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# AM

architecture minnesota

VOL. 21 NO. 1

THE MAGAZINE OF AIA MINNESOTA

JANUARY/FEBRUARY 1995



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## Cover:

Aircraft-Rescue and Fire-Fighters Training Facility.

Location: Duluth, Minn.

Architect: the Stanius Johnson architects, inc.

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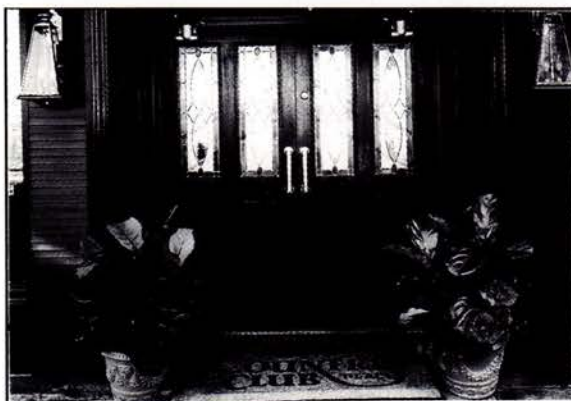
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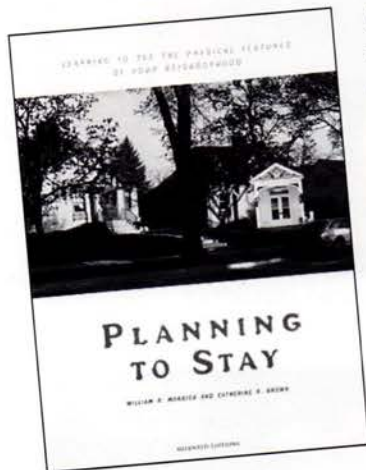
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# AM

## sketches

### Hot off the presses



*Planning to Stay: Learning to See the Physical Features of Your Neighborhood*, by William R. Morrish and Catherine R. Brown, is a fresh look at good old-fashioned neighborhoods. In a country always on the move, we are forever abandoning the old for the new. *Planning to Stay* encourages us to assess our neighborhoods, look for strengths and weaknesses, and determine ways to set

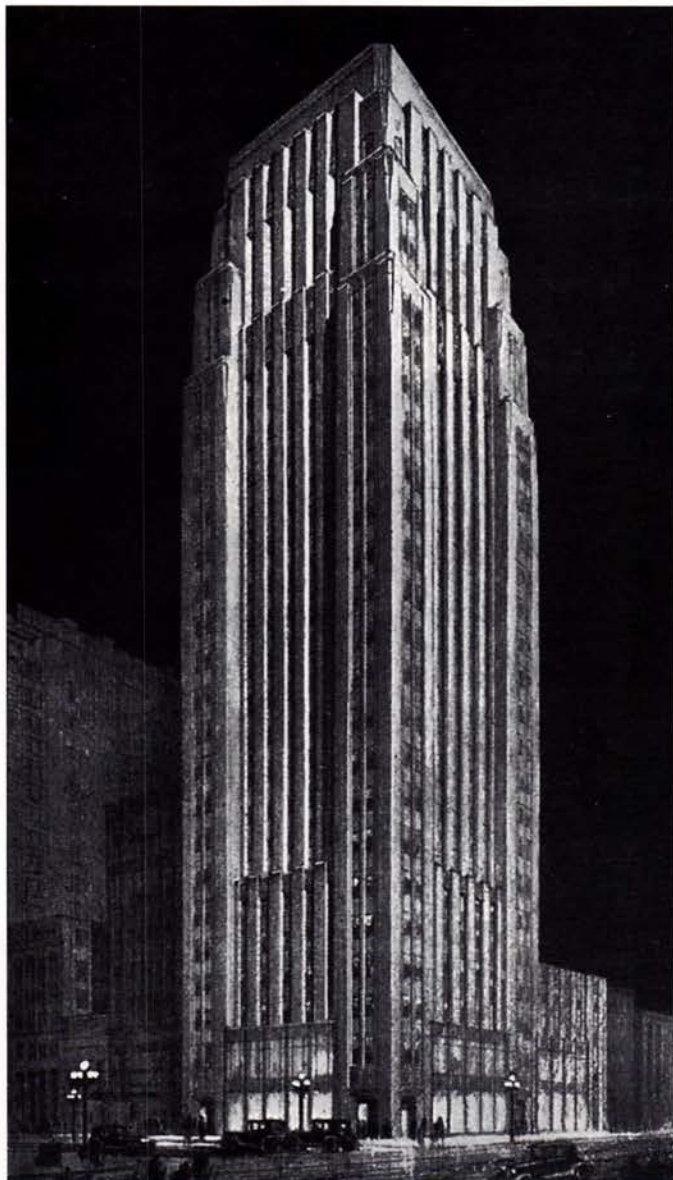
down roots. Different chapters explore a framework for describing your neighborhood, looking at homes and gardens, community streets, neighborhood niches, institutions and public gardens. The final chapter outlines six planning steps for creating a neighborhood the entire community can call home. *Planning to Stay* is published by Milkweed Editions, Minneapolis. William Morrish is director and Catherine Brown is coordinator of special projects at the Design Center for the American Urban Landscape in the College of Architecture and Landscape Architecture at the University of Minnesota.

*The Modern Language of Architecture* by Bruno Zevi sets forth seven principles or "antirules" to codify the new language of architecture created by Le Corbusier, Gropius, Mies van der Rohe and Frank Lloyd Wright. Replacing the classical language of the Beaux Arts system, Zevi presents a communication system marked by free interpretation of contents and function, an emphasis on difference and dissonance, an independent inter-



play of elements, and among other precepts, an integration of buildings into their surroundings. Wright once called Zevi "the most penetrating architectural critic of our time." This book, originally published in 1978, is reprinted by Da Capo Press, New York. Zevi is also author of *Architecture as Space*.

### Historic heights



The 26-story Rand Tower, one of the gems of art-deco architecture in downtown Minneapolis, has been listed on the National Register of Historic Places. The building, designed by Holabird and Root of Chicago, has held a prominent place in the city's architectural legacy since its completion in 1929 by Minneapolis businessman Rufus Rand. The designation ensures the building's future as bigger and more prestigious high rises have sprouted up around it. Its small floor plate makes the Rand Tower a bit of a David to its Goliath neighbors. One can easily pass it by in the urban shadows—but it surely deserves more than a glance with its ornate cast-iron features, stone façade and sleek physique. A scheduled \$2.5 million renovation by the Minneapolis architecture firm Shea Architects will renew the tower's best features, including the main lobby, skyway levels and upper-floor lobbies.



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# AM

## sketches



Peter Kerze



The bright-red Aurora (Minn.) Fire Hall reflects the region's traditional architecture.

As with the adjacent Aurora Community Center (page 32), the Aurora Fire Hall, designed by Architectural Resources, Inc., of Hibbing, Minn., is a simple, straightforward structure that reflects the architectural heritage of its community. That simplicity converts into a quiet elegance, a vernacular piece of architecture that looks as though it has always been there, or always meant to be there.

## fire watch

*A fire station retains the flavor of its rural surroundings*

The main garage with square windows, for instance, recalls typical farm sheds with pitched roofs. Lap siding, too, is common to much rural or small-town architecture.

Architectural Resources divided the hall into three separate components to house the fire-fighting machinery, the staff and administrative functions, and a "tower" entrance that recalls hose towers of yesteryear. As with any small-town civic project, budget was tight. The architects needed to design a low-maintenance facility with modest materials. But with that slim budget, Architectural Resources applied the proper punch to offer a striking presence on the landscape.

E.K.



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## bus Stop

*A new transit center in downtown St. Cloud recalls an earlier era of travel*



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**A quick glance** at the new MTC transit station in downtown St. Cloud, Minn., might suggest a train depot. Yet it's buses not trains that stop here. Designed by Grooters Leapaltd Tideman, the 1,800-square-foot building provides transfer service for the city's Metropolitan Transit Commission and Greyhound buses. Services include ticket and token sales, waiting, staff break room and restrooms.

An appealing downtown gathering place for both passengers and passersby, the building is a return to history as it faces the city's Historic District. Victorian inspired, the transit facility features tall arched windows, protective overhangs, cupola with clerestories and a rock-faced, concrete masonry façade. Though rather small, the interior seems much bigger because of the high ceiling created by the cupola, and the light streaming through the tall windows and clerestories.

For downtown St. Cloud, the new facility is a welcome addition to history.

E.K.

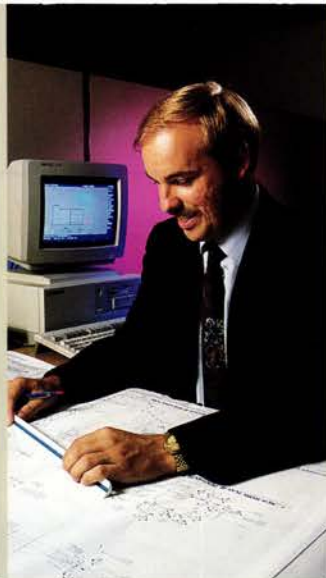


*From inside to outside, the St. Cloud transit facility recalls historic depots.*





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**Duchamp's Leg  
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Marcel Duchamp is regarded as one of the most influential forces in contemporary art, challenging some of the avant garde's most strongly held tenets. This exhibit looks at Duchamp's legacy in art produced from the 1950s to the present. Featured artists include Joseph Cornell, Robert Gober, Jasper Johns, Sherrie Levine, Glenn Ligon, Nam June Paik, Robert Rauschenberg, Rosemarie Trockel, Andy Warhol and Millie Wilson. Duchamp's own pieces are drawn primarily from the Walker's private collection.

For more information, call WAC at (612) 375-7622.

**The Things We Need  
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In her minimal works on paper, Melander-Dayton isolates images that are common and easily overlooked to highlight the ordinary objects of our surroundings. Such objects as toys, bells, pipes, bullets, skulls, plates and teacups are juxtaposed. The pieces reflect "shared disquiet, common desire, those impulses that can't find words." Melander-Dayton, who has exhibited in Chicago, Minneapolis and Santa Fe, lives in Santa Fe.

For more information, call (612) 338-8052.

**Lake Superior Design Retreat  
Fitger's Inn  
Duluth  
Feb. 10-11**

Every winter designers and design enthusiasts gather along the frozen shores of Lake Superior in Duluth for a weekend meeting of minds and souls in this broad-based design conference. This year's program, featuring guest speakers, group activities, and the usual fun and games, promises to be as broad based as in previous years.

Among the highlighted speakers are Chicago architect Stanley Tigerman and Eva Maddox, who will discuss plans for the Chicago-based Archeworks, a new nonprofit, multipurpose educational design laboratory; California-based Stewart Brand of the *Whole Earth* catalogs and *Whole Earth Review* quarterly and author of the recently published book *How Buildings Learn* and founder of *The Well Electronic Network*; and Craig Blacklock, a northern Minnesota nature photographer who will present a chronicle of his travels around Lake Superior in a kayak.

For more information, call AIA Minnesota at (612) 338-6763.

**Bystander: A History of  
Street Photography  
The Art Institute of Chicago  
Through March 12**

Taken from the Institute's permanent collection, this exhibit surveys images of everyday street life since the beginning of street photography. Street photography often provides the best testing ground for experimentation, such as multiplicity of views. Four key photographers are highlighted: Eugene Atget, Henri Cartier-Bresson, Walker Evans and Robert Frank. A newly published book accompanies the exhibit.

For more information, call the Institute at (312) 443-3600.

**Joel Meyerowitz on the Street:  
The First Decade  
The Art Institute of Chicago  
Through March 19**

Known today for his view-camera landscape photography, Meyerowitz began his career as a street photographer in his native New York. While many of his contemporaries shot strictly in black and white, Meyerowitz shot in color. From 1962 until 1972, many of his color photos were shot during his travels through Europe and America. This exhibit draws primarily from his earlier and lesser-known works.

For more information, call the Institute at (312) 443-3600. **AM**



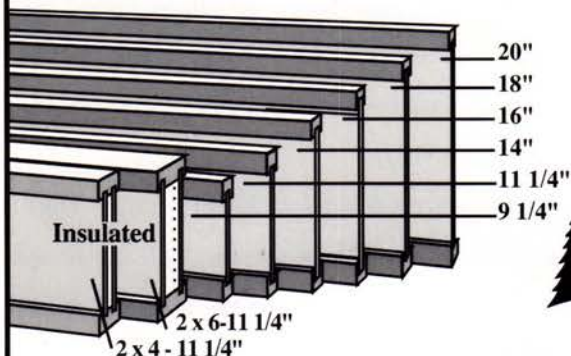
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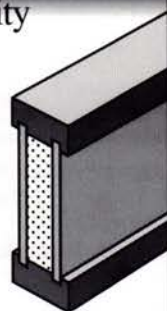


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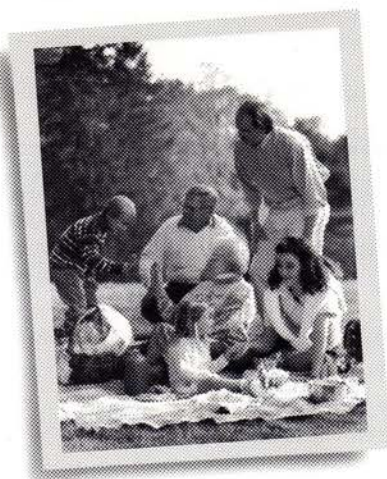
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# AM

up close



By Eric Kudalis

When John Lackens, Herb Ketcham and Bob Bell joined forces in 1970, they envisioned a collaborative firm in which teams of experts melded their talents. Today, Architectural Alliance still bases its design on team effort, aligning its architecture and interior-design divisions with other outside ex-

ods by which we could see the future and become involved in more collaborative efforts, to stretch the limits of architecture."

