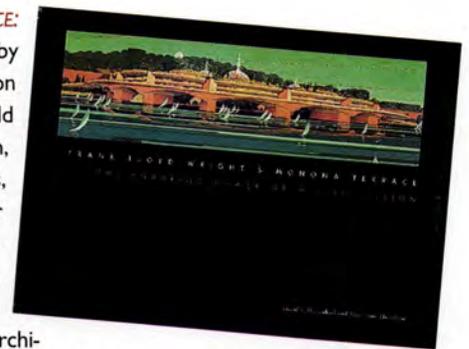
In the May/June issue, we neglected to credit Mike Dunn, AIA, for his role in the Seward townhouse development in Minneapolis (pp.48–49). A longtime Seward resident, Dunn joined Close Associates after starting the project with developer Seward ReDesign. Dunn steered the project from conception through implementation.

Hot off the Presses



AS A COMPANION PIECE TO THE ART INSTITUTE OF CHICAGO'S EXHIBIT RUNNING THROUGH SEPT. 26, *THE PRITZKER ARCHITECTURE PRIZE: The First Twenty Years*, chronicles the careers of some of the late-20th century's most important architects. Among the award-winning architects featured are Frank Gehry, I.M. Pei, Robert Venturi, Richard Meier, Aldo Rossi, Philip Johnson, Tado Ando, James Stirling and Renzo Piano. More than 370 illustrations and 200 full-color photographs highlight the architects' work. *The Pritzker Architecture Prize*, the Oscar of architecture awards, is named annually to a living architect who has "produced consistent and significant contributions to humanity and the built environment through the art of architecture." The book contains texts by Pritzker jury members, and commentary by selected architecture critics. *The Pritzker Architecture Prize* is published by Harry N. Abraham's of New York in association with The Art Institute of Chicago.

FRANK LLOYD WRIGHT'S MONONA TERRACE: THE ENDURING POWER OF A CIVIC VISION by David V. Mollenhoff and Mary Jane Hamilton studies the famous architect's quest to build his long-delayed civic auditorium in Madison, Wis. The project was redesigned eight times, generating more drawings than any other commission. It was finally completed in 1997, nearly 40 years after the architect's death. Through text, illustrations and photos, the authors present a well-delineated architectural case study, as well as a portrait of civic and social drama. Mollenhoff previously wrote about the history of Madison, Wis.; Hamilton is a Wright scholar and author. *Frank Lloyd Wright's Monona Terrace* is published by the University of Wisconsin Press.



IN THE EMERALD CITY AND OTHER ESSAYS ON THE ARCHITECTURAL IMAGINATION, author Daniel Willis takes an expansive approach to examining the value and future of architecture. His collection of engaging and literate essays shifts from the Emerald City of Dorothy and Toto fame to the Tower of Babel and Christmas trees, from vernacular architecture to New Urbanism and the impact of computers on modern design. Willis is an associate professor of architecture at Pennsylvania State University, and is a principal with LDA, a multidisciplinary architecture and engineering firm in Pittsburgh. *The Emerald City* is published by Princeton Architectural Press, New York.



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Continuity is important to Steven H. McNeill. Director of architecture in the Duluth office of LHB Engineers & Architects, McNeill is the first AIA Minnesota president in 25 years from outside the metro area. No particular challenges associated with that, McNeill says, largely because LHB has offices in Minneapolis, as well. Instead, his concerns center on continuing and expanding AIA's public-relations efforts, quantifying the influence of architecture on the community and putting the art back into architecture through a reemphasis on drawing.

Steve McNeill

The AIA Minnesota president reflects on his goals for leading the state's architectural profession

A graduate of the University of Minnesota's College of Architecture and Landscape Architecture, McNeill has more than 20 years experience in architectural design, including three years of facility management, planning and construction management for Duluth Schools. As leader of LHB's Duluth architecture group, McNeill's primary expertise lies in educational-facility planning and design.

He has defined needs, determined priorities and estimated costs for more than \$30 million in successful bond referendums at four regional K-12 facilities, as well as \$4 million in improvements for the College of St. Scholastica's Science Classroom addition and renovation. He also specializes in incorporating lifelong education into community living. Examples of his work include the Inter-Governmental Work Group he formed for Moose Lake, Minn., to develop a community master plan that includes a senior center/library, recreational facility and city government buildings around a new community development; and serving as project principal for

Washington Center and Studios and the St. Scholastica Monastery projects. He is currently working with Duluth Schools on the program management of ongoing capital improvements.

Twelve years ago, McNeill co-founded the Lake Superior Design Retreat, to bring a professional development program to the region. The retreat, he says, is "a design weekend in a Duluth venue, which gives none of us northern Minnesota architects an excuse for not being there. Whereas the fall has its AIA Minnesota convention in Minneapolis, late winter has Lake Superior Design Retreat, which has been very successful."

Architecture Minnesota talked with McNeill about his goals as chapter president in 1999, and how he hopes to achieve those goals through new initiatives, and continuing the work of past presidents and committees.

In taking on the mantle of AIA president, what has been one of your primary goals?

One of the concerns I have is that as designers and creative people we tend to have difficulty keeping on a track previous AIA presidents have established. I come in and want to pursue my goals, then someone else says we're doing something else now. That's not good for AIA Minnesota, for the membership. We need consistent themes in order for the membership to be served properly. I need to understand past themes and continue those.

To do that we've gone back to a document put together in 1996 by an AIA Minnesota group called "Image of the Profession Task Force Report." It's a great document that does a very good job of defining the profession's concerns. So

why reanalyze what's already been carefully considered?

This last fall we held a retreat and combed back through those goals and developed some action items with which we can be effective. So we're pushing more the public-relations efforts of the chapter. The "Image of the Profession Task Force Report" talks about visibility problems, and right now we have a golden opportunity to amplify AIA National's advertising campaign here using some of the ideas outlined in the report.

How will you be doing that?

We have a modified public-relations committee coming together. But there will be some things as simple and cost-effective as expanding our underwriting credits on Minnesota Public Radio, which has proven nationwide to be a cost-effective way of reaching people who are, what we call, "influencers."

The other effort has been the recent reader's survey for *Architecture Minnesota* magazine. We're serving three kinds of readers: the subscribers, who are not professionals but are interested largely in the history of architecture in the state; the professionals, who want more technical articles; and the off-the-shelf group, who see an article they like and buy the magazine for that reason.

Those are two examples of things, in small ways, we hope to be doing in public relations. The other goal we're looking at is based on previous years of board retreats: the issue of the value of architecture from a research basis. In other words, architectural design and quality of design have value; how can that value best be documented? The issue is to quantify the value of architectural design for a user.

Continued on page 43

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A LIGHT TOUCH

By Todd Willmert

LIGHTING HAS SHAPED OUR ARCHITECTURE FOR MILLENNIA

Daylight traditionally has defined buildings. Historically, firelight and oil lamps were the traditional illumination sources, aside from sunlight. Gas lighting, a major advance when introduced in the early 1800s, had its drawbacks. The incandescence of unburned carbon particles in a gas flame ascends in a column of soot that soils finishes and furnishings.

from each other to minimize drafts from extinguishing flames, and to allow separate airings. Dark wallpaper, furnishings and intricate molding disguised grime. In many pre-industrial spaces, preoccupation with refracting and reflecting light could produce enchanting qualities. Chimney pieces from the 1700s were often studded with rhinestones to sparkle with firelight. Chandeliers dripped with cut glass; moldings glimmered with gold leaf. Mirrors placed behind candles opposite full-length windows magnified candlepower. Light was a precious commodity to be expanded through a room. The 1700s were the age of reflection as much as the Age of Reason.

London had 15 miles of gas lines in 1815, a system that grew exponentially over the years. In Philadelphia, availability of gas lighting after midcentury created a 20-fold increase in the actual illumination used per household between 1855 and 1895.

Then came electricity. Electric arc lamps installed in 1879 in the Reading Room of London's British Museum doubled access hours dur-

ing winter months. Incandescent bulbs (Thomas Edison patented his version in 1879) contributed to electricity's ascendancy. Electricity was the preferred means of lighting public spaces after 1900. The initial high cost of electric currents and installing new systems, however, meant that gas predominated in households until about 1930.

Today, energy is considered a precious commodity. Incandescent bulbs literally give off more heat than light, with most of the electricity converted into heat. Yet their traditional advantage is good ambient color. With some fluorescent tubes now approximating sunlight's full UV spectrum, they are becoming increasingly prevalent, using approximately 80 percent less energy than incandescent lighting. A fluorescent tube adds a ton less of carbon dioxide and 20 pounds less sulfur oxides to the atmosphere than an equivalent incandescent bulb. More efficient energy sources exist in our own backyard. Enough solar energy falls on the United States in 40 minutes to power the country for a year.

The playful possibilities of light parallel energy-conservation concerns. Creative lighting is evident in the "ice shard" table for a bar in the Florida Panthers hockey arena. Internally illuminated along the edges to emphasize the glass's icicle etchings, colors rotate from aqua to blue to purple. A light source in the table's base—fiber optics conducts light to the glass tabletop—allows lighting to be seamlessly integrated.

Fiber-optic lighting represents the latest evolution in light systems. Instead of a gas or electric network powering many lights, a single energy source is distributed on glass or plastic cables. The advantages inherent in this concept are still being explored, yet given the impact of past lighting innovations, fiber-optics are certain to exert their own pull on architectural design. **AM**



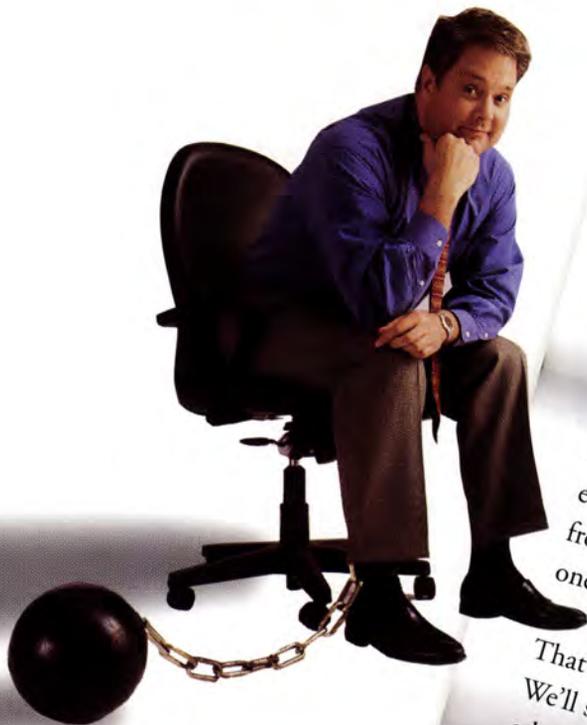
"Ice-shard" lighting effects in a Florida bar by Ellerbe Becket.



Burning gas also had a foul smell. "Spring cleaning" became a domestic ritual. These drawbacks lead to radical strategies, such as locating the lamp outside a window, with reflectors to bounce light indoors.

Lighting systems often manifested the "form-follows-fuel" principle. Before electricity, individual rooms were closed off

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Growing business

Large or small, architecture firms weigh strategies for managing growth

By Camille LeFevre

Cycles of boom and bust are a given in America's economy. After a period of prosperity, the economy fluctuates and earnings drop, salaries are cut, layoffs occur and companies downsize before things change course and prospects brighten again. Few businesses are immune to the whims of market forces. Architectural firms are no exception.

"We've experienced significant ups and downs over the years," says Robert Degenhardt, CEO, Ellerbe Becket. "We're on a continual quest to reduce such cycles. We're so dependent on capital spending that the economy really affects our business volume."

How Minnesota architectural firms respond to economic change varies widely. Plus, out-state firms have additional market concerns with which to contend. While some architects grow and diversify their businesses, even expanding across the United States and internationally to weather economic storms, other firms downsize into one-person shops to focus on the types of projects they love most.

Whatever their growth strategy, successful firms can't afford to become static. Even though today's economy remains healthy, change is inevitably on the way.

According to Degenhardt, Ellerbe Becket's biggest growth spurt in the last 20 years occurred in the late '80s, when the business acquired the Becket firm and opened an office in Kansas City, Missouri, specializing in sports facilities. "We felt the need to become more diverse in terms of lo-

cation (we wanted a stronger West Coast presence and to move into foreign markets)," says Degenhardt, "and we were known as an institutional firm and wanted more commercial clients. The Becket acquisition worked both of those strategies. We were looking to create a more broad-based firm with a more diverse set of skills and market appeal."