Lackens adds, "We built our whole firm on the basis that our future was dependent on repeat work and continuing clients, and we developed a strong rapport with the clients and users of the facilities we designed. We were concerned about how the buildings related and how they served the people they were intended to serve."

Although they say that the social unrest of the late '60s didn't influence architecture, they both saw a social order to designing buildings.

"Architecture was for me an opportunity to begin to make people's lives easier," Ketcham says. "It was an opportunity through better planning, thinking and designing."

Ketcham and Lackens complement each other well, perhaps because they share much in common, including birthdays just one day apart that put Ketcham a day younger than Lackens. As sons of teachers growing up in small towns, the two knew early on that architecture was for them.

"I wanted to be an architect since I was in seventh grade," Ketcham says. "I always liked to paint and draw. A photographer lived across the alley from us. He always brought home big pieces of paper, which I used to draw pictures of comic characters. I got interested in art through that; then I started getting interested in buildings and the art of building."

While Frank Lloyd Wright may have been the only star architect familiar to them as kids, college at the University of Minnesota in the late '50s and graduate school at Harvard opened a new world for them.

Ralph Rapson, head of Minnesota's architecture program, brought mod-

## TEAM PLAYERS

**Herb Ketcham and  
John Lackens  
established  
Architectural Alliance  
25 years ago on the  
principle of  
collaborative efforts  
between design and  
construction experts.  
That basic principle  
still drives the firm.**

perts in the building industries. The result has been a steady flow of repeat clients and a basket full of design awards, including the Firm Award in 1994 from AIA Minnesota and 1994 Honor Awards for the circulation towers and skyways at the Minneapolis/St. Paul International Airport, and the St. Paul City Hall/Ramsey County Courthouse renovation.

When Bell left in the late '70s, the firm continued to grow. Today it includes 10 principals: Tom DeAngelo (president), Don Hammer, Carl Remick, Dennis LaFrance, Cindy Ellsworth, Peter Vesterholt, Sharry Cooper, Ron Reigle, plus Ketcham and Lackens.

As the remaining founders of one of the Twin Cities' largest architectural firms, with clients ranging from the International Airport to Blue Cross/Blue Shield, Medtronic, Cray Research and the University of Minnesota, among others, Ketcham and Lackens have watched 25 years of growth and changes, both on the home turf and in the profession.

From the start, they were clear what they wanted.

"We wanted the firm to be participatory and we wanted clients to be involved," Ketcham says. "We knew change was happening in architecture, and we wanted to be able to find meth-

*Continued on page 42*





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How do we define the public realm? In this issue, we look at the public realm under different guises to discover where people congregate and wish to congregate.

In our essay on Twin Cities coffeehouses, we explore the exploding phenomenon of brew-houses. Coffeehouses are becoming our new civic gathering places, places to hang out by

## **Public places**

yourself, meet with friends, or check out the comings and goings in your neighborhood. When we think of great civic architecture, we often think of city halls, judicial buildings—the great, columnar buildings of a Beaux Arts yesterday. But coffeehouses, often couched in storefronts or left-over spaces, are civic architecture at its finest, because at your neighborhood coffeehouse, anyone is welcome—and lingering is often encouraged.

If civic architecture is inclusive architecture meant to be used by all people in a community, then surely Whittier (featured this issue, and with its share of coffeehouses) is one of the most civic of Minneapolis neighborhoods, and certainly one of the most egalitarian. Established by the social elite in the early century, Whittier, as we learn from our feature, is now home to a cross-section of social, economic and racial classes living side by side. Three percent of the city's residents live in this densely populated area bounded by 35W, Lake Street, and Franklin and Lyndale avenues.

In a city distinguished by suburban-style neighborhoods with owner-occupied, single-family houses on quarter-acre lots, Whittier is a bit of an anomaly in Minneapolis. Whittier has a mix of housing, from mansions to bungalows, apartment buildings, one-room efficiencies, row houses, boarding houses, halfway houses and homeless shelters. Typically, you can find it all on any single block in Whittier. As with any urban neighborhood—and many suburban neighborhoods—Whittier has its problems: crime, drugs, poverty. But these problems, nagging as they are, are often focuses of hype that seldom reflect the whole truth.

**Eric Kudalis**

People live in Whittier by choice, and like all great civic places, anyone is welcome. Great civic architecture, like great urban neighborhoods, provides common ground for vast diversity. That's civic architecture at its most civil.



# Neighborhood focus

## Whittier

From imposing mansions to low-cost

housing, this South Minneapolis neighborhood is a melting pot of architectural styles and ethnicity



Don F. Wong



The Merrill Castle (top), 2116 Second Ave. South, by William Channing Whitney. Apartment house (above) with mosaic-tile decoration, 601 W. 28th St.

By David Anger **W**hen the first families of Minneapolis—Crosby, Morrison and Pillsbury—marched past Grant Street to huddle in great mansions, like hornets in a nest, around William Washburn's palatial Fair Oaks estates, they endowed the Whittier neighborhood with a brilliant and wildly diverse architectural legacy. Spreading out from the Fair Oaks epicenter, professionals built respectable homes on Blaisdell, Pillsbury and Stevens avenues. More modest still, workers made simple wood-framed structures, clustering along the 29th Street railroad tracks.

**S**andwiched between Highway 35W, Lake Street, and Franklin and Lyndale avenues, Whittier today is a microcosm of the city. It boasts commerce and industry, arts and educational institutions, social-service agencies and just about every conceivable type of housing available, from historic cottages, mansions and row houses to modern apartments, lofts and townhomes. The neighborhood is so compact that you can tour it by car or bike in less than half an hour. But the best way to discover the architectural heritage of this area is by foot, especially on a fine day when the sunshine reveals all its charms and flaws.

**W**hittier is one of the liveliest and most heterogeneous neighborhoods in Minneapolis. Although it represents one percent of Minneapolis's geography, almost three percent of the city's citizens live in the neighborhood. While 31 percent of Whittier's residents languish in poverty, an equal number of people earn high incomes and possess either a college or graduate degree. More than 60 percent of the residents are white, followed by African Americans, who are trailed by Asians and Native Americans.

**W**hittier's growth was spontaneous. In 1860 Minneapolis's population registered a meek 6,000. By 1880, it grew to 47,000 and by 1890, it more than tripled to 165,000. Only Chicago grew as rapidly. Disturbed by the crowded city, "Our family moved up to live at the corner of 24th and Stevens in 1890, which meant more or less moving into the country," recalled John S. Pillsbury in





1960. "My father owned a house with 2½ acres of land or the equivalent of a city block, with lots of tall oak and elm trees, and it did not look much like a city residence."

**T**he John Pillsbury mansion peered across at the Fair Oaks, a massive yellow-stone house that cost more than \$250,000 to build in 1884. To the west, the Pillsburys faced the Johnson Row House—at 2319 First Ave. South and 106 to 108 East 24th St.—designed by Harry Wild Jones and completed in 1894. Rendered with gabled dormers, a corner turret, and decorative windows, the red-brick row house presents the illusion of a single, very large residence.

**L**ike many mammoth estates, Fair Oaks lived a brief life. By 1911 the house stood empty and the property was integrated into the Minneapolis park system. Thirteen years later, the mansion came tumbling down. While the John Pillsbury mansion also succumbed to the wrecking ball in 1937, two other Pillsbury homes remain standing.

**A**t 106 East 22nd St., architect Edwin Hewitt blessed the Charles Pillsbury house with beautiful Bedford limestone. A reserved Elizabethan Gothic, the interior is luxurious. Famed antique dealer



*A typical Whittier residential street (top).  
Gale Mansion (above), 2115 Stevens  
Ave., by Ernest Kennedy.*





*The Johnson Row House (top), 2319 First Ave. South and 106-108 East 24th St., by Harry Wild Jones. Fair Oaks Apartments (above), Third and Clinton avenues, by Perry Crosier. Apartment house (opposite top), 26th and Clinton, by Bel Mar Development. The Marie Antoinette (opposite bottom), 26 and 30 East 22nd St.*

Charles Duveen raided three English manors, importing oak paneling, elaborate carvings, and wood and stone fireplaces to Minneapolis.

Next door at 116 22nd St., Ernest Kennedy created a Gothic mansion for Charles's brother, Alfred. Brimming with fanciful gables and massive chimneys, it sparks Romanesque dreams. Similar to Charles's home, Alfred's basement library was assembled—board by board—from a demolished Tudor manor. Nowadays, Charles's mansion is home to a social-service agency and Alfred's is once again a private residence.

In 1912, Alfred and Charles's sister Sarah Pillsbury Gale and her husband, Samuel, moved into a sophisticated Italian palazzo at 2115 Stevens Ave. Also designed by Kennedy, it is very Edith Wharton—suave and classically symmetrical. Situated to fully exploit the site, the house reflects the Gale's sensitivity to artistic endeavors. From the mansion's swank terrace, the couple surveyed the rolling park and the imposing Minneapolis Institute of Arts in the foreground. In 1947, 2115 became the Association of American University Women's clubhouse.

Decades earlier, in 1885, architect William Channing Whitney designed the stone Merrill Castle at 2116 Second Ave. South, mixing Gothic, Tudor and Victorian ideas. The heavy spire references both castle and church. Since the Merrills were devout Baptists, an organ loft stood next to the theatrical foyer. John Bradstreet—Minneapolis's earliest and most acclaimed decorator—appointed the interiors. After several incarnations, including a stint as a rest home and later an art gallery, the Merrill Castle is a well-maintained office building.

On the eastern edge of Fair Oaks Park, the Christian House at 2301 Third Ave., merges the Renaissance and the Gothic. This Hewitt-designed residence is enlivened by superb ornamental ironwork, particularly the door grille and balustrade executed by Philadelphia craftsman Samuel Yellin. It foreshadowed the suburban raised ranch: garden-level windows provide a platform for the two upper levels, creating the appearance of a larger residence. Occupied by the Christian family from 1919 to 1957, it is now home to the Hennepin History Museum.

By the 1920s, the streetcar arrived in Whittier, bringing white-collar professionals and their families, who built to the west and south of Fair Oaks Park. Even though one-way traffic and apartment blocks have desecrated Blaisdell, Pillsbury retains a glimmer of yesteryear. The Meyer House at 2532 Pillsbury is one of Purcell and Feick's few contributions to Whittier. Completed in 1909, the bungalow features an unusual plan—striking in its modernity—including a built-in garage at the rear.

The J.B. Hudson House at 2400 Pillsbury is an



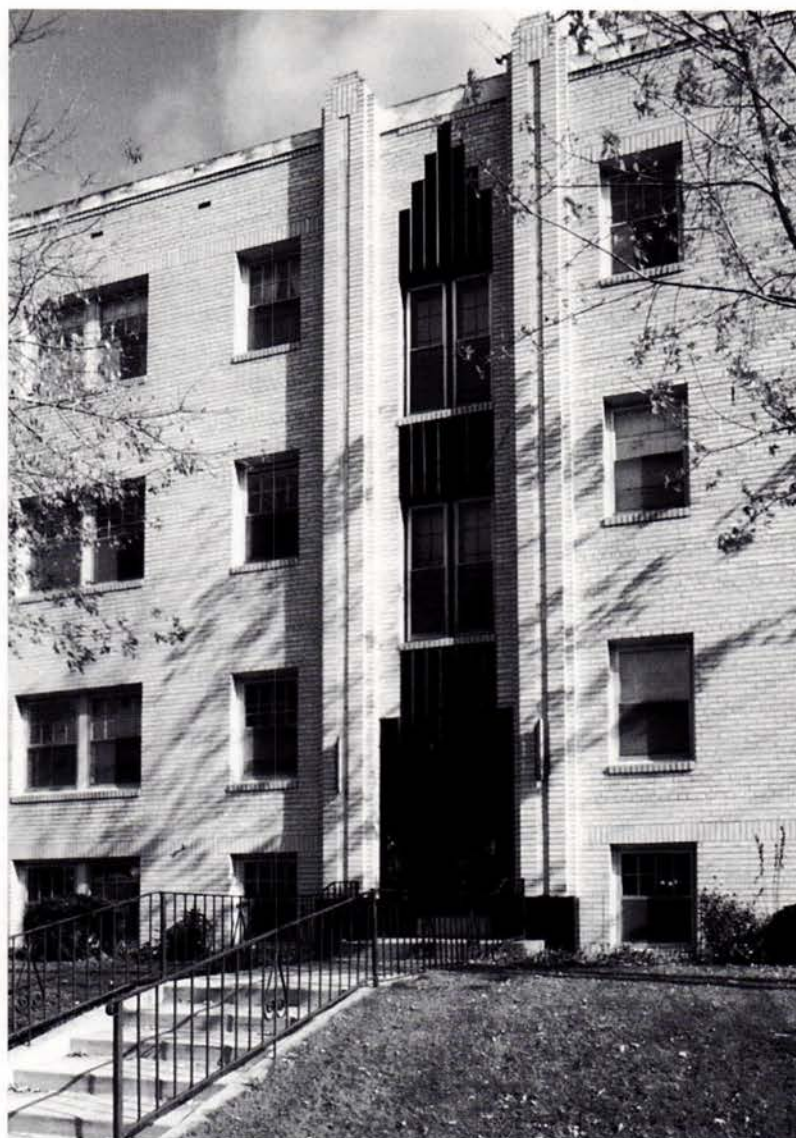
elegant highlight. Truly a relic from a bygone era, the six-bedroom, six-bath residence presents 9,000 square feet, providing room for servants quarters, a library and a full-finished basement with a kitchen and gymnasium. Across the street, the Cupola House at 24th and Pillsbury is a testament to preservationists' perseverance, who moved it from an undesirable spot near the freeway to its current site. Formerly known as the Morse House, it is one of the area's oldest structures, dating from 1873.

**W**ith Minneapolis's population climbing upward, Whittier became a hotbed of apartment construction. In 1927, the Windsor at 2011 Third Avenue South—with its flapperish porte-cochere—instantly became “the most exclusive” apartment hotel in the city. The Windsor's architecture is a peculiar hybrid: Batman's “Stately Wayne Manor” meets a Wellesley College dormitory. For art-deco enthusiasts, the Marie Antoinette at 26 and 30 East 22nd St., absorbs the zig-zag moderne craze of the era. Here, limestone brick successfully contrasts with the polished black granite entrances, which suggest the tiered Rand Tower downtown.

**T**he Depression brought an even greater diversification of Whittier's housing stock. Abandoned by families who no longer could afford the requisite staff and maintenance, mansions were either subdivided into multiple dwellings or converted into group homes. Soon Whittier was one of the most densely populated areas of the city, a situation exacerbated after World War II by the conversion of more homes into multifamily units and the construction of large apartment blocks.

**T**he Fair Oaks Apartments possess the 2400 block of Third and Clinton avenues. Designed by Perry Crosier, the 224-unit complex opened in 1939 to critical accolades. The 3-story garden apartments, arranged around blooming courtyards, are sensitive to the older buildings nearby. Rendered in a brick Colonial fashion, Fair Oaks offers such homelike features as front and back entrances and cross ventilation. Crosier properly concealed parking underground. Sadly, the Fair Oaks represents one of the last great examples of new residential architecture in Whittier.

**F**or instance, the contrast between the Fair Oaks Apartments and the Charleston at 2715 Clinton Ave., might prompt tears. Constructed by the Bel Mar Builders in the late 1960s, the 2½-story walk-up is better suited for the Highway 494-strip than a historic neighborhood. At the time, city planners were disturbed by Minneapolis's eroding population—which peaked at 500,000 in 1950—and welcomed such developments. Declining land values, deteriorating housing stock and tax depre-



*Continued on page 52*



# Java Jive

In the new civic gathering place, watching the world go by from a coffeehouse window is time well spent

By Robert Gerloff

I love my local coffeehouse.

I'm sitting at my favorite window table at the Dunn Bros. coffee house at 34th and Hennepin in Minneapolis. It's nasty outside. Wind is whipping rain and leaves in swirls on the street, imploding umbrellas and soaking pedestrians. Heavy clouds obscure the moon, and the streetlight over the bus stop only intensifies the darkness. It is raw, cold and blustery, the kind of November evening that triggers an atavistic hibernating instinct in Minnesotans. The bus was uncharacteristically quiet tonight; riders were withdrawn and introspective, either buried in books or lost in private thought.

However bleak and blustery it may be outside, here inside Dunn Bros. it is warm and cozy. My nose tingles from the lingering aroma of roasting coffee. The windows are steamed over from the espresso machine frothing milk in countless cappuccinos. Neighbors are gathered around tables, laughing and visiting and reading, and it's all choreographed to the throbbing tom-tom beat of 1920s jumpin' jungle jazz.

To my right sits a regular, a thirty-something woman pouring frustrations into her journal. To my left a pair of raccoon-eyed students cling to their lattes for dear life while highlighting page after page in their marketing texts. In the corner an insufferably J. Crew-cute high-school couple are giggling and poking each other while a grandmotherly-type seated against the wall clicks her dentures disapprovingly. A trio of

briefcase-bearing downtown business types is ordering espressos-to-go at the counter—liquid fortitude to face their families—while an electrical subcontractor settles into a pile of paperwork, mysteriously sipping an iced tea on this dark and stormy night.



Critics love to carp that America has no public space. Brits nip down to the pub, the French linger in sidewalk cafes, and Italians promenade in piazzas, but Americans who want to watch the world go by have to either resist the eat-and-run pressures of a fast-food franchise or evade security in a sanitized shopping mall. Critic James Howard Kunstler writes in *The Geography of Nowhere* that American public space "is composed mainly of roads. And the only way to be in that public realm is to be in a car, often alone." Kunstler concludes that, "Indulging in a fetish of commercialized individualism, we did away with the public realm, and with nothing left but private life in our private homes and private cars, we wonder what happened to the spirit of community. We created a landscape of scary places and became a scary people."

Ironically, even as Wal-Mart sucks the last remaining life from small-town Main Streets, and even as relentless suburbanization is sapping the urban vitality from districts like Uptown in Minneapolis, coffeehouses have exploded upon the scene. Suddenly every neighborhood, every street, every demographic subgroup seems to have its own place to hang out, its own informal public gathering space.

The variety of coffeehouses here in South Minneapolis is mind-boggling. My Dunn Bros. (one gets possessive) caters primarily to the neighborhood.

Muddy Waters, with its pop-tarts and Rice Krispy bars, attracts a twenty-something crowd steeped in '70s nostalgia. Biker Bob's, true to its name, caters to the leather-clad recovery crowd (just look for the Harleys lined up outside). The ever-evolving stage set of the Loring Cafe attracts Bohemian wannabes. Cafe Wyrd has a mostly gay clientele, while the Caribou and Starbucks franchises, multiplying faster than fruit flies in a petri dish, attract yuppies-on-the-go with their fast-food efficiency and hyper-shiny cleanliness.

Each coffeehouse has its own regular clientele, and they tend to be filled with the playful laughter of friends greeting friends. While they're all privately owned, for the price of a cup of coffee one can linger for hours. Coffeehouse etiquette allows one to read, to write, to strike up a conversation with a neighboring stranger, or to simply sit, idly staring into space. Maybe in the past this hanging-out function was served by the corner tavern, the local cafe, or the barber shop and beauty salon. But today, here in the Land of 10,000 Treatment Centers, it is the coffeehouse that is truly a home away from home, the rare place where a human being can simply BE with no pressure to shop, to consume, to produce, to work, to do anything but exist.

What kind of architecture supports the existential act of simply *being*? Liberated from pressure to sell, free from the straight jacket of corporate theming, architecture reverts to the understated aesthetic of the vernacular.

My favorite Dunn Bros. employs a





*The Loring Cafe in Minneapolis.*

few architectural flourishes that give it character—a carefully rescued and restored tin ceiling, brightly painted ochre trim, spiffy green canvas awnings—but otherwise it is plain and simple, understated and restrained: its floor is simple vinyl tile, its woodwork straightforward, its lighting basic, its furniture abused, its walls painted a simple pale cream. Its design seeks not to WOW! or impress, but rather to create an ambiance, a mood, a place of safety and comfort where the neighborhood can hang out. Of course Dunn Bros. is carefully designed—its effect is highly intentional—but its architecture is understated, floating in the background, creating a comfortable, warm, authentically homey place for the foreground of private experience, for the reality of existential being.

Words like “authenticity” and “existential being” are pretty heavy bag-

gage to dump on a place that just wants to sell you a cup of joe, but the self-confident simplicity of Dunn Bros. stands in stark contrast to so much of our built environment, where multiple patterns, complex textures, sweeping gestural curves and fussy, self-important details substitute for clear design intentions. Dunn Bros. knows exactly what it wants to be—a place for neighbors to bind into a community—and every aspect of the design reinforces that intent, creating a place that, while new, has the friendly patina of faded jeans, a place where one can sit with a cup of coffee at a window and watch the world go by.

Ultimately, places like Dunn Bros. beg the question of what is truly profound in architecture: Is architecture a thing, a sculptural object to be admired for its abstract design qualities? Or does architecture gain signif-

icance only when rooted in the larger structures of a community?



The wind is still and the rain has lightened to an aimless drizzle. The after-work crowd has come and gone, except for the thirty-something regular to my right, still frantically scribbling in her journal. While I've never met this woman, I worry about her. Maybe it's true that members of a community can bind together simply by spending time in the same space, and maybe it's true that binding a community together is one responsibility of architecture. But right now it's time for me to head home. I've mentally processed my workday, and while my latte may be empty, my life is a little richer.

*Robert Gerloff is an architect with Mulfinger, Susanka & Mahady Architects in Minneapolis.*





*The mountains  
of Carrara, Italy,  
have been  
supplying  
the world with  
lustrous marble  
for centuries*

Text and photos  
by Bill Beyer

The materials we build with have long traditions of human use. We often forget that they have endured because of their beauty. As architects we sometimes work as if stuck inside a block of stone, with no way to see out. Lost in the daily grind, we lose sight of those things that give delight. Even the finest oak boards and richest stone pavers lose

a mayfly with a quick yes. An official-looking fax three hours later convinced me that this was not an elaborate hoax or daydream.

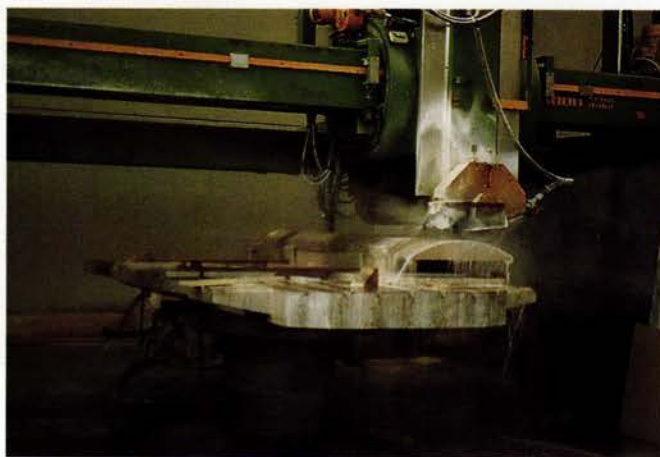
My fellow American travelers included Nora Wolin, an interior designer from Frank Gehry's Los Angeles office, Maret Webb, past president of AIA Phoenix, Michael Prifti, president elect of AIA

At the local convention center on the industrial urban perimeter, the city hosts the annual Intermarmomach, the world's largest trade fair for natural stone, equipment and machines. We were set loose to wander the complex of 10 fair buildings comprising some 800,000 square feet of indoor display and examine the offerings of more than 1,000 exhibitors. The world's most beautiful stone from every continent in every shape,

## like a rock

some of their charm when wrapped in a change order.

Adrift in the specification-writing reverie one August morning, I received a call from a gentleman at the Italian Trade Commission in Los Angeles. Because I was 1994 president of AIA Minneapolis, he invited me to learn about Italian dimensional stone. I almost told him that the likelihood of my needing to know about fine Italian stone was comparable to needing detailed knowledge of titanium toilet seats. But I held the line long enough to hear that the learning offered would be accomplished during a week in Italy, at ITC's expense. Some sliver of common sense deep inside surfaced like a trout to



Philadelphia, and Michael Crosby, senior editor of *P/A* magazine. Maret's architecture partner and husband, Tony Vehr, rounded out our group. We were met and united in Rome by our able and helpful ITC tour leader, Marinella Loddo, then dispatched to Verona on a connecting flight.

At the doorstep of the Dolomites in northern Italy, Verona has been a crossroads of trade and commerce since pre-Roman times. The Roman amphitheater at the center of the old city stands as testament to the permanence of the local marble. Block on block, seating 18,000 people, it is still used. The sidewalks of Verona are marble. Its buildings are dressed with marble statuary.

form, texture and color imaginable stood before us.