Today, the Minneapolis-based firm also has offices in Washington, D.C., Phoenix, Seattle, San Francisco, Seoul and Cairo, in addition to temporary project offices, and owns a joint-venture company in Leeds, England. The expansion and diversification, Degenhardt says, "have been driven by what customers think. We get invited to compete for projects that clients perceive as needing national-scope architects. We want to stay in that category and there are certain requirements—you've got to do the jobs to have them, have to be of a certain size and capacity and financial strength. Those criteria drive a firm's decision to become a major player or not."

The last few years, he adds, have shown "rather steady improvement in not only the volume of work, but in the quality and financial results of our work." The firm's increase in foreign projects, however, was "dramatically interrupted" last year by overseas crises, Degenhardt says.

"Basically we learned we have to be very agile in markets all over the world because things change so fast," he says.

Becoming proficient in a number of domestic markets that were expanding at a time when

architecture as a whole was slow is how Cuningham Group grew ten-fold in the past 10 years, says John Quiter, president. The firm entered two markets, education and entertainment, "very strategically," Quiter says. After working with Eden Prairie school district in the '80s, the firm picked up a new school district every year. In the early '90s, the firm entered the entertainment market by way of casinos.

"We saw the explosion of that industry as a way to balance the practice, to get into the private sector more," Quiter says. "Casinos have restaurants, hotels, theaters and other entertainment venues so this work took us into a diverse range of project types and gave us the ability to expand in a lot of areas."

At the same time, the firm knew both local markets would quickly mature. "So in the '90s we moved from a minor player to major player in the national and international education markets," Quiter says. Similarly, the firm used its experience with casinos to move into restaurant, theater and hotel markets outside of gaming. "In fact," Quiter says, "we have developed studios within the firm to address each of those individual markets."

The studios, which function as firms within the firm, he continues, "enable us to put together expertise to best serve clients, they give people a chance to develop their own careers and they give them a home base within the larger firm." Developing the studios was a way

Continued on page 44

THE BEST BUILDINGS ON EARTH ARE STILL BUILT BY HAND



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



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Design Balance

This is the third year that we've focused primarily on people rather than buildings in our July/August issue. In 1997, we highlighted the impact women are having in the architectural profession. Last year we looked at six firms or individuals we dubbed "emerging voices." This year we spotlight a group of four small, relatively new firms. The point of our focus is not to promote the celebrity status of architects—there are no celebrities in Minnesota, unless you count a certain wrestler at the statehouse. Our objective is to show the personalities behind the architecture, to illustrate that architecture is a collaborative process between many different individuals and voices.

Architecture always has danced a fine line between art and pragmatism. Architecture's primary function is to provide shelter and enable us to productively carry on the business of life. But architecture in its highest form reflects man's creative ingenuity, a melding of aesthetics and engineering that at times inspires awe, from the sun-parched pyramids of ancient Egypt to the towering skyscrapers of our modern cities.

While a painter or novelist may cite sources for his creative inspiration, he still pursues a solitary endeavor, beholden only to an elusive marketplace that may point thumbs up or thumbs down to the finished piece. An architect does not sit alone at a desk composing a personal creative statement. An architect is part of a larger web of players who all have say in steering the finished product. An architect is a team leader, and as such he must juggle variegated opinions and programmatic requirements to design a building that will satisfy the larger group of client, user, community.

The four featured firms in this issue may have different approaches to running their businesses, but they all share the goal of meeting client needs and expectations.

"True learning and creative design come when you allow for interaction, when the clients become engaged in the design process and in creating the project for themselves," according to Rick Lundin, Jim Graham and Ali Heshmati of CONstruct Architects. "The design process is about trust and responsibility," Heshmati continues. "You need to trust the relationship and provide something responsible. There must be a mutual passion about a project and a direct honesty."

For Hagen, Christensen & McIlwain, the architectural-design process is "all about design sensibility, making the project appropriate to the site, budget, client and program," Jerry Hagen says. "The client gets what he wants—and hopefully a little more."

With Schrock & DeVetter Architects, growing as a firm is about positioning itself as a decision-maker and becoming involved in the development process. "Getting involved in development will improve our economic base and improve the quality of the building," says Michael Schrock.

Client, user and developer are only part of the design equation. Tod Drescher considers the environment and the larger community as he focuses on new ways of looking at suburban-housing development. Through clustering, Drescher and his associate, Roger Tomten, advocate grouping proposed new housing onto smaller lots, leaving the remaining proposed development land as a nature preserve for all to enjoy as co-owners. "It's nature and community existing in balance," Drescher says. The design process for Drescher starts with the environment. "It's a matter of placing the house properly on the land and getting to know the land," he says.

Building a business has its inherent risks. Almost all the featured architects came from the job security of larger firms. They set out on their own to become more personally involved in individual projects, something not always possible in the structure of big firms. "I want to be able to look at a project and still be involved enough that my input is relevant," Lundin says. Adds Schrock, "In a large firm it's easy for an architect to lose sight of why he got into the profession. . . I am finding the thrill of the chase to be as exciting as cranking out projects."

Of course, architects can't live on thrills alone. The challenge for any small architecture firm is to build and sustain a client base—and that is often a balancing act between many voices.

Eric Kudalis

CONstruct Architects

Creative collaboration transforms ideas into reality

FFor the team of Rick Lundin, Jim Graham and Ali Heshmati, architecture is a process in which ideas become form. The name itself, CONstruct, taps into the firm's philosophy. "The word 'construct' covers the formal physical aspect of architecture, as well as the psychological aspect," says Rick Lundin in the firm's storefront office along Minnehaha Boulevard in south Minneapolis. "When we deal with ideas we deal with the realistic idea of how things are put together, how things are constructed."

Certainly the idea of construction is not foreign to the team. Heshmati, who emigrated to the United States from Iran 14 years ago, has a cabinetry background. Lundin and Graham both grew up in Mankato, whose quarries have furnished Minnesota's buildings with rich golden limestone for decades. Lundin's family, in fact, is in the stone business, providing crushed gravel to the state's highway system.

"We feel that there is no separation between ideas and the final product," Lundin continues.

As such, the team wishes to involve the client in the process of creating. Heshmati defines the firm's approach as a process of collaboration, and a mutual working out of client/architect preconceptions of architecture. While all firms view their design process as a collaboration between architect and client, CONstruct may have taken it one step further by actually having the client design the space with them. "True learning and creative design come when you allow for interaction, when the clients become engaged in the design process and in creating the project for themselves," they say.

They often will do drawings and sketches on the spot with the client, and even reverse the tables and have the client sketch his ideas of the proposed space. The process leads to a true understanding of a space, for client and architect alike.

Patrick's Cabaret, an alternative performance-arts theater in south Minneapolis, is one such example of the firm's collaborative design process.

"When we entered the design process with Patrick's Cabaret, we asked owner Patrick Scully and their design committee to consider the character of the existing space and its future potential," Heshmati says.

The team sat down with Scully and the committee and had them describe the existing three-story storefront facility and how the different parts of the open interior could be used to facilitate performance. Working with Patrick's Cabaret provided a rare synergy for the three architects, in which the creative profession of architecture teamed with the creative profession of theater. Together, they explored how architecture and theater fed off one another to create the unique experience of performance.

CONstruct players are (left to right) Rick Lundin, Jim Graham and Ali Heshmati. The firm designed this house in collaboration with Studio Z (below) to fit a narrow Minneapolis lot in a national design competition. With Patrick's Cabaret (center), the architects and client worked closely in a collaborative process to envision uses for this south-Minneapolis commercial building. Bank Vista (opposite) in St. Cloud is one of their largest commissions to date.



STUDIO Z



COURTESY CONSTRUCT



DON F. WONG

"We developed a mutual understanding of the space between the client and architect," Graham says.

Heshmati adds, "the design process is about trust and responsibility. You need to trust the relationship and provide something responsible. There must be a mutual passion about a project and a direct honesty."

Lundin says, "We have a commitment to being honest with our clients and about what is involved. You also have to let the client know that it isn't always going to be fun. The design process is a struggle at times. We have to moderate that struggle, and we aren't afraid to say 'no' if we think the client is making a mistake."

While knowing their clients is key to completing a successful project, knowing each other is key to building a successful firm. Although they officially put their

names on the door in January 1997, they have worked together a lot longer. All three architects worked for a time at Meyer, Scherer & Rockcastle in Minneapolis. They attended architecture school at the University of Minnesota, where they had opportunities to critique each other's thesis projects. Heshmati and Lundin worked on a team with then-dean Harrison Fraker in a national competition to design the Evanston (Ill.) Public Library in 1991. The project placed first runner-up.

CONstruct actually began as an informal after-hours studio in which they did some grant-supported arts projects. Since they were already comfortable working with each other in a variety of settings, it was natural to turn CONstruct into a full-time office.

The day-to-day business of running an office is determined by

who does what best. Graham, for instance, manages the books. Lundin, strong at public speaking, has taken the lead in marketing, while Heshmati, well connected in the arts community and academic world as an adjunct at the University, takes the reigns with graphics. Together they decide which clients to pursue; and while an individual will take the lead on a project, they all will participate in office-wide design critiques.

Growth is on their minds and

they have no desire to remain a small boutique shop. The trick, they say, is to find a self-sustaining critical mass of clients while maintaining a hands-on involvement with each project.

"I want to be able to look at a project and still be involved enough that my input is relevant," says Lundin.

Ultimately, Graham adds, "We want to always ask, 'are we enjoying what we're doing?' That determines growth." **E.K.**



COURTESY CONSTRUCT

Hagen, Christensen & McIlwain Architects Moving up the architectural food chain

FHagen, Christensen & McIlwain Architects first hung their shingle outside the door on Groundhog's Day in 1998. Unlike the perennial rodent that scurries back underground at the sight of the sun, the team of Jerry Hagen, Roger Christensen and Tim McIlwain has stayed above ground and prospered in that year-and-a-half, enabling them to pay their start-up costs and even open a retirement plan.

Prospering is not a matter of blind luck for the three, who added a fourth member last summer with Matt Lysne. They had worked together for more than nine years at Architectural Alliance in Minneapolis before they began talking about starting their own firm together. "We were at a point in our careers when we thought it would be great to be involved in all aspects of a project's design and development, which is not necessarily possible in a large-firm environment," McIlwain says.

But they didn't just latch onto the idea and improvise their way through. To realize their goals, they spent months strategizing and ironing out the business details. "We did a serious financial business plan, and assessed our

individual talents and aspirations to make sure we share the same values and can work together," Hagen says. "We all aligned on the core value of how we want to work with clients and each other. It was a big leap of faith to go out on our own, but everyone we talked with said 'do it.'"

Says McIlwain, "There was a real energy to not knowing what was ahead."

But capturing what lies ahead was easy with their collective experience. Hagen, with more than 19 years in the architecture profession, has significant technical knowledge and project-management experience for large and institutional projects. Christensen has a 12-year background in developing and documenting projects in the corporate sector. McIlwain's 12 years of experience has him working on such smaller projects as retail.

In this nonhierarchical office under the high ceiling of the Colonial Warehouse in downtown Minneapolis, the business of marketing is an office-wide undertaking. In fact, the three principals, as well as Lysne, will all meet with a client over lunch to land a deal. There is no opportunity for division because

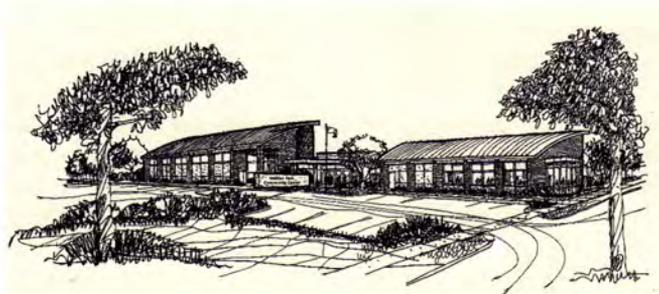
the office itself is a wide-open space in which work stations and computer terminals are in full view of each other. Tall windows on two sides frame city views toward the north and west. The bright, comfortable office has a decidedly casual feel established by the principals.