About half the building display space comprised machines used to unlock the beauty from raw quarry blocks. Like Machinery Hill at the Minnesota State Fair, the equipment was factory fresh, the latest models, clean enough for today's surgery. True to the weight of stone, the machinery was Brobdingnagian (Bunyanesque to Minnesotans). Band saws the size of large trucks. Gang saws the size of handball courts. Forklift trucks able to lift tons of stone. Industrial diamond tools and accessories used to drill, rout, grind, hone and polish were arrayed in glass display cases worthy of Tiffany's. There were demonstrations of water-jet





cutting transforming marble slabs into lacy rosettes. Even in the standard-gray, trade-show atmosphere, I was beginning to experience beauty shock.

Verona was the setup. For two days we had seen the finished products and the tools used to get them. Now on a bus crossing the robust Apennines into Tuscany, we were on the way to a leg-

We watched relentless gang saws slicing bus-sized blocks into thin 2-centimeter slabs. Watched machines cut and polish pavers and column claddings, and crafts-



door market. Streaked around town before the bus left each day, buying more film. Lunched at a tavern on the mountain, on marble tables and benches, under an arbor of ripe table grapes and figs, treated to platters of the local delicacies—lardo, pancetta, hard sharp cheese, inky-red house wine and risotto-crustured custard. Enjoyed late dinners and walks along the Mediterranean with our Italian hosts and fellow delegations from Finland,

per cubic foot, granite 165. That the beauty of stone is undiminished by the ages. That Keats had it right in pursuing the principle of beauty in all things. That taking time out from the daily grind is worth its weight in stone. That, if you can imagine it, anything can be made from stone in Carrara.

*Bill Beyer is a principal with The Stageberg Partners in Minneapolis.*



endary source, the quarries of Carrara. By this time, my jagged consciousness of mundane architectural practice had been sawn away, and Italy had begun to hone and polish a half-lost ability to see things for their intrinsic beauty.

We became a group of voluptuaries, absorbing the beauty of stone, the countryside, the food, wine and language. Our three days in Carrara were as densely packed and as subtly textured as the marble in the mountains. We were bussed up and down hairpin roads to quarries, museums, fabricators, sculpture studios. We toured the world's largest stone yard and scrambled like children to pick up sparkling flakes shed from 17,000 kilogram blocks of marble and granite.

men cut and fit elaborately patterned marble tapestries. Visited operating quarries at the mountain top and were awed by their scale. Put on Wellies and tramped into the cool darkness of a horizontal quarry, big enough to hold a small cathedral, smoothly and squarely cubed into the mountain. Watched quarrymen unlock a 250-ton block, large as a city bus, and gently drop it onto a cushion of quarry spoil. Saw sculptors coaxing poetry out of blank tonnage.

Our host, Internazionale Marmi e Macchine, briefed us on the technical advances in the industry and the importance of architects learning and understanding the technology. We stole away for 20 minutes of shopping in an out-

Hungary, Canada, Hong Kong, Korea, South Africa, Japan, Australia, Lebanon and Turkey. Fell in love with the granite floor of our hotel lobby, Brazilian Verde Eucalpto.

Our American delegation's driver in Carrara was an architecture student from Florence named Ugo Cacciatori. He fetched us early on our day of departure, whisked us to the massive marble cathedral, crazy-cupcake baptistery and cocked tower of Pisa, then to the airport for the short hop to Rome, back at the threshold of the real world.

What did I learn? That marble weighs 173 pounds



*From the mystical mountain glow, vast quarries and precision machines, to the delicious foolishness of a wheel barrow full of garlic and a full-size, solid-marble Cadillac and the Pisa Cathedral with its Baptistry and famous "leaning tower," our eyes and minds were gloriously stretched.*







# fire

## B R I G A D E

An aircraft-rescue and fire-fighting training facility combines state-of-the-art technology with fearless, old-fashioned brawn

By Eric Kudalis

**R**ecent newspaper headlines chronicling the latest air disasters illustrate just how deadly flying is when something runs amok at 10,000 feet. From the American Eagle Flight 4184 en route to Chicago this Halloween to the USAir jet outside Pittsburgh this September, planes take plunges and hundreds of people die. In many instances, the plunge is so final that rescue teams have little to do but step aside for the crash investigators and pathologists. In other cases, when seconds tick away as flames engulf shredded fuselages, trained rescue teams are the only thin link between life and death.

If you want a good lawyer, look to graduates of the top law schools with winning records. Crash victims can't be so choosy about their rescuers. Air travel may or may not be getting safer, but the methods of rescuing crash victims are getting better. The recently completed aircraft-rescue and fire-fighting training facility (ARFFT), designed by the Stanius Johnson architects, inc., of Duluth for Duluth Technical College, combines high-tech, state-of-the-art training equipment with high-design architecture on a rustic 80-acre site surrounded by birch and aspen trees in western Duluth. Here, technology, architecture and nature combine on a campus that provides training for career fire fighters, military fire fighters, fire-fighting students and airport personnel. Future plans, if they see fruition, will bring all aspects of fire-fighting training to the one



campus to include—in addition to aircraft—training in wild land, structure, maritime and industrial situations.

*Though utilitarian, the fire-fighters training facility is enlivened with colorful detailing, as seen in the entrance canopy (opposite) or patterned walls (above). The blue-metal equipment bay to the right of the main entrance (below) resembles an airline hangar.*

According to Steve Hartsock, fire-fighting training coordinator at Duluth Technical College, the new \$15.8 million facility is unique

because it combines an actual computer-controlled, environmentally safe simulator in the form of a mock Boeing 757-airplane fuselage on a campus marked by strong architecture and natural amenities. Other training facilities may have the simulator but not necessarily the architecture, too. As a result, Hartsock says the program is drawing interest from fire-fighting students around the world, although its primary student core is within a 350-mile radius. That's quite a step up from the days when training consisted of dumping flaming toxic fuel on a runway and having the students scurry to squelch it.

The building and simulator are located on a former gravel-mining quarry, thus few trees were downed for



Don F. Wong





*The simulator (above), which burns clean propane gas, is in view from the main entrance hall and classroom building (opposite top and site plan).*

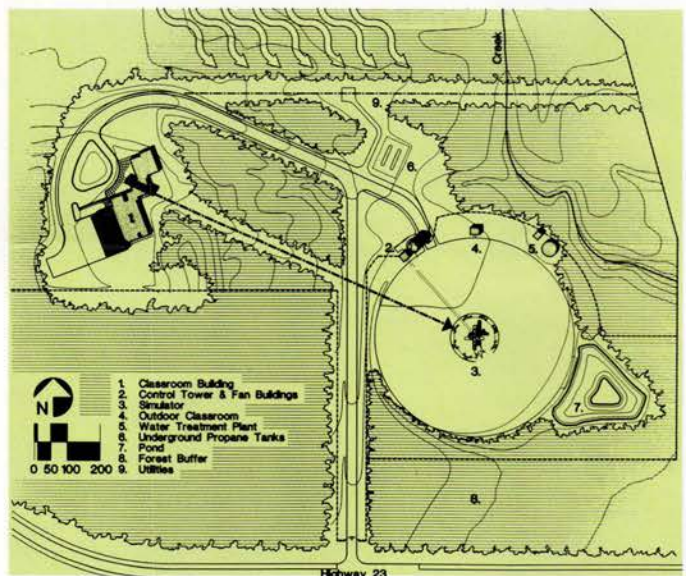




Don F. Wong

construction. From the main street, a driveway leads through a 300-foot thick wooded buffer zone that shields the campus from the street to discourage curious passersby from spotting the burning propane-fueled simulator. Stanius Johnson designed the campus to maximize educational opportunities and take advantage of the natural site. The simulator is to the right of the drive; up a wooded incline is the 27,000-square-foot classroom building; on the northwest side of the simulator—out of line from prevailing winds—is the control tower. A clearing opens the classroom building to views of the simulator.

At the heart of the campus is the simulator, a full-size, 75-foot-long Boeing 757 fuselage welded from cor-ten steel that can withstand temperature extremes from 30 degrees below zero to 1,800 crackling degrees above. Encircling the simulator is a 600-foot diameter gravel vehicular-maneuvering operations area, which holds the outdoor classroom, control tower, pond and treatment plant. Designed with Contraves, U.S.A., of Tampa, Fla., the simulator is surrounded by 125-foot-diameter burn pit. Trainers program life-threatening crash scenarios from the computer-rigged control tower, igniting 13 different burn areas in the plane and 98 different burn segments in the pit, which is broken into quadrants. You name the fire, this simulator can create it, from fuel-spill fires to cockpit fires, galley fires, luggage-compartment fires, passen-







The architects designed a dramatic barrel-vaulted main entrance (opposite) with pine ceiling. An airline-rescue truck (above) sits waiting for action in one of four equipment bays. Classrooms (below) are designed to withstand the wear-and-tear firemen all suited up can cause.



ger-compartment fires, wheel-well fires, jet-engine fires and tail-engine fires. Internal temperatures sizzle up to 500 degrees, while flames leap to 50 feet. If a passenger had any idea how many different ways he could fry in a plane crash, he probably would take a horse and buggy.

The simulator uses clean-burning propane, which emits about 1/200 of the waste of traditional jet-fueled training fires, according to Hartsock. Water and foam, which collect in the burn pit during fire-fighting practices, drain into an on-site treatment facility before flowing into the region's sewer system.

Up the wooded hill from the burn pit is the classroom and support building, divided between a "clean, low-bay" area housing two classrooms and administrative offices, and an "unclean, high-bay" area housing a decontamination area with showers and lockers for clean-up after fire-fighting operations; and four equipment bays for storage, mechanics, instruction and massive airline-rescue trucks.

Given the facility's gritty, utilitarian program, this could have been a standard-issue training facility. Instead, Stanius Johnson designed a first-class structure that matches the blazing drama of the burn simulator.

"We wanted to capture the essence of the program and the image of aircraft and aircraft facilities," says Ken Johnson of Stanius Johnson.

Thus from the outside, the sky-blue equipment bay resembles an airline hangar, and red window frames pick up on a fire motif. Glazed concrete blocks accent a burnished concrete-block exterior that is further enhanced by precast dentils, blue metal structural framing and yellow trim (matching the yellow airline-rescue trucks) above the main entrance.

Part of the architects' challenge was to design for durability and beauty, inside and out. Fire fighters don't tip-toe around; they're big and their equipment makes them bigger. The facility had to withstand the wear-and-tear of fire fighters clomping around. Terrazzo floors, butcher-block desks and concrete-block interior walls are up to the task. Even in planning desks and seats for the classrooms, the architects measured the personal space each person required while all suited up. The striking yellow-pine ceiling, a seeming extravagance, functions as a roof deck, thus serving structural needs and adding aesthetic warmth.

The building's architectural capper is the barrel-vaulted reception corridor, a luminous space with yellow-pine ceiling and exposed structural supports. Dividing the "clean" side from the "unclean" side, the corridor visually connects with the simulator, maintaining the link between classroom training and hands-on training.

The building's wings are designed for expansion. If this facility is only the beginning of planned growth, the fire-fighting programs at Duluth Technical College have a bright future.

**Project:** Aircraft-Rescue and Fire-Fighting Training Facility (ARFFT)

**Location:** Duluth, Minn.

**Architect:** the Stanius Johnson architects, inc.









## Metropolitan State University boosts its visibility with a new home base

# HIGHER EDUCATION

Metropolitan State University always has had a bit of an image problem. Overshadowed by the behemoth University of Minnesota and the prestigious private colleges and universities throughout the metropolitan region, Metro State lacked a permanent campus that created an identifiable image. Serving approximately 9,000 students with flexible programs leading to baccalaureate degrees and master's degrees in business administration, management and administration, and nursing, this has always been the university without walls. Classes are held at various Twin Cities locations, including in a midrise on Hennepin Avenue in downtown Minneapolis.

Yet Metro State is now revving up its low profile with a new 70,000-square-foot facility anchored along Dayton's Bluff and overlooking downtown St. Paul, the landmark St. Paul Cathedral and state Capitol. Designed by Frederick Bentz/Milo Thompson/Robert Rietow, Inc., of Minneapolis, "New Main," built on the old St. John's Hospital site as part of the university's "main campus," is primarily a student center housing classrooms, laboratories, information and computer centers, a 320-seat auditorium, study areas, administrative offices and food services. While one hospital building was razed for new construction, two existing structures will be renovated and remodeled by 1996 to blend with New Main for a total of 170,000 square feet of university buildings. The University owns surrounding property, and over the years and decades Metropolitan State may take on a true campus look in this East St. Paul neighborhood.

With the new student center, Metro State is off to a run-





*The new Metro State building (opposite) sits on a bluff in St. Paul, overlooking the downtown skyline and surrounding neighborhood. A series of terraces (left) encourages outdoor gathering. The main hall with floor-to-ceiling windows (below) is a multipurpose space used for a student lounge and other gatherings and functions.*

ning start. The \$11.2 million facility creates a strong presence on the landscape, whether approached from the neighborhood or viewed while zipping along Interstate 94.

The building's focus is the Great Hall, a soaring space flanked by towers on either end and enclosed by patterned glass walls that open the space to the downtown skyline on one side and the neighborhood on the other. The hall is used as a student lounge as well as for community events. Viewed from atop the grand stairway, the Great Hall offers appropriate architectural drama with its high ceilings and floor-to-ceiling windows. Perhaps to maintain its image as a university without walls, the architects kept the building as open to the outside as possible. The windows create transparency, and a series of exterior terraces, used for lounging or special events, further enhances the building's connection to the surrounding urban sights.

Because this is a state-funded project in which every penny is precious, the administration asked for a "100-year" building made of durable materials that require little or no maintenance. Thus a pitched gray-slate roof surely will last through the decades. Other exterior materials include textured sand-mold brick, lead-coated copper shingles, concrete pavers and cast-stone detailing. Interior detailing is less extravagant, as in concrete-block corridor and auditorium walls, and porcelain-tiled stairs. The concrete block, however, is effectively tailored to offset its utilitarian origin.

Set in a historic neighborhood, the building needed to blend architecturally with the territory rather than sit majestically on its own. The massing suggests Prairie School influences, but the materials and detailing give it a historically correct texture that sits well with the neighbors. With this new facility, Metro State University should make a good neighbor in St. Paul for decades to come.

**E.K.**



**Project:** Metropolitan State University  
**Location:** St. Paul, Minn.  
**Architect:** Frederick Bentz/Milo Thompson/  
 Robert Rietow, Inc.





## On the Range



Peter Karze

The new Aurora Community Center, designed by the Virginia, Minn., office of Damberg, Scott, Peck & Booker, reflects the ethnic and cultural diversity of this northern Minnesota mining town. Aurora lies along a 150-mile strip known as the Mesabi Iron Range. Immigrants from Yugoslavia, Italy, Germany, Finland and Scandinavia settled in this region, building small communities that thrived on iron extracted from the earth. Europe's diverse tongues are still spoken here, from the streets to the taverns, where the Old World and New World meet alongside the scarred earth.

The 5,400-square-foot multiuse community center is strategically placed in the center of town, alongside abandoned railroad tracks that divide north from south. The community center's location symbolically unites the two sides of town, leap-frogging that other-side-of-the-tracks image. The building is, in fact, part of a new civic-center campus that includes a recently completed fire station by Architectural Resources of Hibbing, Minn.







## A new civic center bridges two sides of a community

The Aurora Community Center is a gathering place for the entire community, offering a large hall spanning the building's length that can be subdivided for various functions. A commercial kitchen accommodates catered events, as well as the community's meals-on-wheels service. In addition, Senior Citizens of Aurora finds a permanent home here.

Historic research revealed that the site, an abandoned lot, once held the city's first train depot, a town architectural landmark. With the new facility, the architects hoped to create an updated civic image, on a scale with city hall and the old depot. Damberg, Scott, Peck & Booker used imagery from the train depot, the industrial vernacular architecture of the mines, classical detailing of Iron Range civic buildings, and the city's modest company houses in composing the new civic center.

Taking their cue from the train depot, the architects designed a low-slung roof line for the main hall. From the industrial architecture comes the community

center's horizontal south elevation and clean roof-edge detailing. From the Iron Range's civic bell towers and entry cupolas come the new entry towers on the east and west sides. And the ubiquitous Iron Range mansard roof here covers the mechanical equipment. Color, too, comes from both the land and regional architecture. Violet red reflects the iron ore from the mines; straw yellow comes from the surrounding pastures, gray from the taconite ore and white from classic civic architecture. Inside, pastels commonly found in homes add warmth and comfort.

The building's simple, unpretentious stance is its strong suit. Although the architects pulled architectural references from many sources, the building doesn't mimic styles; it blends in with its settings, an organic part of the region's architecture and land.

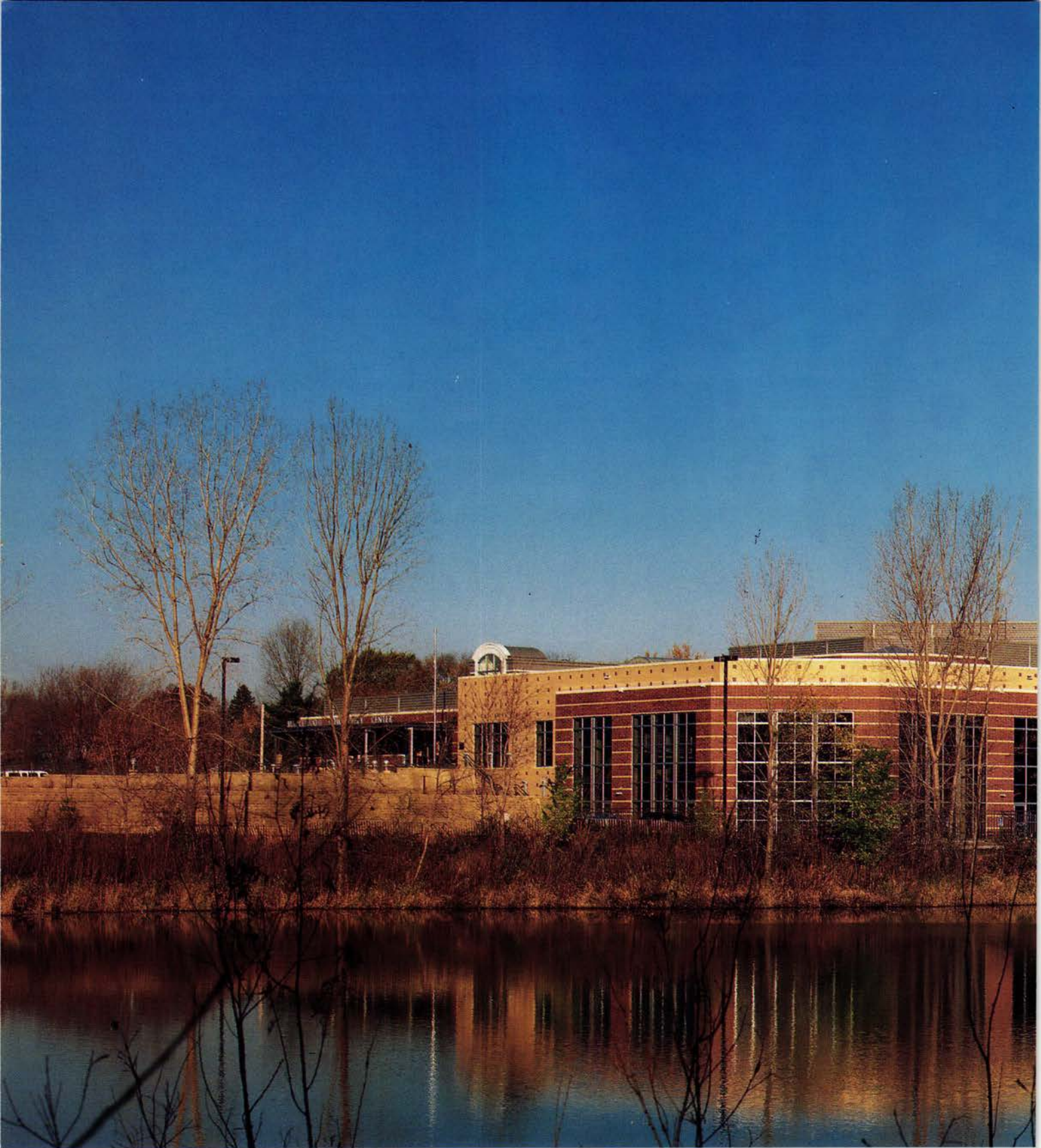
**E.K.**

**Project:** Aurora Community Center  
**Location:** Aurora, Minn.  
**Architect:** Damberg, Scott, Peck & Booker



*The Community Center reflects the region's traditional architectural styles and forms, seen in the tower entrance recalling civic bell towers and entrances to mines. The hall (opposite bottom) can be divided for many functions.*





*The colorful, patterned  
Maplewood Community Center  
features exercise facilities, a  
theater and civic gathering spaces.*

# Civic Focus





Shin and Joel Koyama

The Maplewood Community Center provides a reference point on the suburban landscape





## Maplewood, like many suburbs surrounding the Twin Cities,

lacks a traditional downtown, a point of reference with historic buildings and a train depot that recalls the town's origins and establishes a common ground that all can call home base. And as with many area suburbs, Maplewood has of late tried to remedy that absent focus by building a civic-center complex.

Completed this fall, the Maplewood Community Center, designed by Ankeny, Kell, Richter, Walsh Architects of St. Paul, is a striking multipurpose athletic and community facility that gives focus to amorphous suburbia. Located on a 10-acre site near the city hall and public-works building, the Maplewood Community Center helps establish a small campus that connects with an existing regional trail system.

Two central circulation corridors divide the 86,000-square-foot, 2-level Community Center into quadrants serving different functions. The barrel-vaulted corridors meet at the apex under a skylight rotunda in which a metal staircase connects the levels. Patrons can enter from either level. The upper level, serving primarily social functions, connects with the 300-seat theater with full orchestra pit in the northwest corner, and the banquet and meeting rooms served by a catering kitchen in the southwest corner.



Shin and Joel Koyama



Filling out the program is a double gymnasium with 1/8-mile-per-lap track, exercise equipment, aerobics and weight-lifting areas, and two hand-ball courts in the northeast corner; and aquatics, containing a six-lane lap pool and a leisure pool with 120-foot water slide in the southeast corner.

By dividing the community center into quadrants and having all circulation radiate from the central rotunda, the architects devised a facility that is remarkably easy to navigate. Patrons find their way around by orienting at the center, and personnel stations surrounding the rotunda keep everything within view. High windows, for instance, open the pools to the central control desk in the rotunda, a particular safety feature.

While the interior is a prime example of solid programming, planning and function, the exterior shows off the architects' aesthetic muscles. Each quadrant is designed as a box with different protrusions and window openings that accommodate specific functions and sunlight requirements. The façade blends contrasting light and dark brick, horizontal banding and square accents, and metal siding along the roof line and arched entrances.

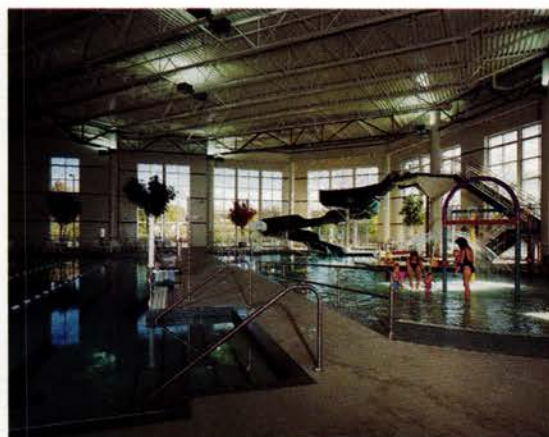
On approach, the building is a tweed coat of patterns and tones, a visual marker and striking presence to center Maplewood.

**E.K.**

**Project:** Maplewood Community Center

**Location:** Maplewood, Minn.

**Architect:** Ankeny, Kell, Richter, Walsh Architects



*The architects varied the exterior features (opposite top) to create a lively presence in this St. Paul suburb. Interior corridors radiate from a central skylit rotunda (opposite bottom).*

*Amenities include two pools (top), double gym (above) and 300-seat theater (below).*







## HISTORIC RESONANCE

**M**inneapolis architect

Michael Melman, who focuses his camera lens on Minnesota's historic sites, has exhibited his black-and-white photographs at galleries since 1979. Subjects include architecture, interiors and urban scenes, traces of our historic past quickly evaporating.







*Minnesota Veterans  
Home (opposite top),  
Fort Snelling; Milwaukee  
Road Depot (opposite  
bottom), Minneapolis;  
Concourse, Union  
Station (above), St. Paul;  
NSP Hennepin Island  
Hydro Plant (below),  
Minneapolis.*





Under the icy Minnesota waters of Lake Superior lies an ominous and hushed landscape of shipwrecks

By Camille LeFevre

# submerged

**d**riving up 35W north from the Twin Cities, one gradually leaves behind any disposition toward Minnesota as a land-locked prairie state. The transition is clinched when the road suddenly rises and peaks, revealing a remarkable scene below: the City of Duluth, an international shipping port built alongside the world's largest inland sea, Lake Superior.

Since 1870, when Lake Superior became the last Great Lake to open to large-ship navigation, the assortment of

ships on Lake Superior has included various passenger/package freighters, bulk freighters, side-wheelers, wooden-hulled ships and steel cargo-carrying behemoths, not to mention tugboats, military sailing ships and schooner barges.

Not all these ships safely returned to port, however.