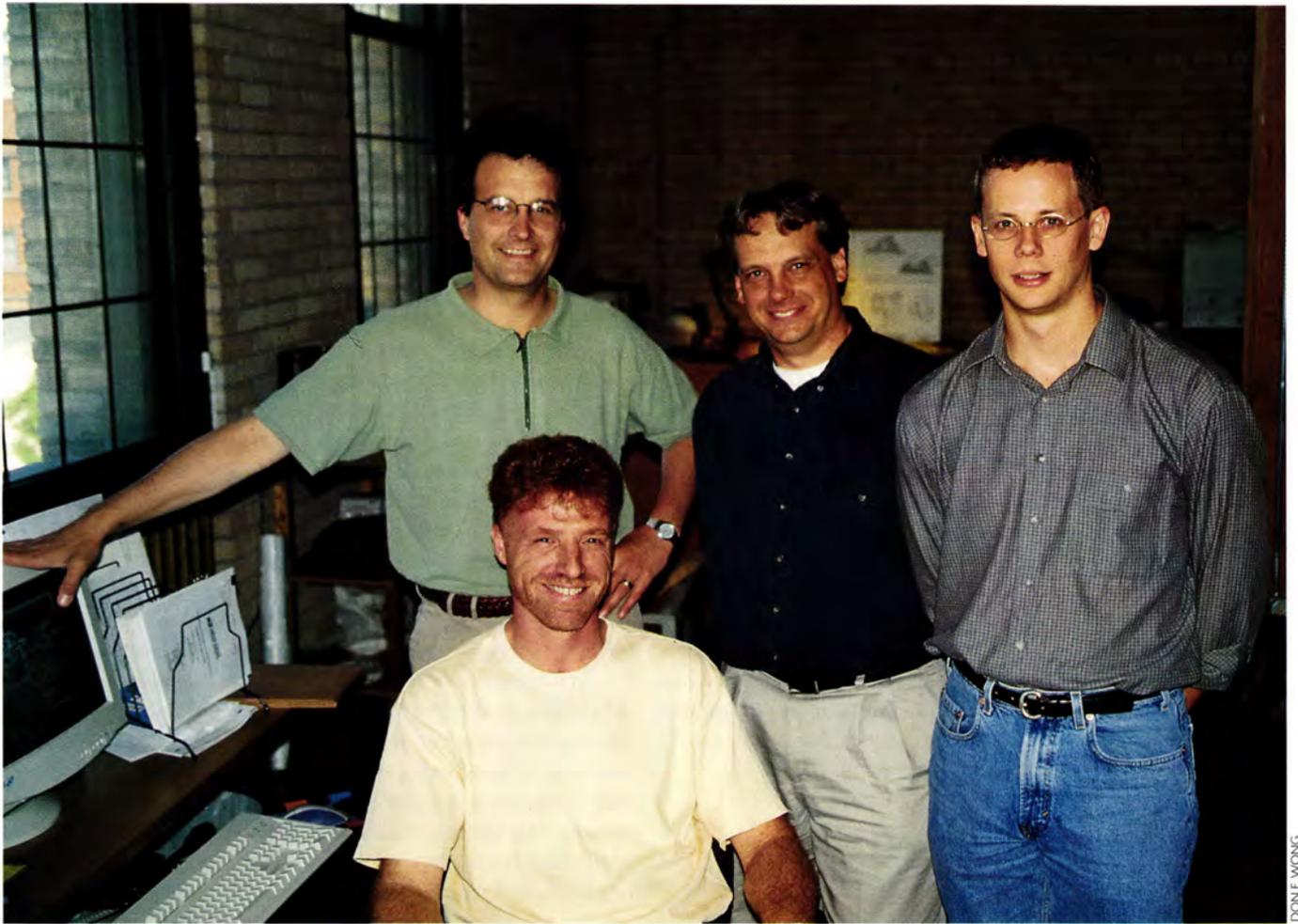
Unlike the structure of a large firm in which different players specialize, a small firm offers team members the opportunity to juggle several projects at once. "We all do really well with a variety of projects," Christensen says. Yet determining the specific office structure has taken time. "At first we focused on working our own projects, but we have now made each commission a team effort."

Someone still takes the lead, depending on expertise, previous relationship or availability, but all members of the office will have design input through weekly meetings, and through the informal, open arrangement of the office. Many of their projects come through word of mouth, referrals and established relationships. In fact, some 30 percent of their work has come through long-established relationships with contractors. "We knew that the



COURTESY HCM





DON F. WONG

heart of what we were was a network of relationships that we built up over the years," McIlwain says.

While some firms will define themselves by a certain aesthetic look, the team has avoided stylistic typecasting. "It's all about design sensibility, making the project appropriate to the site, budget, client and program," Hagen says. "The client gets what he wants and hopefully a little more."

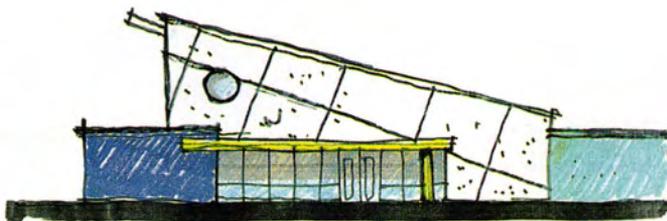
So who are those clients? Well, rather than going after the glamour projects initially, Hagen, Christensen & McIlwain looked for hidden-away projects, the kind of daily maintenance that is easily overlooked yet which can lead to bigger commissions. A small generator

facility for St. Olaf College in Northfield might not sound like much, but it's sheathed in the college's traditional rough-cut limestone and blends quite comfortably with the campus. Another utilitarian commission, a simple bathroom remodeling for EcoLab, Inc., has led to redesigning EcoLabs main lobby. Among the firm's other corporate, institutional and retail commissions are juice bars for Sola Squeeze

and a series of facility studies for Foss Swim School, which has led to a freestanding building now on the boards.

With each project, they step up a notch on the architectural food chain, increasing size and billing. "We nearly tripled our billing in the first year from our original projection," they note, placing the firm at its third-year billing projection. **E.K.**

Setting up shop in the warehouse district of Minneapolis are Roger Christensen (seated), Tim McIlwain, Jerry Hagen and Matthew Lysne (left to right standing). Firm projects include a stone-face utility building at St. Olaf College in Northfield (far left); the Foss Swim School (below); and Webber Park (center), a multiuse recreation/civic complex.



Schrock + DeVetter Architects

Building teamwork and collaboration

Michael Schrock and Michael DeVetter always have felt comfortable in big-firm environments. In fact, before forming their seven-person firm Schrock + DeVetter Architects in 1997, they worked at some of the largest architecture firms in the Twin Cities, most recently Cuningham Group. It was there that they struck up a friendship and began talking about forming their own firm while jogging along the Mississippi River during lunch breaks outside Cuningham's office in Minneapolis.

The idea of forming his own firm came as a bit of a surprise for Schrock, who says that he

thought he would "always practice in a large firm and work my way up the corporate ladder." DeVetter, on the other hand, envisioned running his own firm and remained on the look-out for a suitable business partner. Through discussion, they found that they shared similar ideas about forming close client/architect relationships, and the need to become more involved with the entire design process, not always possible in the design stratification of larger firms.

"In a large firm it's easy for an architect to lose sight of why he got into this profession, with project after project landing on the desk as the previous project nears an end," says Schrock. "As a principal of a fairly small firm, I am finding the thrill of the chase to be as exciting as cranking out projects."

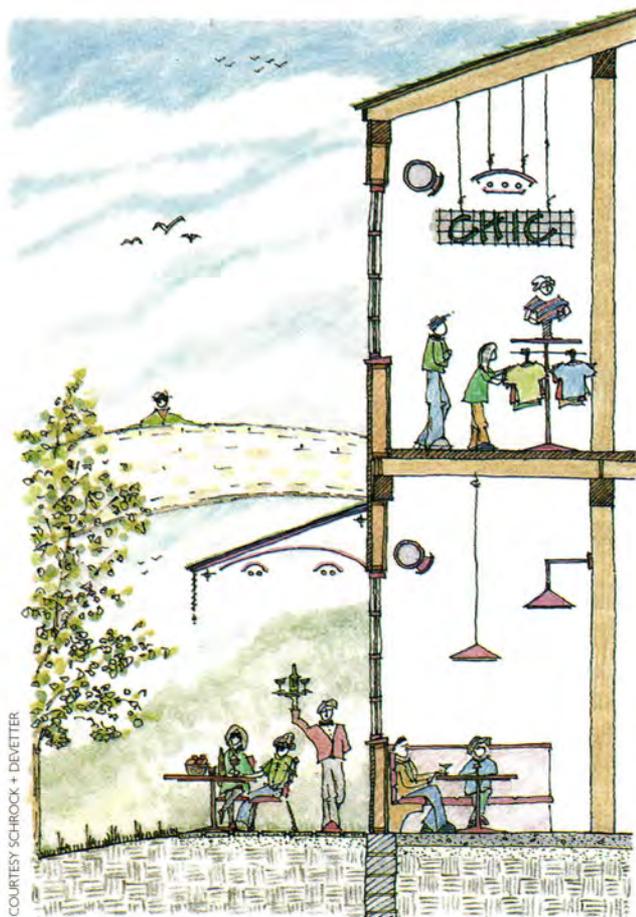
Nonetheless, the two do have their sights set on growth. Renting space in the Close Associates's modernist office on Franklin Avenue in Minneapolis, DeVetter and Schrock strategize for the future.

"We never had intentions of remaining a small firm forever," DeVetter says. "We want to

grow and we want to do larger work. But growth is a balancing act between building staff and billable projects."

They don't view themselves as a "boutique" shop working on small projects that reflect a specific design signature. They are most comfortable with such larger-scale projects as education, municipal and retail buildings compatible with their professional background at larger firms. As is typical of many newer firms, though, landing those big-ticket projects is challenging in a competitive market that gives larger firms the edge. "It's hard to get credibility when you're new and small," Schrock says. In light of that challenge, they have developed relationships with such firms as Cuningham Group, and Hammel Green and Abrahamson.

For instance, Schrock + DeVetter is architect of record for a parking-management building, part of an overall \$140 million transportation master plan by Hammel Green and Abrahamson at Minneapolis-St. Paul International Airport. They are also associate architects with Cuningham Group on a number of pro-





DON F. WONG

jects with Eden Prairie Schools, including a 50,000-square-foot, \$10.2 million performing-arts center, and an 80,000-square-foot, \$9.3 million athletic facility. In addition, sharing office space with Gar Hargens of Close Associates has opened opportunities for exchanging design skills and time.

Certainly teaming up with other firms has made the transition into opening their own office proceed smoothly. In fact, within its first six months the firm added several staff members. And while building partnerships with other architecture firms, the firm has begun to build a roster of smaller-scale projects, as well. Schrock notes that with big-ticket projects, you often have to wait several years to see the outcome of your design work. With smaller projects, "we wait months, and that's evoked memories of architecture school with fast sketches and in-house design charettes," they say. The team, in fact, will of-

ten do pro-bono work for non-profit organizations.

In their own Seward neighborhood, the young firm is working with Seward ReDesign on a commercial building at the corner of Franklin and Milwaukee avenues. For Fairview-University Medical Center, they are reworking one of the pediatric units and including colorful mural illustrations by artist Darcy Ferrill.

Schrock and DeVetter hope to expand the role of the architect in their firm by getting more involved in the development process. While a recent attempt to develop a building in the Uptown section of Minneapolis fell through, they plan to pursue other development projects. "Getting involved in development will improve our economic base and improve the quality of buildings," they say. "Architects must be involved in the decision-making process. It will put us in the driver's seat if we become developers on projects."

The best way for them to build a strong firm is to build a strong staff. One of the valuable lessons they took from Cunningham Group (a small office that expanded explosively within a few years), was to put people and staff at center stage. "Ultimately, it's about people and how you interact," they say. "The best firms have people who stay together a long time." **E.K.**

Michael Schrock and Michael DeVetter (left to right) in their Seward neighborhood office.

Their projects include a proposed renovation of the Roland Millwork Building (opposite) in Minneapolis's Uptown district, with possible second-level retail and ground-level dining. Other projects include the Eden Prairie High School Activity Center (below), and the Performing Arts Center (center), also at Eden Prairie.



Tod Drescher Architecture

Placing the environment up front

Roger Tomten and Tod Drescher (left to right) have advocated new ways of looking at housing development through Open Space Conservation Subdivisions, or clustering. In traditional suburban development (plan on left), repetitive large-lot developments consume the land and destroy the rural character. In cluster development (plan on right), a variety of lot sizes grouped closer together create a stronger sense of community while preserving the rural character. Development costs are reduced by shortening roadways and sharing water and septic systems. Aside from land planning, Drescher focuses on designing private residences, such as this small solar home (opposite) that he designed in 1995 for \$85,000 for a single mother with four children.

Driving into Marine on St. Croix is a little bit like driving into another time and era. About 10 miles north of Stillwater, Minn., along the St. Croix River, Marine steps down from Highway 95 with a cluster of commercial buildings. A general store, ice-cream shop, service station, a couple decent restaurants and a few other commercial businesses comprise the petite downtown. The sound of the river is always present as you stroll along Judd Street—the main avenue—from which you easily can see end to end.

People live in Marine on St. Croix, population 620, because they thrive on the town's bucolic tranquility—a tranquility many townspeople wish to maintain.

Tod Drescher, who opened his architecture practice in Marine in 1988, is a leading voice to maintain Marine's other-era charm. From his office in a converted apartment on the second floor of a downtown-commercial

building, you see why Drescher is so protective of Marine on St. Croix and cares so strongly about monitoring new development. His homey office feels a bit like a tree house, with its windows looking through tree branches toward the river. The ambient sound of the river and chattering birds fills the interior. Sitting inside Drescher's office, which he shares with Roger Tomten of Tomten Environmental Design, you always feel close to nature.

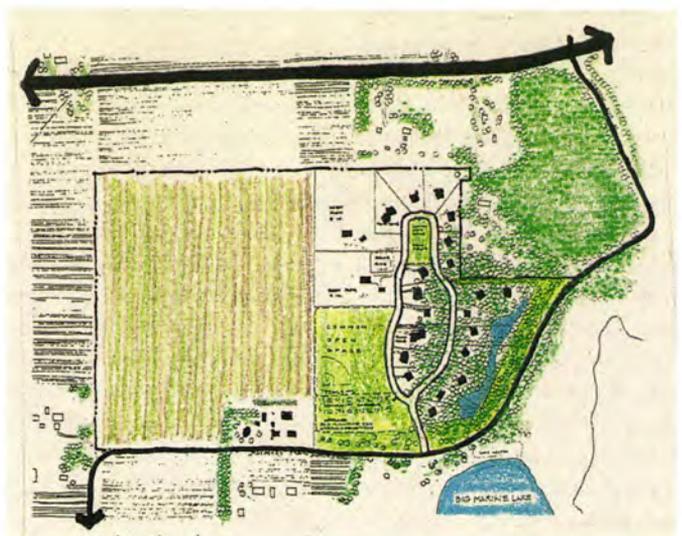
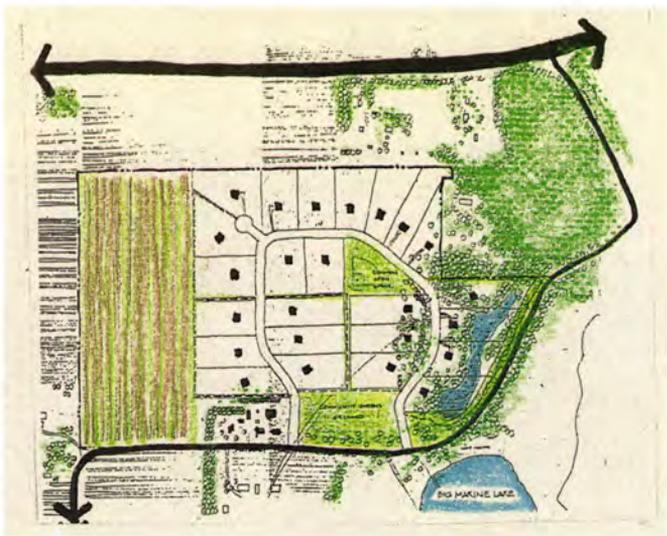
When a developer entered Marine on St. Croix in 1994 with plans to divide land into clean and efficient five-acre lots for new "McMansions," residents balked that urban sprawl was threatening to swallow their town with generic suburban housing.

Drescher and Tomten responded to these development proposals by advocating cluster housing, which they call Open Space Conservation Subdivisions. Cluster housing essentially reenvisioned traditional suburban de-

velopment by protecting the land rather than chewing it up. Instead of dividing proposed development land into equal, uniform lots, Drescher and Tomten suggest clustering the houses closer together onto smaller lots to create a more traditional small-town neighborhood feel. This method of combining town and country preserves remaining rural land in its natural state and restricts it from future development. Homeowners become co-owners in the undeveloped land.

"It's nature and community existing in balance," Drescher says. "Roger and I became the rabble-rousers behind this model. The problem at the time was that there wasn't any local example of cluster housing and there still is a lot of education that must go on. Some people feel that you are taking land from them."

Yet their crusade to create better housing developments paid off. Marine on St. Croix and





DON F. WONG

nearby Lake Elmo have mandated cluster housing. Jackson Meadow, being developed by the team of Harold Teasdale and Bob Durfey in Marine, employs the principles of cluster housing, in which nearly 70 percent of the subdivision preserves open meadow and woodland for all to use.

Since winning his crusade, Drescher has left most of the land planning to Tomten while he has redirected his efforts of applying environmentally sensitive design principles to individual housing, primarily in the St. Croix Valley area. And while they work on their own commissions, they still share design work depending on the project.

Environmental issues always have been at the forefront of Drescher's thinking. He received honor degrees in architecture and environmental design from the University of Minnesota in 1979. His master's thesis involved designing a camp and edu-

cational center for the Amherst H. Wilder Foundation called Wilder Forest, a 2,000-acre environmental learning center in May Township, Minn. Drescher stayed for the next five years as an on-site architect and environmental educator.

Tomten, likewise, graduated with a bachelor's degree in environmental design from the University of Minnesota in 1982. He met Drescher one summer while leading a group of inner-city teenagers on a construction project at Wilder Forest. When Drescher left Wilder to form his own firm, Design Build Alliance in Stillwater, Tomten joined him for a couple years beginning in 1985. They worked on passive-solar residences in the St. Croix Valley area, taking a hands-on approach to architecture that involved designing, drafting, bidding, general contracting and carpentry. Tomten left to do commercial work for eight years

with Morrison-Walijarvi Architects in White Bear Lake, Minn., before teaming up with Drescher again in 1994.

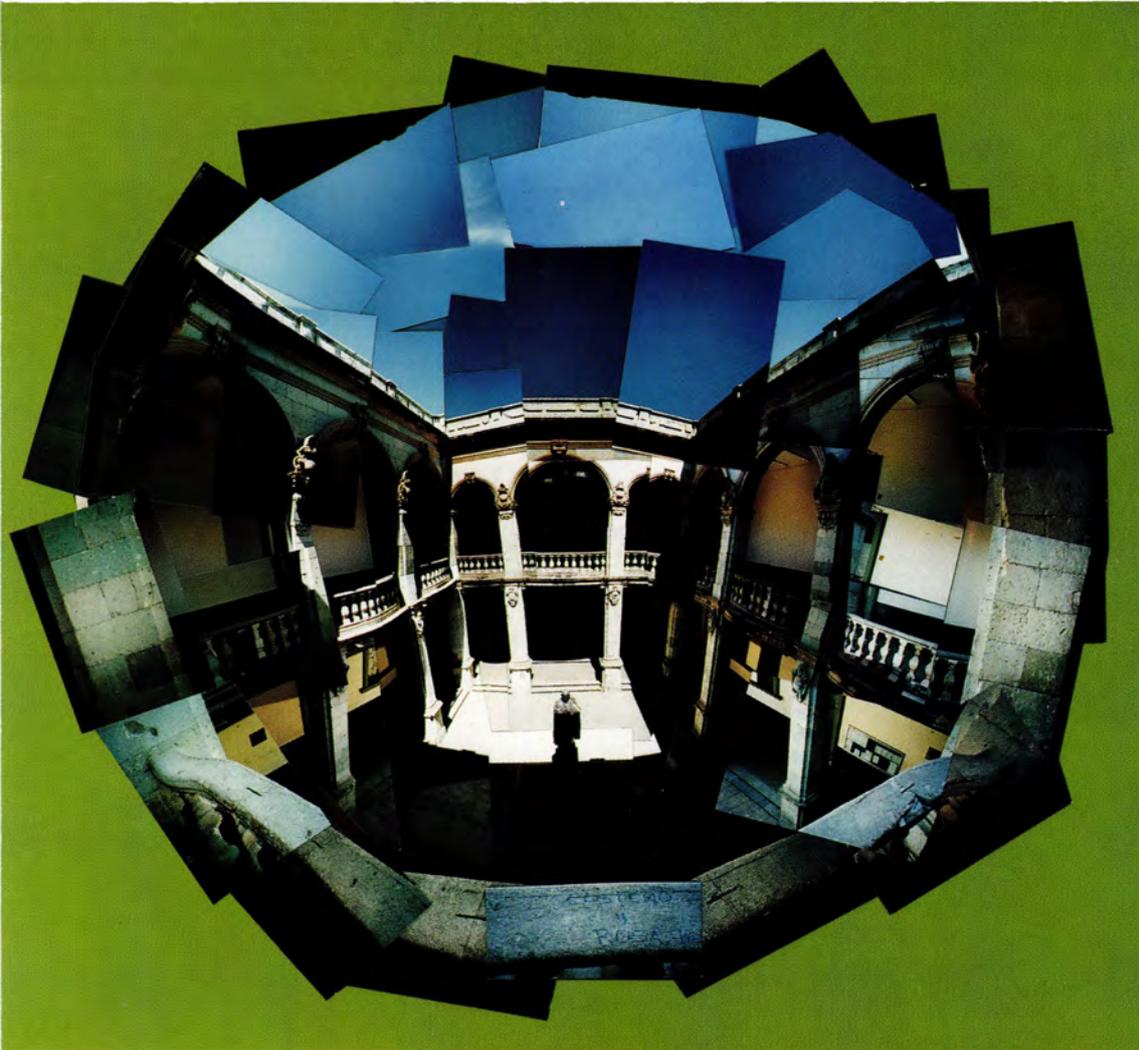
Environmental design for Drescher is a process of understanding the dual forces at work. "It's a matter of placing the house properly on the land and getting to know the land," Drescher says. Any architecture disrupts the land and destroys nature, but the goal for Drescher is to lessen that disruption.

Drescher, who has never entertained the notion of growing into a large firm, has actually thought of cutting back on his workload to pursue more interests outside the office. He's refreshingly honest about the fact that he doesn't work evenings or weekends much. Nor does he pursue marketing; instead he likes to see what unfolds.

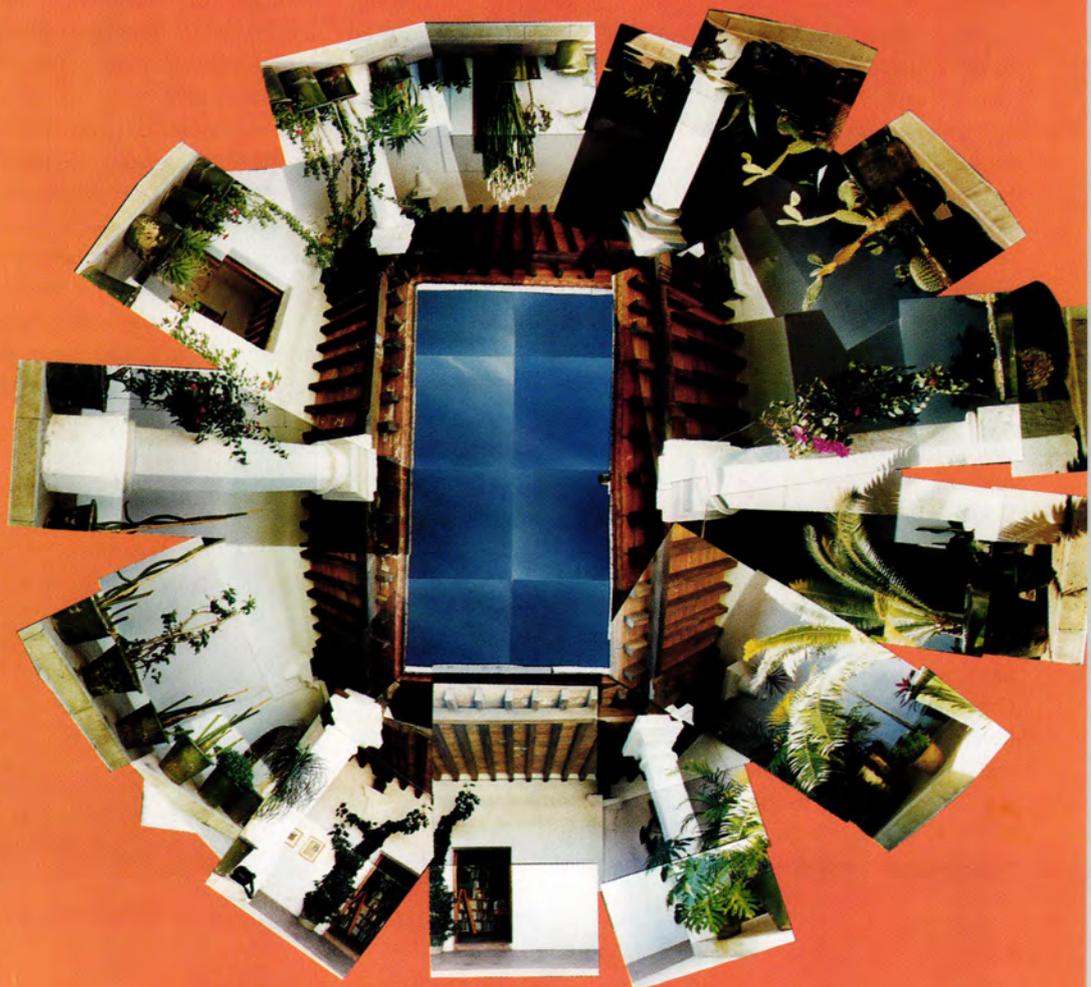
"I have to be self-employed to follow my passions, which change hourly," he says. **E.K.**



TANGI SCHAAPVELD PHOTO



Student studies of Mexican courtyards by Mike Gustavson and Darren Commerford (right); Bryan Ludwikoski, Amy Meller and Jaimi Plath (above); and Ryan Rademacher and Rob Aldecocea (opposite).