Storms, mechanical and human errors, and old age caused more than 10,000 ships to sink in the Great Lakes. Lake Superior

seum, Duluth, because of the lake's fresh cold water and mostly rocky (rather than sandy or silty) bottom. "Lake Superior is also rather deep—there are few shallow shorelines," he adds, "so most wrecks are well-protected from ice and storms."

As such, many ships that once traversed the Great Lakes are represented today solely by their shipwrecked counterparts in Lake Superior. And these wrecks comprise an intriguing collection of naval architecture. "Shipwrecks in Minnesota represent a pretty good cross section, like a time capsule, of Great Lakes ship development," Labadie says. "Our shipwrecks give us good examples of ships on the Great Lakes from the Civil War era through the present."



A Lake Superior storm in November 1905 destroyed more than 20 ships, including the Mataafa (above) in Duluth Harbor. Among the ships drowned over the years in the icy Lake Superior waters are the Thomas Wilson (opposite top), a "whaleback," which sank June 9, 1902; and the Onoko (opposite bottom), which went down in September 1915.

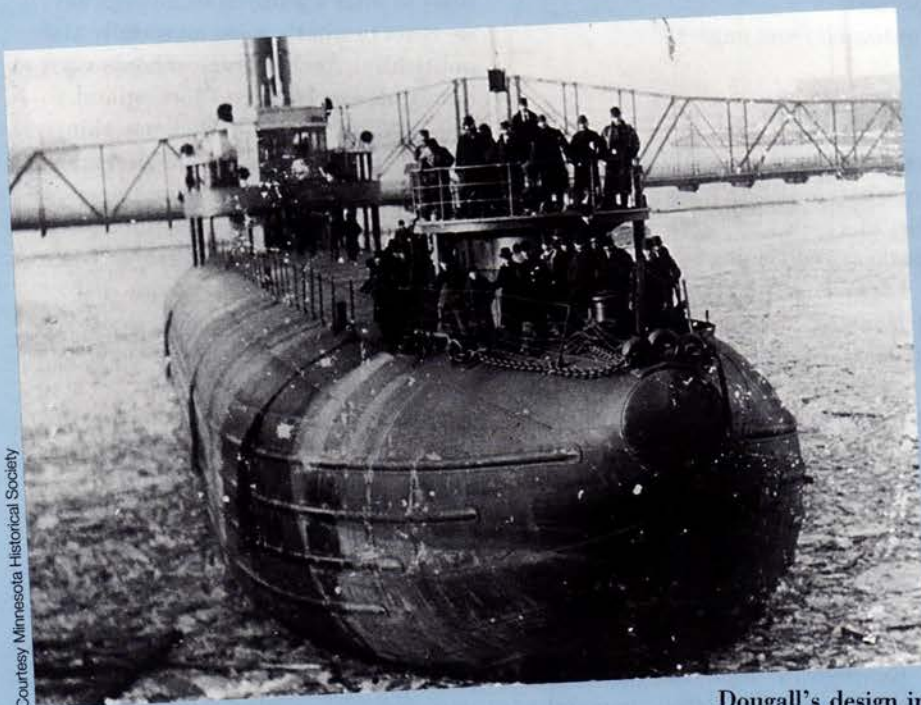
(more treacherous than the ocean, say sea-faring "salties," because of its weather, rocky coasts and cold water) contains about 350 shipwrecks. Slightly more than 50 of them are in Minnesota waters, but only about half have been found, usually along the shoreline from Duluth to Grand Marais and around Isle Royale.

Lake Superior wrecks are better preserved than those in other Great Lakes, points out C. Patrick Labadie, maritime historian and director, Canal Park Mu-

Since the late 1600s, shipbuilders have accounted for Great Lakes weather, navigation and shipping needs when constructing vessels for the inland seas. "Shallow water combined with twisting channels and limited maneuvering room imposed special considerations on vessel designers and builders," Labadie wrote in an article titled "Major Vessel Types on Lake Superior: Sail to Steam."<sup>1</sup> "The builders and designers of Lakes vessels have been forced to experiment, adapt, refine and develop particular answers to the problems posed by the unique environment of the Inland Seas." Two outstanding examples of innovative Great Lakes naval architecture, the Onoko and the Thomas Wilson, are Lake Superior shipwrecks.

The steamer Onoko was the first iron-hulled bulk freighter to operate on the Great Lakes. Built in 1882 at Globe Iron Works in Cleveland, it was developed to serve the specialized needs of the Great Lakes bulk iron-ore trade. At the time,





building an iron-hulled steam freighter was a radical change from traditional wooden-hull construction. The ship was a success and the largest craft on the Great Lakes for about 10 years until Sept. 15, 1915, when it sprang a bottom plate and sank. The wreck now lies upside down in 200 feet of water, six miles east of the Knife River. But Onoko remains "the prototype for all of the thousand-footers on the lake today," says Scott F. Anfinson, archaeologist, Historic Preservation Office, Minnesota Historical Society, St. Paul. "In naval-architectural history, it's a very important vessel."

The Thomas Wilson is an example of the earliest whaleback, a ship built specifically for the Great Lakes by the American Steel Barge Company in West Superior, Wis. The whaleback was a unique concept in steamer/consort design introduced by Captain Alexander McDougall in 1889. (The consort system—ships towing ships—was common on the Great Lakes, and vessels that were towed also at times used a combination of sails and steam.)

The cigar-shaped vessel was built of heavy steel plates and had conical ends. The superstructure was set above turrets and mounted in the main deck. Designed to carry bulk cargoes of grain and iron ore around the Great Lakes, the Wilson offered little resistance to wave action above the decks. At the time, Mc-

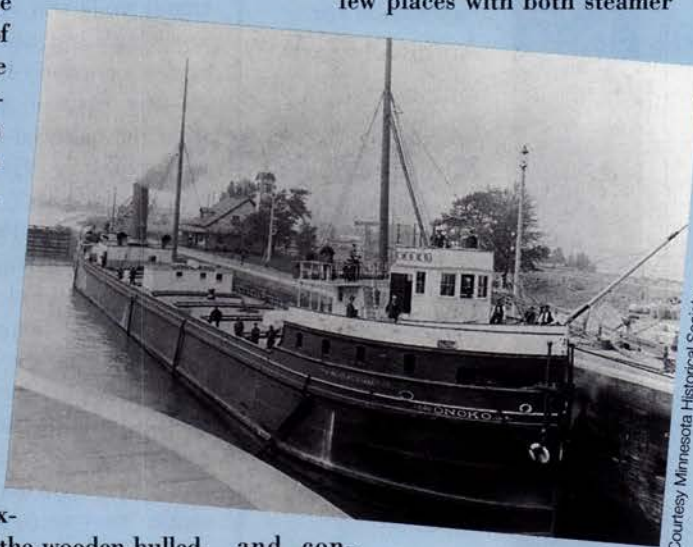
Dougall's design influenced most shipbuilding modifications introduced on the Great Lakes, including a whaleback freighter that was the immediate forerunner of the Doxford turret ship, built in England and widely used for ocean-cargo transport. The Wilson sank on June 9, 1902 when it collided with the George Hadley just outside of Duluth Harbor. The only surviving whaleback above water is the S.S. Meteor, a museum ship in West Superior, Wis.

Other Lake Superior shipwrecks notable for representing a period in naval-architectural history include the U.S.S. Essex, a navy gunboat built in 1874 that exemplifies the last of the wooden-hulled, sail-powered fighting ships of the United States Navy. The Essex is also the last known example of a Donald McKay vessel. McKay, a 19th-century shipbuilder famous for his clippers, "brought the sailing ship to the acme of perfection at a period when sail was engaging in a battle for life with steam," according to an old text.<sup>2</sup> On Oct. 14, 1931, the Essex, having outlived its usefulness, was towed out to the lake side of Minnesota Point near Du-

luth and burned until it sank.

Another shipwreck, the Madeira, is the last surviving schooner barge of its type. Built in 1900 by the Chicago Shipbuilding Company, the Madeira was designed to carry bulk cargoes of grain, lumber or iron ore economically about the Great Lakes and on the coasts, under tow of a steam-powered freighter. A sailing rig on the Madeira aided the towing vessel. Built of riveted steel, the ship's full, flat shape maximized cargo capacity with minimum draught. The Madeira sank after being bashed against Gold Rock cliff, north of what is now Split Rock Lighthouse, during the violent Mataafa Storm of Nov. 28, 1905.

More than 20 ships were wrecked in that storm (named Mataafa for the freighter caught sideways at the Duluth ship canal and battered by the storm until it sank). Other ships claimed include the Amboy, another type of schooner barge, and the George Spencer, a bulk-freight steamer that was towing the Amboy. Each shipwreck represents its specific type of naval architecture, and their shared wreck site, south of Taconite Harbor near Grand Marais, is one of a few places with both steamer



and consort barge present.

For a long time, however, the site was thought to contain only the wreckage of the Amboy. The Spencer, according to local legend, was salvaged. But underwater archaeologists hired to investigate Minnesota's Lake Superior shipwrecks discovered irregular keel lengths and dif-

*Continued on page 63*



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*up close*  
*Continued from page 13*

ernism to the Upper Midwest when he came here in 1954. With him followed a host of renowned architects as guest speakers and visiting faculty.

Lackens recalls that graduate work at Harvard, completed in 1960, was a further eye opener.

"The type of design that was taught at Harvard was quite different," Lackens says. "I think for a hick from the sticks—as I considered us—to live in Boston and the East Coast and go to school with students from all over the world was quite different. We were exposed to people like Kenzo Tange, Louis Kahn...."

Ketcham, completing his master's from Harvard in 1968, remembers hearing Louis Kahn once during his graduate-school days.

"He would talk about the intrinsic quality of brick and how as an architect he found the material very Freudian," Ketcham says. "That was language I really hadn't heard before. The International Style was really much more severe, talking about space. So here comes somebody talking about material—the intrinsic quality of material—what the material is trying to tell you, what the basic flow of the building is trying to tell you."

Ketcham says that these ideas about a building's intrinsic qualities—thinking about material, space, the people in the building—helped formulate a lot of the ideas that he still applies to programming and function.

"In designing for clients—especially public clients—we realized that we were doing buildings that weren't going to be static; they were going to change and their function was going to change," Lackens says. "They needed to be flexible and adaptable."

Like buildings, architectural firms develop with the times.

"The country has changed so much since we began," Ketcham says. "Architectural firms tend to be responsive to the society, to what's happening. We react to what's going on economically; we

react to what's going on technologically; we react to what's going on socially and politically. Architecture schools turn out students who tend to respond to these things, as well. Because things have gotten so pluralistic there are many different ways of doing things.... The thing that has changed the most is what's expected of architects. Once upon a time we were expected to deliver a service; now we're expected to deliver a product—like a car—and it's not suppose to have any errors."

Lackens adds, "The way you acquire work is quite different. It was once politically based on who you knew. That doesn't work anymore, and, in fact, even if it did we wouldn't play that game anymore. We're not political in any sense of the word. The competition, some people think, is much more fierce. But it's really based on what you've done and how people relate to that."

Diversity is the linchpin to staying solvent today, the two believe.

"You can't survive in any single market," Ketcham says. "I see more partnerships being formed in which the architect, builder, engineer, interior designer and others work closely together. Design has more players today; there are more voices to be heard."

This certainly doesn't spell doom and gloom for the architect and the profession.

"The future of the profession is real bright," Lackens says. "But there will be new kinds of offices, there will be combinations of professions."

The architect—unlike in those mythical days of the master-builder Howard Roark—will become one of many vital links in the building process.

"The role of the architect is still secure; he is still the individual in the team who is looked to for designing," Ketcham says. "But the architect's role will have to involve more consensus building. There are other players. They have to be true team players. The architect's role is to synthesize, and that's why design is more difficult today—you're synthesizing more information. Buildings are more complicated technologically today. Architects involved in team building and consensus building will survive."

AM



AM has published directories of architectural and landscape architectural firms for some time. With this issue we present our fourth directory of those Minnesota firms which provide consultative engineering services. Principals of these firms are members of the Consulting Engineers Council of Minnesota or of AIA Minnesota.

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

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Peter A. Rand, FAIA  
Publisher

## LEGEND

PE	Professional Engineer
AIA	American Institute of Architects
FAIA	Fellow, American Institute of Architects
ASLA	American Society of Landscape Architects
FASLA	Fellow, American Society of Landscape Architects
RLS	Registered Land Surveyor

## ARMSTRONG, TORSETH, SKOLD AND RYDEEN, INC.

4901 Olson Memorial Highway  
Minneapolis, MN 55422  
Tel: 612/545-3731  
Fax: 612/525-3289  
Established 1944

James E. Rydeen	AIA
Donald L. Yungner	PE
James N. Riess	PE
Robert A. Martini	PE
Terry L. Stofferahn	PE

Firm Personnel by Discipline	
Mechanical Engineers	16
Electrical Engineers	10
Architects	50
Other Professional/Technical	15
Administrative	10
TOTAL	101

ATS&R Expertise: Quality control/coordination during design, construction, post-occupancy; design of HVAC, plumbing, Direct Digital Control Systems; design of electrical systems including computer facilities, communications; energy conservation including active/passive solar, heat exchange systems, geo-thermal heat pumps, variable air volume, earth berming, ice storage, natural daylighting, energy management systems, energy efficient lighting, heat pumps; Technology including video, voice and data systems.