STEVE BERGERSON

Fort Snelling State Park's
 visitor center is
 the centerpiece of one
 of the state's most
 popular parks



RUSTIC PARKLAND

Minnesota has built several important interpretive centers in the past few years, including Gooseberry Falls State Park Visitor Center on the North Shore and Mille Lacs Indian Museum in west-central Minnesota. The Fort Snelling State Park Visitor Center in St. Paul follows the tradition of the other two facilities by reflecting an architectural vernacular appropriate to its rustic park setting.

Operated by the Minnesota Department of Natural Resources, Fort Snelling State Park

is located on the river flats at the confluence of the Mississippi and Minnesota rivers. The interpretive/visitor center, designed by Thorbeck Architects of Minneapolis, is the flagship building in this state park, which is located in a historic district. Above the river bluffs is Historic Fort Snelling, a reconstructed early 19th-century military fort with a separate visitor center run by the Minnesota Historical Society.

The new Fort Snelling State Park Visitor Center is the park's primary gathering space and edu-

cational facility, which interprets and relates the natural and cultural heritage of the park.

Positioned deep within the park below the historic Mendota Bridge, the 6,800-square-foot interpretive center rises above the floodplain along the edge of a river bluff. It replaces an old house on Pike Island that was frequently flooded by the rising rivers. Designing the facility was a collaborative process, Dewey Thorbeck reports. He worked closely with the Minnesota Department of Natural Resources, the Min-

nesota Historical Society, the Native American community (whose ancestors were interned at Historic Fort Snelling in the 1860s), a citizens' advocacy group, landscape architect Ron Melchert, exhibit designer Deaton Museum Services of Minneapolis and Twin Cities artist Susan Fine, among others.

"I sought to retain the tradition of the best of rustic park architecture found throughout Minnesota's parks and around the country," Thorbeck says.

In state, Thorbeck looked to such distinctive park buildings as Douglas Lodge, a timber structure built in the early 1900s at Itasca State Park in the North Woods. He also drew influences



ALBERT KAHN ASSOCIATES, INC.



STEARNS HISTORY MUSEUM

Kahn's design for the Ford Assembly Plant in the mid-1920s (opposite left) in the Highland Park section of St. Paul is an almost identical copy of the Ford Engineering Laboratory in Dearborn, Mich., (opposite right) with its classical façade and long, low-rise massing. One of Kahn's most famous manufacturing facilities is the Chrysler Half-Ton Truck Plant (left) in Detroit. Kahn designed this steel-frame, glass-wall structure (above) for the Cold Spring (Minn.) Granite Company in 1929.

draftsman in 1885. He progressed quite rapidly and in 1891 won a scholarship from American Architect enabling him to study abroad. He traveled and sketched old buildings with architect Henry Bacon, who later became noted for his design of the Lincoln Memorial. This trip was the first of a number of European excursions for Kahn, who retained a lifelong affection for classical and traditional architecture. This may be viewed as somewhat ironic in light of the fact that he is best known as the architect of functionalism, an architect who stripped all classical ornamentation from his industrial buildings. It raises a question as to whether Kahn was primarily a traditionalist or a modernist, which, of course, was the preeminent question facing all architects of that period.

Kahn had a distinguished and successful career as an architect, practicing in the classical manner. He designed many residential, institutional and commercial buildings, using his academic travel sketches as the basis for his detailing. Kahn was unapologetic and stated, "If, in re-employing older forms and applying them to our newer problems, we have done wrong, then all architecture of the past was wrong, for all of it is but a development of what was done before." He later commented, "The attempt to continue a vital architecture and one related to and enriching our own time instead of merely repeating old forms is, of course, proper. What is wrong with the movement today is the throwing to the winds all precedent, the idea that the new style may be created by an abandonment of all old." Yet noted architectural critic George Nelson, in describing Kahn's DeSoto Press Shop for the Chrysler Corporation of 1936, stated that

"modern architecture has reached its most complete expression."

One simple explanation of this dichotomy in Kahn's work is that it "reflected the contrast between the business worlds of his clients and the private worlds to which they retreated." It is understandable that the dizzying pace of technological change in the first decades of this century would warrant the need for a counterbalancing conservative response, particularly in the field of domestic architecture.

Kahn was responsible for many of these technological advances. He was experimenting with reinforced concrete as early as 1901. His younger brother, Julius, who later joined the firm, was a trained engineer who designed the "Kahn Bar," used for reinforcing concrete, and founded the Truscon Steel Co. In 1905, Kahn built the first factory in Detroit using reinforced concrete for the Packard Motor Company. In 1907 he built an all-concrete multistory factory in Brooklyn, N.Y., utilizing steel window sashes. A few years later, he was using the innovative concrete-mushroom columns for the Hudson Motor Company. Kahn started his association with his most important client, Henry Ford, with the design of the Highland Park plant, which opened in 1910 in Michigan. It was in this structure that the modern assembly line was invented two years later. The enormous success of the Ford Motor Company, and the company's increasingly complex manufacturing requirements, led to the need for a new facility. Kahn was selected by Ford to design the River Rouge complex, which dwarfed all previous factories. One building, the highly innovative glass-walled

Building B built in 1917, was a half-mile long. The River Rouge complex became the ultimate factory, a self-contained vertically integrated machine, where such raw materials as Minnesota iron ore entered one end of the operation and finished Model T's rolled out the other end.

By 1938, Kahn's firm was responsible for 19 percent of all architect-designed industrial buildings in the country. He also had a flourishing international practice and his buildings can be found on five continents. In 1929, a high-ranking Russian delegation visited Detroit, landing Kahn commissions to build more than 520 factories in that country alone. In addition to his contributions to the field of construction technology, Kahn revolutionized the organizational structure of the modern architectural office. Because his industrial projects were so massive and so innovative, and were frequently built on the "fast track," Kahn needed to incorporate within his office specialized engineering and construction skills. He was a pioneer in utilizing the team approach to designing and building his projects.

Kahn's major Minnesota project was the Ford Twin Cities Assembly Plant, which replaced an earlier Ford assembly plant built in 1913 at 420 North Fifth St., Minneapolis. The earlier structure was designed by the Minneapolis firm of Kees and Colburn, and at 10 stories it may be the tallest automobile factory ever constructed in the world. It is still standing and is relatively unchanged. But by the 1920s, Ford had outgrown this facility and acquired a new site in Highland Park in St. Paul,

Continued on page 48



ALBERT KAHN ASSOCIATES, INC.

Working from his Michigan office,
 Albert Kahn produced
 some of the 20th century's
 most innovative industrial buildings
 around the world—
 several in Minnesota



MINNESOTA HISTORICAL SOCIETY



ALBERT KAHN ASSOCIATES, INC.

Kahn *in* Minnesota

By Brian McMahon

Albert Kahn, one of the most prolific and challenging architects of the 20th century, designed four industrial buildings in Minnesota. While small in number relative to his total output, these varied projects are representative of his work and present an opportunity to reflect on important issues he raised.

Kahn was born in Rhaunen, Germany, and emigrated to Detroit in 1880. These simple biographical facts foreshadow several of the essential elements critical to his later success as a preeminent industrial archi-

tect. Kahn retained a strong ongoing interest in German architecture and was influenced by the work of Ludwig Hoffman, Peter Behrens, Emil Fahrenkamp and Wilhelm Kreis. In addition, his selection of Detroit as a place to start his architectural practice was extremely fortuitous because it coincided with the rise of the automobile industry, which created an "economic necessity" for new building forms. His career demonstrated his unique ability to provide these forms.

Kahn started his architectural training in a small Detroit firm as an office boy and junior

Oaxaca, Mexico



By focusing on the Colonial courtyards of a small Mexican town,
architecture students develop tools
to understanding their own culture

By Dale Mulfinger

Buildings are the answer. Architecture is the question. I start my design syllabus at the University of Minnesota with this axiom, which I formulated from reading David Leatherburrow's *The Roots of Architectural Invention*. Leatherburrow's thesis is that architecture is sustained by questions that don't go away. In an undergraduate design studio in the University's architecture program, one such question is typology. What is the lineage of buildings?

Typology is often difficult to see in one's own backyard, especially for students who have yet to develop a critical eye. Yet if students are removed from their local culture and immersed in another, they easily see cultural architectural patterns and nuances.

One such program is that of architecture professor Lance LaVine. For the past three years LaVine has escaped the snowy tundra of Minnesota winters for the mountainous town of Oaxaca, south of Mexico City. Here in a city center refined by European antecedents lies a rich variety of courtyard typology. Whether dwellings, government centers, schools or hotels, the courtyard provides the formal order to buildings.

In American culture, buildings sit on the land as objects in space. Our architecture is about the design of these objects and their inter-relationship to other objects. In Oaxacan culture, as in many other

parts of the world, land is claimed by a surrounding wall. Buildings first emerged as lean-tos to the wall. The formality of courtyards emerged from this formation as controlled access to light and ventilation. Oaxaca presents a wealth and diversity of courtyards.

In LaVine's class, students record the varied courtyards through drawings and photo montages, and compare their studies to each other's. The students that I visited on a recent February in Oaxaca noted that the courtyards are easily catalogued according to their responses to the following issues: relationship to the street; opening to the sky; level change at the courtyard floor; type, scale, character and size of columns; covered portico portions of the courtyard; number of stories surrounding the courtyard; color and material of the courtyard; details; use of fountains and vegetation.

I was struck by their clear and insightful visions of courtyard typology. The language of architecture was unfolding for them through this careful study; they could return to the Midwest with new insights into their own cultural artifacts. One student said to me, "Look how this courtyard brings the sky down to us." I can only hope that this new-found observation is retained as he applies his questions to the building typology of our culture. The following montages are examples of the students' studies.

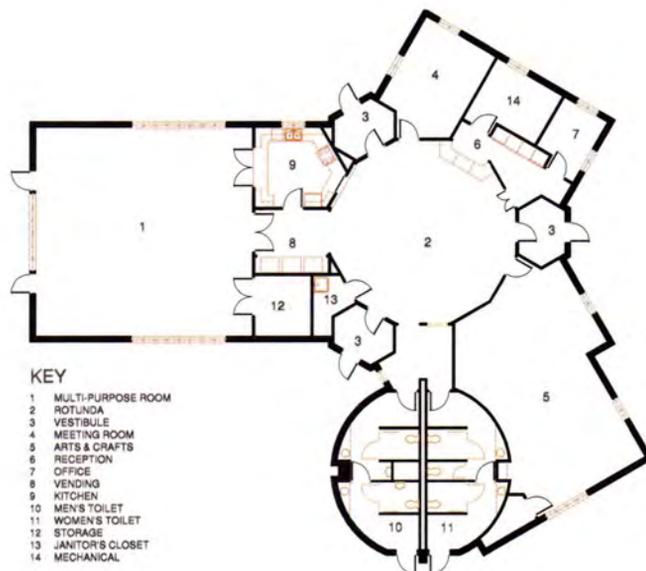


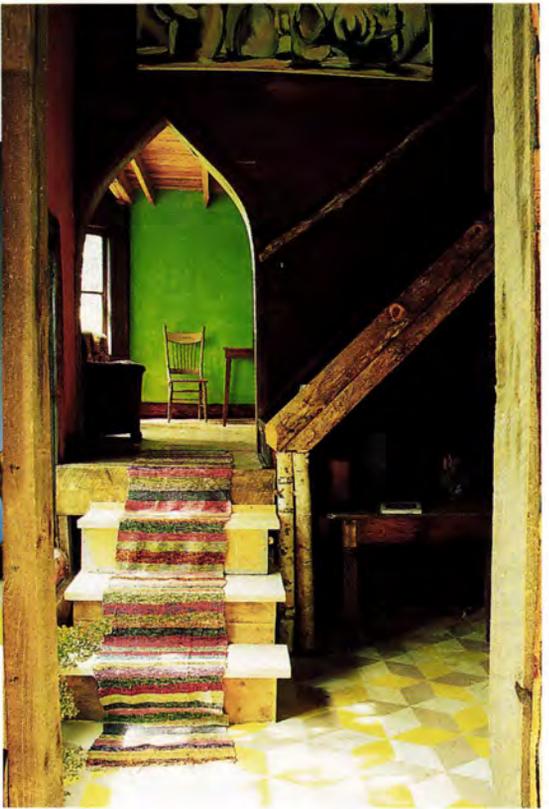
though the architects originally intended to use wood from sustainable-certified forests only, cost proved prohibitive. They did, however, manage to salvage some of the existing wood rafters from the razed park building and donate them to the Green Institute of Minneapolis.

With its official opening this past June, the Brackett Park pavilion provides a solid basis for increasing park attendance with a fanciful architectural vocabulary. **E.K.**

**Brackett Park Community Center
Minneapolis**

Frederick Bentz/Milo Thompson/Robert Rietow, Inc.





DON F. WONG

Russell Sharon with his cats at home. The house's rooms radiate off the main volume (above), leading to the upstairs bedrooms, painting studio (center) and kitchen (right).

Russell Sharon finds artistic inspiration in the familiar landscape of his childhood

Ancestral art

By Eric Kudalis



The wooden house is surrounded by sculpture, sometimes carved from tree trunks (left) or twisted from metal rods (above).



Sprouting like wildflowers along the country road, colorful flags mark the entrance to Russell Sharon's artist retreat outside Randall, Minn. If it weren't for the flags, it would be easy to miss his little compound as thick foliage hides the house from the road. But once up the unpaved drive, you sense immediately that this is not your ordinary Minnesota farmstead.

The house and grounds are eclectic evidence of a tirelessly creative mind, with human figures chain-sawed out of tree trunks or twisted out of steel rods; rock piles stacked like totems on the landscape; a wooden house looking curiously like an improvised work in progress.

A prolific artist who sidesteps categorization as he works in metal, wood, ceramic and painting, Sharon has been widely exhibited throughout the country, yet he is hardly known in his home state. Perhaps that's because he lives here only part of the year during the warm months, spending the rest of his time at his studio in Miami Beach. Despite the fact that the 50-year-old artist has spent most of his adult life building his career elsewhere—particularly New York where he lived and worked for 20 years before relocating to Miami Beach in 1995—Sharon considers the region where he grew up on a farm in Morrison County his primary residence, his anchor. He talks of the land with a sense of security tying him to his family. His house, in fact, is adjacent to the family farm.

Sharon bought the house and 20 acres 15 years ago from his brother, who built it "from found objects for about \$200," Sharon says. Over the years he has added onto the house, maintaining its quirky storybook character of precarious shaved-log stairs and stick railings, wooden walls, oddly skewed windows and doors, and brightly painted walls of green, yellow, orange and blue. A two-story-high atrium with a diamond-patterned concrete floor of gray, yellow and white is centrally located, leading to his in-house painting studio converted from a porch, up the Hansel-and-Gretel stairs to the bedrooms, or to the kitchen from a couple of plank steps. Furnishing is definitely of the found-object variety likewise, well-worn through years of use. An upright piano turns the atrium into a music room; big cushioned chairs positioned next to a bay window double the kitchen as a comfortable lounge, where Sharon frequently bakes bread or prepares fresh preserves.

Sharon also built a separate studio, which looks as improvised as the house itself with its sloping roof, rough-wood framing and wall of windows salvaged from a nearby parochial school. Yet the studio functions remarkably well, one outer wall splashed with urban graffiti and a bright, white-washed interior ideal for creating and displaying art.

"The house becomes like a sculpture as I continue to work on it," says Sharon, whose retreat surrounded by sculpture includes the house, studio, sauna and garage. "The creative spirit is

the same no matter what the medium. You get the energy from the same spot."

Sharon felt that creative energy from an early age. His parents encouraged his art; in fact, they even relieved him of his farm duties to pursue art, whether drawing, painting, or working in metal or wood sculpture.

"One of my first memories was being jealous of my sister, who could draw," he says. "I was always interested in beauty, and I always saw beauty in nature."

Indeed, his art generally focuses on nature, interpreted in evocative, sometimes-abstract landscape paintings. He often will do nature studies in watercolor, particularly when he travels, but completes his final paintings in oil.

After high school he headed for Mexico City, where he studied archaeology, art and liberal arts at the University of the Americas. Sharon says that he immersed himself in the Latin culture. "Mexico introduced me to a whole new perspective—Latin colors, historical elements, Aztec and Maya civilizations, and Spanish Colonial architecture," he says. "Studying these ancient civilizations gave me the impression of things having been around a long time."

Certainly the quietude of rural Morrison County is a decided contrast to the clamor of New York or Miami Beach, yet Sharon is rarely alone. He frequently has guests, who come to explore their own art through writing, music, painting and sculpture. This lends a creative spirit, which further drives his artistic energy. He envisions converting a hill across the street from his property into a sculpture garden, with different artists contributing.

Sharon retreats to nature to explore his artistic themes, and through the process he has shaped architecture into art. His house and studio are nothing if not exceeding personal and idiosyncratic, a vernacular Minnesota architecture derived from the land itself.

Russell Sharon will host a public exhibit of his painting, sculpture and ceramic at his Morrison County home and studio Aug. 28–29. For more information, call Russell Sharon at (320) 749-2892.



A separate studio/gallery is an ideal setting for displaying and creating art. The window wall (left) is salvaged from an old schoolhouse.

Virtues of small houses



MINNESOTA HISTORICAL SOCIETY

A manual examines the creative potential of renovating 1950s-era suburban houses

Reviewed by Todd Willmert

Houses in traditional urban neighborhoods most often have distinctive features. Inside, built-in cabinetry and buffets, hardwood floors and wood trim offer aesthetic appeal; outside, unique dormers, turrets and ornament provide character. The houses' "good-bones" make them desirable to homebuyers wishing to live in urban neighborhoods.

Middle-class, post-World War II suburban houses are a different matter. For the most part, they offer little of the architectural charm and amenities of their older urban counterparts. Returning soldiers bought tract houses in such first-ring suburbs as Richfield, Robbinsdale and Roseville to start new families with the promise of postwar prosperity. Most of the houses were small and quickly constructed along freshly laid street grids carved out of farm fields.

Unfortunately, many of these early, midcentury suburbs have not held up well over the years. The Twin Cities explosive growth beyond the first-ring

suburbs indicates that the inner suburbs lack appeal; they have become mere drive-through zones between the urban center and new developments farther afield. That is unfortunate, because the modest homes that line first-tier suburban streets actually hold significant potential, as illustrated in a new book. *Cape Cods & Ramblers: A Remodeling Planbook for Post-WW II Houses*, sponsored by 15 first-tier Twin Cities suburbs, suggests we rethink these homes so that residents and buyers can better visualize their value.

The houses in the first-tier suburbs are caught between two worlds of highly desirable real estate: the urban core with its stock of solidly built older homes and the expanding outer suburbs with their fresh, new homes. Urban houses offer old-world charm, while new "exurban" homes offer more spacious floor plans and such updated amenities as media rooms and gourmet kitchens. *Cape Cods & Ramblers* examines the "middle ground" by suggesting

ways to upgrade these modest first-tier suburban homes, and allow them to compete with the inner city and the outer suburbs.

Three prime factors make this book a timely endeavor.

In 1950, the average residence in the United States was smaller than 900 square feet and housed 4.2 people. Today the average house is 2,100 square feet with 2.6 occupants. More than one-quarter of new houses surpass 2,400 square feet. The average 1950 residence would nest comfortably in today's typical three-car garage. To compete against other housing stock, the 1950s residence needs updating, to add literal and figurative space.

Sprawl is prevalent throughout the U.S. Consider that Minneapolis is 58.7 square miles, St. Paul 55.4, yet in recent years the Metropolitan Council has proposed opening up 312 additional square miles for development. That the Building Association advocated 781 square miles makes the Council proposal seem moderate. Sprawl and commute time make inner suburbs more attractive.

The home-improvement, do-it-yourself culture runs deep in the U.S., and is growing stronger. Renovation and repair spending has risen 26 percent in the past decade, topping \$120 billion annually. Home Depot, the home-remodeling center, grew from four stores to 1,000 in 20 years, to say nothing of other do-it-yourself chains. Home renovation magazines are hot sellers on the newsstand, and numerous television shows addressing renovation and home improvement draw wide audiences.

Given the national interest in home repair, the inner suburbs hold great potential. *Cape Cods & Ramblers* imaginatively illustrates possibilities in such tract houses. The key to reclaiming the first-tier suburbs lies in recognizing that these houses were quickly built to meet postwar demand. In tone with the houses' modest 1950s character, the authors—Robert Gerloff, Kristi Johnson and Peter J. Musty—suggest a gamut of renovation strategies, from a simple porch addition to pulling off the roof to create a second story. Sketches and architectural drawings illustrate how renovations can be consistent with the original design.

The Cape Cod (named for the Massachusetts peninsula) is a colonial, saltbox design. The rambler—a low, horizontal design—owes its origin to the California, west-coast lifestyle. Although neither style is indigenous to the Midwest, they fit in comfortably with the region's landscape. The Midwest traditionally has adopted many different architectural forms from different parts of the world and country. Take the bungalow, for instance. These dwellings, wrapped with verandas, were erected for British administrators in India. The single-story houses, with expansive porches, are now common throughout the Midwest.

Cape Cods & Ramblers is more than a mere plan book. An essay on the social factors contributing to the origins of the Cape Cod and rambler provides case studies illustrating how contemporary homeowners have renovated their houses. Linked with discussions of changing social circumstances, insightful sidebars on energy- and building-code issues explain such factors as insulation, stair and egress requirements. Standard building practices of the 1950s are placed in context with current codes, giving homeowners important guides.

Gerloff and Johnson have an established interest in restoring older neighborhood homes. They recently collaborated on a bungalow plan book for the Twin Cities Bungalow Club. The book raised



awareness of south Minneapolis's abundance of bungalows. Similarly, *Planning to Stay*, by William Morrish and Catherine Brown, touches on the how and why of neighborhood preservation and planning. Grass-roots, architect-led design charrettes often focus on neighborhood-renewal issues, as well. A design charrette led last year by Aaron Parker of A Studio and Michael Lander of Town Planning Collaborative focused on the Lyn-Lake neighborhood in Minneapolis, and considered issues of housing and commercial redevelopment.

Eliel Saarinen noted, "always design a thing by considering it in its larger context—a chair in a room, a room in a house, a house in an environment, an environment in a city plan." Seen in this light, *Cape Cods & Ramblers* takes a first pass at neighborhood and city home renovation. The work's importance is evident in its winning the 1999 Minneapolis Preservation Award for Community Education, given by AIA Minneapolis and the Minneapolis Heritage Preservation Commission.

Cape Cods & Ramblers and similar works urge us to recognize the vast potential that exists in smaller houses and older neighborhoods.

For a copy of the book, contact Fridley Housing & Redevelopment Authority, (612) 571-3450.

A renovation and addition expanded upward, converting this Cape Cod into a two-story house. The original house looked similar to this row of Cape Cods (opposite) built in the 1950s in Roseville.

endangered

Continued from page 7

Phillips activists offer a litany of complaints directed at the Minneapolis Community Development Agency (MCDA), whose operations affect this area more than other public or private entities. Central to the neighborhood's argument are MCDA's unrealistically high rehab-cost estimates, which promote clearing deteriorated houses in favor of new construction. Activists' concerns have been echoed for several years by leaders of many Minneapolis neighborhood organizations, who recited these concerns to MCDA officials at a rehab roundtable discussion two years ago sponsored by the Minneapolis Center for Neighborhoods. At that session, a realtor told the participants, "Many of my clients are young people who see their affordability suited more to the city than the suburbs. But they don't want to buy new city houses or older ones modernized away from their original design. They want the character that older houses offer."

Earl Pettiford, manager of Housing Development at MCDA, counters the notion his agency is anti-rehab, stating that the houses that have been razed in Phillips were done at the request of the neighborhood organization. Pettiford says MCDA has repeatedly tried to market abandoned houses in Phillips and other neighborhoods, but generally gets no credible response. As to those listed in the Phillips Boarded Housing report, he says several of them have been considered as likely candidates for rehab by community developers, and others are still available to offers. He notes these structures often are vandalized and looted soon after they are abandoned by owners and forced into foreclosures by financial institutions. The problem is exacerbated by lengthy delays in reselling the properties or turning them over to MCDA. "By the time we get possession of these houses," Pettiford says, "much of what they once were worth is gone."

Several Minneapolis city-wide neighborhood-organization representatives point to

leaders in Phillips for causing much of the problem. Leadership in Phillips has been a perennial problem. A recent audit of the Neighborhood Revitalization Program (NRP), which administers funding to neighborhoods for their own planning purposes, revealed that Phillips has used only 17 percent of NRP funds for housing.