Champlin Park High School, Brooklyn Park, MN; Stillwater Area High School, Stillwater, MN; Farmington Middle School, Farmington, MN; Maple Grove Junior High School, Maple Grove, MN; Calvary Lutheran Church, Golden Valley, MN

## BKBM ENGINEERS, INC.

219 North 2nd Street, #200  
Minneapolis, MN 55401  
Tel: 612/333-7101  
Fax: 612/342-9482  
Established 1967  
Other Offices: Rochester, Marshall, Albert Lea, MN

Charles L. Ballou,	PE
Harold P. Bakke	PE
Thomas J. Downs	PE
John A. Clark	PE

Personnel by Discipline	
Civil Engineers	3
Structural Engineers	15
Mechanical Engineers	5
Electrical Engineers	3
Other Professional/Technical	11
Administrative	5
TOTAL	42

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

Lakeville High School, Lakeville, MN; Minnesota Judicial Center, St. Paul, MN; John & Sage Cowles Conservatory & Sculpture Garden, Minneapolis, MN; City/County Government Center, Rochester, MN; First Street Parking Ramp & Skyway, Rochester, MN.

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1313 5th Street SE, Ste. 322  
Minneapolis, MN 55414  
Tel: 612/331-4571  
Fax: 612/331-4572  
Established 1971

Dr. David Braslaw	PE
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Firm Personnel by Discipline	
Acoustical Engineers	1
Other Professional/Technical	1
Administrative	1
TOTAL	3

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

Combined Operations  
Center/Heathrow, London, England; American Iron and Supply (noise control), Minneapolis, MN; Envirotec Synterra (air quality studies), Pennsylvania; Dual track airport planning process (air quality), Minneapolis and St. Paul, MN; HUD noise assessments, Upper Midwest

## BRAUN INTERTEC CORPORATION

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Tel: 612/946-6000  
Fax: 612/946-6190

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Other Offices: Apple Valley, Blaine, Hibbing, Mendota Heights, Edina, Rochester, St. Cloud, St. Paul, MN; Chicago, IL; Billings and Butte, MT; Bismarck and Fargo, ND; Eugene, Portland and Salem, OR; Eau Claire, La Crosse and Milwaukee, WI

J.S. Braun	PE
George D. Klumpke	PE
Cameron G. Kruse	PE

Firm Personnel by Discipline	
Civil Engineers	49
Other Engineers	19
Architects	1
Other Professional	5
Technical	314
Administrative	123
TOTAL	511

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Mall of America, Bloomington, MN; Target Center Sports Arena, Minneapolis, MN; Neiman Marcus Plaza, Minneapolis, MN; Strategic Highway Research Program (SHRP), North Central Region, USA; County Road 18 River Bridge, Minneapolis, MN



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Fax: 612/690-9156  
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Bruno M. Franck Ph.D., PE

Firm Personnel by Discipline  
Structural Engineers 1  
Other Professional 1  
TOTAL 2

Structural engineering services for religious, educational, residential, and industrial buildings. Expertise in design with wood for historical or contemporary architecture using recycled lumber or modern structural wood components; design of masonry, steel and concrete structures. Technical routing of reports, analyses, government regulations, permits, specifications, etc.

Beautiful Savior Lutheran Church, New Hope, MN;  
Audubon Center of the North Woods, Sandstone, MN; Brandenburg Residence, Ely, MN; Duckett Residence, Hudson, WI; Bennet-Wakeman Residence, Los Alamos, NM

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Established 1937  
Other Offices: Aberdeen and Rapid City, SD; Fort Meyers, FL

Charles E. Hansen PE  
Larry G. McMurtry PE  
Hadi Sajadi PE  
Michael Fowler PE  
Kenroy K. Janzen PE, RLS

Firm Personnel by Discipline  
Civil Engineers 13  
Structural Engineers 13  
Technical 30  
Administrative 7  
TOTAL 63

Complete structural engineering, civil engineering and land surveying for commercial, industrial and public buildings, bridges, towers, foundations, etc. Water supply distribution and storage, solid

and liquid waste collection, treatment and disposal; street, highway, storm water systems; site development planning, investigations, studies, reports, plans and specifications.

Stillwater Area High School, Stillwater, MN; Champlin Park High School, Brooklyn Park, MN; Mystic Lake and Dakota County Casinos, Prior Lake, MN; Remmele Engineering Company Corporate Headquarters, New Brighton, MN; Carlson Towers, Minnetonka, MN

## DARG BOLGREAN, MENK, INC.

7575 Golden Valley Road., Ste. 210  
Golden Valley, MN 55427  
Tel: 612/544-8456  
Fax: 612/544-8914  
Established 1966

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

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

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

Eagles Nest Casino, Woodstock, New Brunswick, Canada; Findlay Golf Clubhouse, Findlay, OH; Widsten Apartments, Wayzata, MN; Harmony Scenic Studios, Minneapolis, MN; C. G. Hill & Sons Manufacturing Building, Mounds View, MN

## DOLEJS ASSOCIATES INC.

1624 North Riverfront Drive  
Mankato, MN 56001  
Tel: 507/625-7869 or 612/375-1936  
Fax: 507/388-9225  
Established 1977  
Other Offices: Burnsville, MN

Joseph M. Dolejs PE  
David A. Kroells

Firm Personnel by Discipline  
Mechanical Engineers 1  
Technical 8  
Administrative 1.5  
TOTAL 11

Dolejs Associates provides mechanical and electrical design services for the building industry. An experienced and stable staff provides expertise in the HVAC, plumbing, fire protection, temperature control, lighting power, communication and life safety systems. Recent projects include schools, restaurants, athletic facilities, motels, engineered housing, churches, ADA and energy conservation retrofits.

Blue Earth Area High School, Blue Earth, MN; Gymnasium, Bethany College, Mankato, MN; Fire Alarm Retrofit, ISD #77, Mankato, MN; Real Life Housing 125 units, Burnsville, MN; University of Minnesota Child Care, Minneapolis, MN

## DUNHAM ASSOCIATES, INC.

9141 Grand Avenue South  
Minneapolis, MN 55420  
Tel: 612/885-1800  
Fax: 612/885-1856  
Established 1960  
Other Offices: Rapid City, SD; Las Vegas, NV

George F. Dunham PE  
Kathleen M. Kolbeck PE  
Dale J. Holland PE  
Ronald L. Feldhaus PE  
Brion P. Szwed PE

Firm Personnel by Discipline  
Structural Engineers 6  
Mechanical Engineers 26  
Electrical Engineers 18  
Other Professional 30  
Administrative 18  
TOTAL 98

Dunham Associates, Inc. offers mechanical, electrical, lighting design, and structural consulting engineering services. Specialized areas include health care facilities, retail, parking ramps and skyways, data centers, clean rooms, central chiller and boiler plants, structural load studies and design, industrial ventilation and process cooling, master planning and energy conservation studies for central utilities.

Minneapolis/St. Paul International Airport Vertical Circulation Towers and Skyways, MN; Minneapolis/St. Paul International Airport Central Chiller and Boiler Systems, MN; West Health Campus, Plymouth, MN; Unity Hospital Surgery Addition, Fridley, MN; University of Minnesota Duluth, Student Center, Duluth, MN

## ELLERBE BECKET INC.

800 LaSalle Avenue  
Minneapolis, MN 55402  
Tel: 612/376-2000  
Fax: 612/376-2271  
Established 1909  
Other Offices: Los Angeles, Kansas City, New York, Washington D.C.

Doug Maust PE  
Al Wenzel PE  
Jay Rudberg PE  
Robert Brown PE  
Mark Duoma PE

Firm Personnel by Discipline  
Civil Engineers 8  
Structural Engineers 50  
Mechanical Engineers 80  
Electrical Engineers 50  
Architects 300  
TOTAL 800

We understand the difference between buildings and Architecture, and we know how to integrate Engineering with Architecture. At the same time, we have the sophistication to deliver engineering foresight and analysis essential to planning a project or a campus. Estimating and construction services complete our offering.

LaSalle Plaza, Minneapolis, MN; 1st Avenue Cooling Plant, Minneapolis, MN; National Archives II, Washington D.C.; Historic Preservation of Minneapolis Veterans' Home; State Farm Corporate Headquarters, Bloomington, IL



## ■ ENCOMPASS, INC.

2850 Metro Drive, Suite 523  
Bloomington, MN 55425  
Tel: 612/854-4511  
Fax: 612/854-3126  
Established 1979

Howard Noziska	PE
Firm Personnel by Discipline	
Structural Engineers	3
Other Professional/Technical	1
Administrative	1
TOTAL	5

Structural design and facade detailing services for buildings, with extensive experience in masonry construction. Encompass provides preconstruction analysis of details and specifications for the purpose of preventing construction problems or failures. We offer inspection services to ensure compliance with contract documents or record conditions to facilitate problem analysis and repair.

Gran-A-Stone, Office, Warehouse and Stone Cutting Facility, St. Cloud, MN; ISD 196, Five-Year Facilities Maintenance Plan, Rosemount, MN; State Secondary Governmental Complex, Lansing, MI; MEECO, Office and Manufacturing Building, St. Louis, MO; Drummer Office Building, Troy, MI; DeRoy Apartments, Wayne State University, Detroit, MI.

## ■ ENGINEERING DESIGN GROUP OF MINNESOTA, INC.

547 Lovell Avenue  
Roseville, MN 55113  
Tel: 612/481-9195  
Fax: 612/481-9195  
Established 1989

Sean K. Hallet	PE
Firm Personnel by Discipline	
Civil Engineers	1
Structural Engineers	1
Technical	.5
Administrative	.5
TOTAL	3

Structural engineering of commercial, industrial, residential and curtainwall systems. Complete design and analysis of contract documents for building systems. Facility engineering of Jib, mono, crane and bridge rail systems. Forensic non-destructive inspections of all structures. Heavy equipment foundation engineering. Hazardous explosive room engineering. Structural design of amusement rides. Structural product design.

Como Senior High Library, Classroom and Gymnasium Additions, St. Paul, MN; Birch Cove Office Complex, White Bear Lake, MN; Faribault Senior Citizens Center, Faribault, MN; Printed Media Services (PMS), Facilities East and West, Golden Valley, MN; Banesto Spain, Product Development, Madrid, Spain.

## ■ ERICKSEN ELLISON and Associates Inc.

2635 University Ave. W., Ste. 200  
St. Paul, MN 55114-1500  
Tel: 612/641-0311  
Fax: 612/641-0029  
Established 1954

Bruce K. Johnson	PE
William F. Thiesse	PE
Richard A. Hoag	

Firm Personnel by Discipline	
Mechanical Engineers	7
Electrical Engineers	3
Other Professional	
/TECHNICAL	23
Administrative	5
TOTAL	38

EEA'S professional service combines state-of-art planning and design for mechanical and electrical systems including: HVAC, chemical distribution, ground source heat pumps, fire protection, specialty lighting, voice/data communications and security/surveillance. EEA has significant experience in design of aircraft facilities, clean rooms, correctional, data processing, educational health care, libraries, municipal, state and federal projects.

Frederick R. Weisman Art Museum, University of Minnesota, Minneapolis, MN; U.S. Embassy, Santiago, Chile; Henry Sibley Senior High School, West St. Paul, MN; Minnesota Correctional Facility at Red Wing, Secure

Housing, Red Wing, MN; University of Minnesota Hospitals, Short Stay Center, Masonic Building, Minneapolis, MN

## ■ ERICKSEN, ROED AND ASSOCIATES, INC.

300 First Avenue North, Suite 420  
Minneapolis, MN 55401  
Tel: 612/342-9210  
Fax: 612/342-9214  
Established 1985

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

Firm Personnel by Discipline	
Structural Engineers	10
Other Professional/Technical	10
Administrative	3
TOTAL	23

Professional Structural Engineering services from planning through construction for corporate, commercial, educational, health care, industrial, sports facilities, parking ramps, aircraft engine test facilities, and restoration engineering. We provide construction documents, specifications, construction observation, existing building analysis reports and forensic engineering.

Minneapolis Federal Courthouse, Minneapolis, MN; Target Center, Minneapolis, MN; University of Minnesota Basic Sciences, Minneapolis, MN; North Memorial Hospital Expansion, Minneapolis, MN; AT&T Office Tower, Minneapolis, MN

## ■ FOSS ASSOCIATES

810 Fourth Avenue South  
(P.O. Box 306)  
Moorhead, MN 56561  
Tel: 218/236-1202  
Fax: 218/236-4945  
Established 1898  
Other Offices: Fargo, ND

Paul Jacobson	PE
Charles Zeltinger	RLS
Bill Cowman	AIA
Robert Ames	AIA
Willis Stelter	AIA

Firm Personnel by Discipline	
Structural Engineers	1
Land Surveyor	1
Architects	7
Other Professional	4
Technical	.5
Administrative	1.5
TOTAL	15

Structural, land survey and architectural firm with full design and construction observation services for commercial, educational, recreational, institutional, law enforcement, research, health care and governmental agency clients. Specialties include site development, analysis of existing buildings, reroofing, handicapped accessibility, feasibility studies, programming plus traditional engineering and architectural services.