When MCDA and community organizations discuss housing rehab, numbers inevitably become the endgame that forces the outcomes. This can handicap older houses, which are rich in such architectural detailing as hardwood floors, solid-plaster walls, ornate trim and carved woodwork, but expensive to rehab. Replacement housing, with less intrinsic character and charm, is often faster and cheaper than rehab. What the numbers endgame doesn't reveal is that the new replacements fall far short of achieving architectural quality. For all of Phillips's problems, there is no neighborhood in the suburbs that has this richness of housing stock. **AM**

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up close

Continued from page 13

We'd like to know, for instance, how a well-designed manufacturing plant increases productivity and reduces workers'-compensation costs, and how design really enhances the value. It's always been classically difficult to determine how much design saves down the line. I hope we'll do more research with the College of Architecture and Landscape Architecture on design and its value.

Do you have any personal passions you're bringing to your presidency?

As a personal passion, I believe that architecture has lost a little too much of its artistic approach. There's a quote from architect Robert Stern: "An architect is nothing if he [or she] is not an artist." In this era of computer-aided design, we've lost much of the artistic energy and skill level that existed with Minnesota-based architects in the previous 50 years. That loss has definitely been underscored and articulated to me with the recent books and exhibits on the work of Ralph Rapson. I would like to reinvigorate that notion of design and sketching—the artistic function of an architect.

Why is that artistic aspect so important?

Because I can hire a student out of the University of Minnesota or from North Dakota State, but if that individual gets asked a question by a client and needs to sketch a three-dimensional interior or exterior layout, and if they can't do it, they're not communicating. Drawing is a communication tool first and foremost. We talk about how architects have trouble communicating with clients. If we can't draw before their eyes, how else can we communicate?

I went to Celebration City in Florida, and in the sales office there were these fabulous watercolors of the community and hand-drawn elevations—pencil on vellum—of the houses. One knows quite well the entire project was designed on CAD. But hand drawings were important in the conceptual and selling stages, to the future purchases of the buildings. Michael Eisner [chairman and CEO of the Walt Disney Company—the force behind the development of Celebration City] is not a dumb man. He sees the value in hand drawing and it's about time we saw it, too.

I've also read the book, *Management of the Absurd*, by Richard Farson, and I am intrigued by a number of things he says about paradox-

es in our world. He says there's a paradox with technology: For every intended positive there's an unintended negative consequence. One example he used was the fact that computer-aided drafting was intended to liberate the design experience, but instead it has severely limited the artistic and design skills of many people.

What other changes in the profession need to be dealt with?

We've spent this last century building cities and expanding out. In the next century we need to reinvigorate the interior cities. There's lots of talk of sustainability, and people get a lot of attention doing a boutique project in the suburbs. But the heavy lifting is in the cities, doing infill and working on adaptive reuse.

Do you sense the business climate is changing for architects?

Well, there are some shifts. One interesting shift is that AIA has been working on introducing legislation on the design/build potential, and recognizing that design/build is an increasing part of the market. Design/build isn't an answer for every condition, but it's part of a project-delivery method that should be available. Design/build allows the architect to work in more of a collaborative than confrontational role, which benefits project design, project delivery and potential profits.

Do you think the training and education of architects need to evolve?

There's lots of talk about architectural training. I'm not an expert in that. But I did have an opportunity to interview upcoming graduates from North Dakota State University in Fargo and look at their work. As I mentioned before, I could see that artistic hand skills need to be cultivated. One must be able, even in most basic idea phase, to create a quality sketch. An idea can't be converted to AutoCAD if doesn't exist beforehand.

What sort of legacy do you hope to leave at the end of your tenure?

At the end of the year, I'd like it if the membership could look back and say the visibility of the architect in the community has risen. And that we have begun walking along the track of developing research that can validate the worth of architectural design as opposed to simply saying, "Oh, the building is wonderful." I'd like to be able to quantify the experience of architecture in more measurable terms.

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up close

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The third thing I'd like to improve on would involve posing the question about reintegrating the notion of the architect as an artist. The more we focus on the technical aspects, the more we attract technical people—to the detriment of losing the great artists who could be in our business.

The other concern I have is to just keep our eyes on creating livable communities. I'm a real supporter of light-rail transit. I grew up in St. Louis, and when I moved to Minneapolis in 1970 I found the city was, fortunately, 20 years behind St. Louis in urban deterioration. St. Louis had lost all of its elm trees, the city was rotting out from the inside, the suburbs had moved to the outer rings.

Having subsequently moved to Duluth then back to Minneapolis, on visits I realized Minneapolis is starting to look more like I remember St. Louis. We've seen extreme growth of the suburbs here, we've lost our elms, and for such a progressive state as Minnesota to be one of the last to put light-rail transit together is startling. I don't think we'll ever experience the level of urban deterioration that St. Louis has. But I want to do what I can to make sure we never get close to that either. **AM**

insight

Continued from page 17

of keeping the Minneapolis-based business focused during its expansion to offices in Phoenix and Los Angeles. After marketing and human-resources systems were established "to support the architects who were going out and being entrepreneurial," Quiter says, the firm reorganized into studios and "grew very rapidly."

For Gar Hargens, true professional satisfaction has come with gradually downsizing his firm to a studio of one. As president of Close Associates Inc., in Minneapolis, Hargens watched his employee roster shrink over the decades. About two years ago, he realized he could either merge his firm with another, build the business back up or take the opportunity to practice on his own.

"For 10 years, I'd been selling myself to clients by building a team of experts," Hargens explains. "I'd find a graphics person, an interiors person, a lighting person whose talents fit the assignment. That was a successful marketing technique. So I thought why not do all of my staffing that way. Plus, I really love architecture. And now I'm concerned about architecture rather than personnel problems. If projects slow down, there's just

me to worry about. I'm not having to go through the agony of adjusting staff or trying to keep people busy."

The firm primarily handles residences, but has branched into nonprofit and neighborhood work, as well. "I love to work with one-of-a-kind, nonprofit special projects," he says. "They're the same kinds of projects Close has always done, but I'm more involved in the work. It's a bit frantic. But I know at the end of the day if I've got the bases covered. I like that feeling."

In Minnesota's outstate areas, where communities are perhaps more closely knit than in urban neighborhoods, architectural firms feel market demands acutely and must respond appropriately if they are to succeed. As Doug Hildenbrand says, "In a small community you need to be accountable. There's no place to hide. You have to do a good job or you don't stay in business."

As CEO and president of Architectural Resource, Inc., which has offices in Hibbing and Duluth, Hildenbrand says one primary factor affecting his firm's growth is market. "Eighty percent of our annual workload is repeat work. We always market with the idea that our clients are long-term. Then we do whatever projects they have." While the firm focuses on educational facilities—with pro-

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jects ranging from designing new buildings to renovating older structures—it also does housing projects, banks and retail. A new market, Hildenbrand says, is upscale residential as people move north.

Local market forces have also shaped Yagy Colby Associates, Inc., with offices in Rochester and Mason City, Iowa. "Our vision was to be a large multidisciplinary firm serving developers and municipal clients in the region," says Christopher Colby, principal. "That's what the market was asking for." The civil-engineering, soil-surveying, landscape-architecture and architecture firm, as Colby describes it, expends about 20 percent of its energies on architecture.

The mix wasn't part of a "grand scheme," Colby says, "other than an effort to put together a firm that can offer a variety of services to a wide range of clients. When you're located outstate, it's clear the marketplace is more general and expects a more full-service approach, as opposed to us being specialists."

Still, clients are becoming more sophisticated, he adds, and their expectations are rising. "Being broad-based but having the ability to specialize in some areas is the challenge of the future. As a firm we need to respond to the retooling of the rural marketplace."

Regardless of size, location or focus, how-

ever, nearly all architectural firms face the same challenge: what Degenhardt refers to as the "talent wars" or being able to tap into a pool of qualified professionals. In other words, he says, "Where do we find good people? The unemployment rate in this country is extremely low and it applies to professionals, as well." While larger firms engage in specific strategies to fulfill unique and diverse staffing needs around the United States and the world, firms in outstate Minnesota struggle to attract talent to the more rural areas.

In outstate firms, employees are also often required to do double duty. Architectural Resources keeps a landscape architect, and mechanical and electrical engineers on staff. "Structural engineering is all I outsource," Hildenbrand says. "But we're a real hands-on firm. Our marketing people are our project architect people. We want each client to feel like they're the only project in the office. That's how we retain repeat business. So our growth is affected by our ability to serve the clients we have."

At times, Hildenbrand adds, his firm will collaborate with others "that give our team more strength." Many firms do the same. "On particular projects where we don't have expertise in-house—say regarding historic preservation or traffic studies or environmen-

tal capabilities—we team with someone who does," Colby says. "But when we find a consistent pattern of requests for projects we start looking for a staff person who can do it in-house."

Cunningham Group keeps most expertise on staff, Quiter says, but often collaborates with other firms on entertainment projects. In fact, Cunningham Group set up shop in Los Angeles to merge with another firm that had contacts in that arena. Still, he adds, "If we need someone who can develop a particular type of show, we know who to go to. Owners come to us to design the whole thing; we go out and find the pieces to the puzzle that make it all come together. It would be almost impossible to have all that expertise in-house because what we do is so diverse."

Similarly, on Ellerbe Becket's larger projects, Degenhardt says, multiple firms are involved, with Ellerbe Becket as the architect of record. And in markets other than the United States, he adds, "we always have a local partner to deal with language, codes, cultural issues and local practices." Even in his solo practice, Hargens agrees that "the trading of employees, sharing of projects, outsourcing and collaborating is part of the in-

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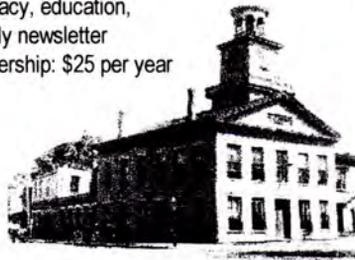
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insight

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dustry now. I can find the people with the expertise that best suits the project and fine-tune the team."

Collaboration is key to meeting the present and forthcoming needs of clients, Quiter emphasizes. "Because the economy is so robust right now firms are growing in a lot of different areas. But the economy won't stay robust. What we have to do as architects is get better at working with others to deliver a product. We're going to be competitors one day and collaborators the next."

"Architects in general, while being polite to each other, have always had a hard time bringing together resources to deliver the best for clients," Quiter continues. "But it's necessary now and in the future. Projects are happening faster and faster, and are more complex. To deliver what clients need and expect, we're going to have to become better collaborators."

Collaboration taken to its extreme, in the form of mergers, is a trend architects need to be wary of, Degenhardt cautions. "Today,

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with merger and acquisition mania going on, you see consolidation everywhere. Some people believe that in the future there will be a few megafirms, a bunch of niche firms and not much in between. Firms of our size wouldn't exist anymore. We need to think about whether to become part of a mega-firm or continue to march the way we are or become niche players, which we aren't likely to do. We're having to figure this out."

Degenhardt also sees the industry ready to reinvent itself in another way. "We'll see services offered in a package kind of deal; the big resurgence in design/build is in the front of this but is temporary. What the industry will get to is a form of integrated services way beyond design/build. Single firms will offer, plan, design, build and manage construction—the whole project. We're doing about 15 or 20 percent of our volume that way right now. In about a year or two, one-third of our services will be delivered that way. That's a whole different look at how firms might grow." **AM**

kahn

Continued from page 31

on a bluff overlooking the Mississippi River. Ford selected Kahn as part of the design team for the new plant, along with the Boston engineering firm of Stone and Webster. The precise roles that each played are difficult to discern. A recent visit to the Albert Kahn archives in Detroit did not produce definitive design drawings of the elegant classical façade of the Twin Cities plant, but there is strong circumstantial evidence of Kahn's major contribution. First, the Twin Cities Assembly Plant is an almost identical copy of the Ford Engineering Laboratory in Dearborn, Mich., designed by Kahn just months before the plans for the Twin Cities plant were developed. In addition, a number of working drawings and other documents provide evidence of Kahn's substantial, if not primary, role.

The classical treatment of both the Engineering Laboratory and the Twin Cities Assembly Plant is most unusual for a "utilitarian" automobile factory of this time. Perhaps Henry Ford felt the need to pause and take stock of his considerable accomplishments and portray them in "the grand manner." By 1924, Ford was at the pinnacle of his success. He

had introduced the assembly line and modern mass-production techniques, and his accomplishments were universally acclaimed. His technological achievements translated into enormous economic power. Ford, creator of the modern age, may have felt that the time was right to claim the mantle of not only the future, but also the past. This theory is bolstered by the fact that immediately adjacent to the Engineering Laboratory in Dearborn lies the Henry Ford Museum and Greenfield Village, Ford's personal history-museum complex. Perhaps the classical treatment can also be explained by the special circumstances that attend each building.

The Engineering Laboratory also housed Henry Ford's office, as well as Ford's newspapers and radio station. The Twin Cities Assembly Plant sat on an incredibly beautiful site; a site, to which Ford was personally attracted, in part, because of its hydroelectric capability. A newspaper account of the day describes Henry Ford taking a tour of the site—before construction started, but after the classical façade had been designed—and requesting that the building be reoriented so its elegant façade faced the river.

Perhaps it was Kahn who proposed the classical design to a willing Henry Ford, but no matter what the inspiration, Kahn, a classicist at heart, was undoubtedly delighted with the opportunity. It enabled him to incorporate a red-tile hipped roof, reminiscent of a building that he had sketched years earlier on one of his trips to Italy. The Twin Cities building was completed in 1925. The façade had large windows permitting visitors to view the assembly line in operation. The plant became a major tourist attraction. A magazine noted that with "the winding roadway with many shrubs and brightly colored flowers, and the immaculate, elegant buildings, the passerby might well imagine it a museum or public library." Unfortunately, much of this beautiful façade was destroyed by a 1968 expansion. Ironically, the architects for this project were Albert Kahn and Associates, Inc., whose practice is still flourishing today, long after Kahn's death in 1942.

A far more attractive addition to the Ford Plant, designed by TKDA of St. Paul, has just been completed. The new Ford Training Center is a collaboration of the Ford Motor Company, the United Auto Workers Local 879, the Minnesota State Colleges and Universities System, and the Minnesota Department of Administration. The 40,000-square-foot facility includes an auditorium, a Skills Enhancement Center, a robot demonstration lab, an electronics lab, three technical-training labs, a ma-

chine shop, woodworking shop, auto-diagnostic bay, paint-repair bay, eight classrooms, a student lounge and offices. The Center will provide technical and educational needs for Ford employees, but also will be available to students in the MnSCU system.

Albert Kahn also designed more straightforward factory buildings in Minnesota. Among these is a Chevrolet Automobile Parts Depot, which was built at 1227 Hennepin Avenue in Minneapolis in 1929. Still standing, although partially modified, its brick veneer is consistent with Kahn's stated belief that "so long as the lines of the building indicate that there is behind them a sustaining skeleton, and so long as they do not mask the reality and pretend to be the sustaining material, there is no offense."

A more typical Kahn factory, an immense steel-framed, glass-walled structure, was built by the Cold Spring Granite Company, also in 1929. More than 600 feet long, the building covers more than 100,000 square feet of floor space. It features overhead cranes to transfer the huge blocks of granite. At the time it was the largest and most modernly equipped granite-manufacturing plant in the country. It has been expanded in the same style and is still used as the company's main cutting shed.

Finally, Kahn designed a corporate headquarters building for the 3M Company on Bush Avenue in St. Paul. This unadorned classical-style structure housed the office of the president of 3M, and the corporate boardroom from 1939 to the early 1960s, after which the headquarters was moved to the new 3M campus in Maplewood.

Kahn rationalized different stylistic approaches for different building types. Early on, he even questioned whether his industrial buildings should be considered "architecture," and deemed them unworthy of a classical treatment. But as the modern movement developed more widespread respectability, Kahn's industrial buildings were increasingly viewed as important architectural milestones. Kahn grudgingly acknowledged his unintended contribution to modern architecture. He wrote, "a straightforward attack of the problem, the direct solution generally applied, that avoidance of unnecessary ornamentation, simplicity and proper respect for the cost of maintenance, make for a type which, though strictly utilitarian and functional, has distinct architectural merit." Kahn's Minnesota projects demonstrate how he expanded the definition of architecture, and help illuminate the contentious debate generated by the rise of the modernist movement. **AM**

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Architect: Bentz/Thompson/Rietow, Inc.
Principal-in-charge: Bruce Cornwall
Project designer: Milo Thompson
Project team: Steve Brandi, Ed Doyle, Diana Glasgow
Structural engineer: Mattson/McDonald
Mechanical engineer: LKPB
Electrical engineer: LKPB
Contractor: Jorgenson Construction, Inc.
Landscape architect: Close Landscape
Photographer: Don F. Wong

Fort Snelling State Park Visitor Center St. Paul, Minn.

Client: Minnesota Department of Natural Resources,
Bureau of Engineering
Architect: Thorbeck Architects Ltd.
Principal-in-charge: Dewey Thorbeck
Project team: Ali Awad, John Larson
Structural engineer: BKBM Engineers
Mechanical engineer: BKBM Engineers
Electrical engineer: BKBM Engineers
Contractor: Donahue Construction Company
Interior design: Thorbeck Architects
Landscape architect: Melchert-Block Associates
Audio/visual: AVI Systems
Exhibits: Deaton Museum Services
Artist: Susan Fine
Photographer: Steve Bergerson

Jeffers Petroglyphs Visitor Center Jeffers, Minn.

Client: Minnesota Historical Society
Architect: SALA Architects (formerly Mulfinger, Susanka,
Mahady & Partners)
Principals-in-charge: Katherine Cartrette, Kelly Davis
Project team: Katherine Cartrette, Kelly Davis, Jim Larson,
Steve Mooney
Structural engineer: Meyer, Borgman and Johnson, Inc.
Mechanical engineer: Jack Snow Engineering
Electrical engineer: Hutchins, Kaeding & Associates
Contractor: Wilcon Construction
Landscape architect: Coen + Stumpf Associates

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Bill Beyer is a principal with Stageberg Beyer Sachs, Inc., in Minneapolis.

Jack El-Hai is a Minneapolis writer whose books include *Minnesota Collects* and *The Insider's Guide to the Twin Cities*. He is working on a book based on his Lost Minnesota column, to be published in autumn 2000.

Camille LeFevre is a contributing editor of *Architecture Minnesota* and is editor of *The Prairie Reader*.

Brian McMahon, a frequent contributor to *Architecture Minnesota*, is writing a book on automobile manufacturing in Minnesota.

Dale Mulfinger is a principal with SALA Architects in Minneapolis and an adjunct faculty member in the College of Architecture and Landscape Architecture at the University of Minnesota.

Robert Roscoe is head of his own firm, Design for Preservation, a commissioner on the Minneapolis Heritage Preservation Commission, and editor of *Preservation Matters*, published by the Preservation Alliance of Minnesota.

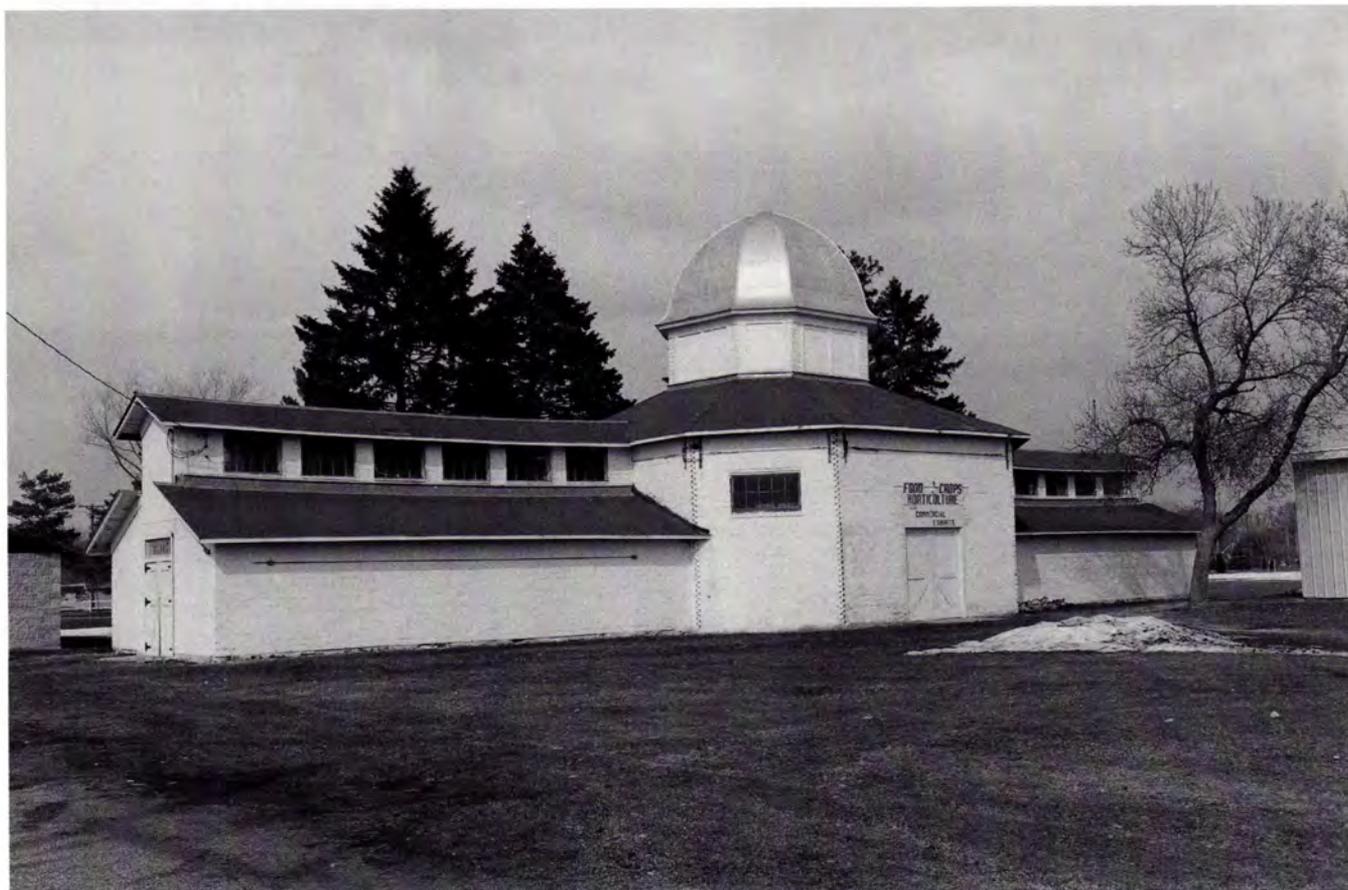
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MINNESOTA HISTORICAL SOCIETY

Horticulture Building, Dakota County Fairgrounds (1918-1988)

In 1918, the Dakota County Agricultural Association acquired a tract of land in Castle Rock Township, near Farmington, to use as permanent grounds for its annual county fair. By that time, the association had already been active for 60 years, and had held fairs—events that provided an educational and social outlet for county residents—at several sites around Dakota County.

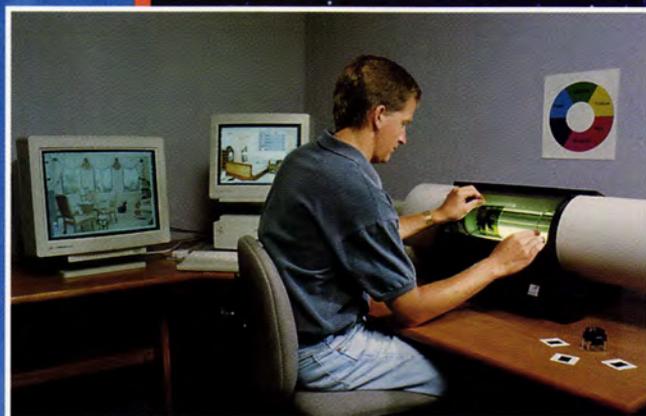
One of the first structures raised at the new fairgrounds was the Horticulture Building, whose octagonal dome greeted fairgoers as they arrived at the main entrance. The dome sat atop the octagonal central section of the building, which was made up of four 24-foot sides and four 12-foot sides. Flanking this central pavilion were two wings, 40 feet each in length. The entire Horticulture Building was constructed of wooden beams and red clay tiles, and the dome bore a coat of silver paint.

Inside, the building housed exhibits of farm produce. Clerestory windows at the base of the dome illuminated the display floor. The Horticulture Building, designed and built by C.S. Lewis, was an excel-

lent example of early 20th-century fairgrounds architecture. A rural cousin of the big-city conservatory, it echoed the features of such urban park structures as the Como Park Conservatory in St. Paul. Over the years, while thousands of fairgoers passed through its doors and admired its exhibits, the building began to weaken. By 1984, it had acquired a noticeable tilt. “The dome is leaning north-east and it could topple in a strong wind,” explained fair director Ernie Ahlberg. “We’ve done a number of studies on whether we could restore it properly, but it’s just too expensive.” Even if restoration were possible, the fair needed more space for its agricultural exhibits.

So the Horticulture Building was razed during the early summer of 1988. Its replacement, a new one-story horticulture building of industrial design, was ready to accept exhibits during the next fair. Meanwhile, the dome of the old building had indeed ended up on the ground. The Agricultural Association preserved it and displays it, intact, in an open, parklike area of the fairgrounds. **Jack El-Hai**

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