Norman County East Public Schools, Twin Valley, MN; Perham Public Library, Perham, MN; St. Mary's Church, Fosston, MN; Sibley County Jail, Gaylord, MN; Douglas County Hospital, Alexandria, MN

## ■ FOSTER, JACOBS & JOHNSON, INC.

345 Canal Park Drive, Suite 200  
Duluth, MN 55802  
Tel: 218/722-3060  
Fax: 218/722-1931  
Established 1922

James R. Johnson	PE
Charles F. Jacobs	PE

Firm Personnel by Discipline	
Mechanical Engineers	2
Electrical Engineers	2
Other Professional/Technical	3
Administrative	1.5
TOTAL	8.5

Mechanical and Electrical engineering services for all building types: Design of power, lighting, security and communication systems. Significant experience in design of energy conservative systems in new construction and retro-fit. Including energy management systems, daylighting and energy efficient lighting.

Duluth Entertainment and Convention Center, Duluth, MN; Aircraft Fire Fighting Training Facility, Duluth, MN; Natural Resources Research Institute, Duluth, MN; Douglas County Courthouse Renovation, Superior, WI; Food Service Renovation, Federal Correctional Institution, Sandstone, MN.



## GAUSMAN & MOORE ASSOCIATES, INC.

1700 West Highway 36,  
Suite 700, Rosedale Towers  
Roseville, MN 55113  
Tel: 612/639-9606  
Fax: 612/639-9618  
Established 1935  
Other Offices: Brainerd and  
Duluth, MN

James W. Giefer	PE
James A. Keller	PE
D. Lane Hersey	PE
Robert B. Full	PE
Adrian P. H. Keller	PE

Firm Personnel by Discipline	
Mechanical Engineers	6
Electrical Engineers	5
Technical	31
Administrative	12
<b>TOTAL</b>	<b>54</b>

Mechanical and Electrical engineering services for all building types including design of HVAC, plumbing, fire protection, power distribution, security and audio/visual systems. Also specialty lighting design, computer network/voice network design, energy conservation design/funding studies.

Musicland Corp. Stores, Nationwide; Rochester City Hall, Rochester, MN; Montevideo Middle School, Montevideo, MN; Northern Itasca Health Center, Big Fork, MN; Camp Ripley Maintenance Shop, Little Falls, MN

## HALLBERG ASSOCIATES, INC.

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

Joseph W. Hallberg	PE
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Firm Personnel by Discipline	
Mechanical Engineers	3
Technical	8
Administrative	3
<b>TOTAL</b>	<b>14</b>

Specializing in Mechanical Design and Energy Conservation in Minnesota Educational Facilities.

Alexandria Junior High School, MN; Big Lake Senior High School, MN; St. Michael/Albertville High School, MN; Warroad Middle School, MN; Burnside Elementary School, Red Wing, MN

## HAMMEL GREEN AND ABRAHAMSON, INC.

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

Harry R. Wilcox	PE
James M. Moravsek	PE
Steve Bieniek (Rochester)	PE

Firm Personnel by Discipline	
Civil Engineers	9
Structural Engineers	12
Mechanical Engineers	25
Electrical Engineers	17
Architects	82
Other Professional	28
Technical	25
Administrative	42
<b>TOTAL</b>	<b>240</b>

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

3M, Corporate Administration Building and Cafeteria Building, St. Paul, MN; Northern States Power Company, Eau Claire and LaCrosse, WI; IBM Campus, Rochester, MN; Metropolitan Waste Control Commission, Minneapolis, MN; Iowa-Illinois Gas & Electric, Davenport, IA

## HOLABIRD & ROOT

400 South Broadway  
Rochester, MN 55904  
Tel: 507/288-8088  
Fax: 507/288-7311  
Established 1880  
Rochester Office Established 1990

Gregory B. Cook	AIA
James W. Baird	AIA
Nicholas A. Bilandic	PE
Gerald Horn	FAIA

Firm Personnel by Discipline	
Civil Engineers	3
Structural Engineers	10
Mechanical Engineers	11
Electrical Engineers	9
Architects	30
Technical	5
Administrative	20
<b>TOTAL</b>	<b>88</b>

Holabird & Root's Engineering staff works closely with clients to develop appropriate engineering solutions based on economy, efficiency, and durability. A complete range of inhouse services are available to meet the varied requirements of projects, including harmonics/shielding, energy conservation, cleanrooms, and process piping.

Electronic Manufacturing Client, Continuing Services, Rochester, MN; University of St. Thomas, Science and Technology Center, St. Paul, MN; University of Minnesota, Tate Laboratory of Physics, Minneapolis, MN; Osram Sylvania, Coating Application Cleanroom, Seymour, IN; Northern States Power Company, Energy Audits and Retrofits, Faribault, MN

## HUNTINGDON ENGINEERING & ENVIRONMENTAL, INC.

737 Pelham Blvd.  
St. Paul, MN 55114  
Tel: 612/645-3601  
Fax: 612/659-7348  
Established 1933  
Other Offices: 72 offices nationwide with Corporate Headquarters in Middleport, NY. Offices in Minnesota include Duluth, Mankato, Rochester, St. Cloud and St. Paul.

Mark Shannon	PE
Dave Hausler	PE
Samuel Ng	PE
Steve Olson	PE
Paul Schultz	PE

<b>TOTAL STAFF</b>	<b>1,670</b>
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Huntingdon is a support service organization with 72 offices nationwide, including 12 laboratories. Huntingdon provides QA/QC testing for all types of construction projects, including geotechnical engineering construction, material testing, drilling, and failure analysis.

Milac Indian Museum, Vineland, MN; Norwest Tower, Minneapolis, MN; Olmsted County Government Center, Rochester, MN; Minneapolis Convention Center, Minneapolis, MN; Guggenheim Medical Research Building, Rochester, MN

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

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

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

Firm Personnel by Discipline	
Structural Engineers	2
Architects	5
Other Professional/Technical	5
Administrative	1
<b>TOTAL</b>	<b>13</b>

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

National Checking Addition, St. Paul, MN; ConAgra Remodeling, Hastings, MN; AFSCME Office, South St. Paul, MN; Cedars Addition, Minneapolis, MN; Tousley Ford Addition, White Bear Lake, MN; National Car Rental, GA; Livestock Facility, South St. Paul, MN

## LARSON ENGINEERING OF MINNESOTA

3524 Labore Road  
White Bear Lake, MN 55110  
Tel: 612/481-9120  
Fax: 612/481-9201  
Established 1978  
Other Offices: Chicago, IL

Wayne C. Larson	PE
Lee A. Granquist	PE
Henry W. Voth	PE
Kesh P. Ramdular	PE

Firm Personnel by Discipline	
Civil Engineers	2
Structural Engineers	11
Technical	4
Administrative	2
<b>TOTAL</b>	<b>19</b>

Structural engineering services for commercial, industrial, educational, institutional, and residential facilities. Serving architects, contractors, developers, and owners. Special expertise in the design of curtainwall systems. Structural design of industrial structures including storage, manufacturing, and processing systems. Extensive experience in plant expansions and remodeling.



Combined Support Maintenance Shop, Camp Ripley, MN; Aspen Research Center, White Bear, MN; Purdue University, Coal Handling System, LaFayette, IND; Kuala Lumpur City Center, Curtainwall Systems, Kuala Lumpur, Malaysia; Sauk Rapids Middle School, Sauk Rapids, MN

## LHB ENGINEERS and ARCHITECTS

21 West Superior Street, Suite 500  
Duluth, MN 55802  
Tel: 218/727-8446  
Fax: 218/727-8456  
Established 1965  
Other Offices:  
Minneapolis, MN

Lauren A. Larsen	PE
Harvey H. Harvala	PE
William D. Bennett	PE
David M. Sheedy	PE
Kevin C. Cole	PE

Firm Personnel by Discipline	
Civil Engineers	6
Structural Engineers	8
Mechanical Engineers	1
Electrical Engineers	1
Architects	14
Other Professional	2
Technical	8
Administrative	11
TOTAL	53

LHB offers complete A/E services to industrial, governmental, commercial, and health care clients. Specific services include: structural, civil, mechanical and electrical engineering, surveying, architecture, landscape architecture, and interior design. Specialties include providing innovative solutions to building renovations, healthy building design, roadways, bridges, curtain walls building investigations, and building condition documentation and monitoring.

Omni Max Theater, Duluth, MN; Wheeler Hall, Ashland, WI; Blaisdell YMCA, Minneapolis, MN; 26th Avenue East Reconstruction, Duluth, MN; Gooseberry Falls Interpretive Center Sitework, North Shore Scenic Highway, MN

## LS ENGINEERS, INC.

200 South Main Street  
LeSueur, MN 56058  
Tel: 612/665-6255  
Fax: 612/665-6818  
Established 1989

Robert L. Sprengeler	PE
William P. Lehnertz	PE

Firm Personnel by Discipline	
Structural Engineers	5
Technical	3
Administrative	1
TOTAL	9

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

Montevideo Middle School, Montevideo, MN; Cub Too! Store, Columbus, OH; Brown County Law Enforcement Center, New Ulm, MN; Bethany Chapel, Mankato, MN; Lyndale Shops, Minneapolis, MN

## LUNDQUIST, WILMAR, POTVIN & BENDER, INC. (LWPB ENGINEERS)

1935 W. County Road B2, Suite 300  
St. Paul, MN 55113-2722  
Tel: 612/633-1223  
Fax: 612/633-1355  
Established 1969

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

Firm Personnel by Discipline	
Mechanical Engineers	6
Electrical Engineers	6
Technical	27
Administrative	8
TOTAL	47

Professional Mechanical, Electrical, and Industrial Engineering Services for all types of facilities. Design expertise in HVAC, sanitation, refrigeration, DDC systems, site utilities, lighting design, power, communication, security systems, fire and life safety systems, life cycle costing, value

engineering, energy conservation and management, feasibility studies and building commissioning. Industrial Engineering Services include facility planning, material handling, and manufacture/process engineering.

US West Market Street Facilities Remodeling, St. Paul, MN; Target Stores, Nationwide; Brainerd Regional Human Services Center, Central Chilled Water Plant, Brainerd, MN; United Health-Care Corporation, Edina and Golden Valley, MN; St. Olaf College, Library, Dormitory and Fieldhouse, Northfield, MN

## MATTSON/MACDONALD, INC.

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

Wesley C. Mattson	PE
David H. Macdonald	PE

Firm Personnel by Discipline	
Structural Engineers	4
Other Professional	2
Administrative	1
TOTAL	7

Mattson/Macdonald provides structural engineering services to architectural firms serving the five-state Midwest area. Mattson/Macdonald has considerable experience with a wide range of building types: housing, retail, office, manufacturing, hospitals, churches, educational and institutional facilities.

Earle Brown Heritage Center, Brooklyn Center, MN; Warroad Public Library, Warroad, MN; Mille Lacs Indian Museum, Garrison, MN; Theater De La Jeune Leune, Minneapolis, MN; Lac Qui Parle Valley High School, Madison, MN

## McCONKEY & ASSOCIATES, INC.

3144 Hennepin Avenue South  
Minneapolis, MN 55408  
Tel: 612/822-6950  
Fax: 612/822-8385  
Established 1978

H. James McConkey	PE
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Firm Personnel by Discipline	
Structural Engineers	4
Technical	2
Administrative	1
TOTAL	7

Structural engineering consulting services for commercial, industrial, institutional, public and residential building projects; Special design for bins, stacks, equipment supports, material handling; Rehabilitation and remodeling of existing structure; Structural investigations and reports. Licensed in 23 states.

Minnesota Correctional Facility, Faribault, MN; Target Store, Myrtle Beach, SC; Cinema 6 Theater, St. Louis Park, MN; Carisch Commercial Property and Parking Ramp, Wayzata, MN; St. John the Baptist Church, Savage, MN

## MEYER, BORGMAN & JOHNSON, INC.

810 Plymouth Building  
Minneapolis, MN 55402  
Tel: 612/338-0713  
Fax: 612/337-5325  
Established 1955

John E. Meyer	PE
Roland Johnson	PE
Michael Ramerth	PE
Richard E. Wiehle	PE
Daniel E. Murphy	PE

Firm Personnel by Discipline	
Structural Engineers	10
Technical	5
Administrative	2
TOTAL	17

Single discipline consisting of Structural engineering services applied to the design of commercial, educational, industrial, recreational, religious and residential facilities.

Mankato Civic Center, Mankato, MN; West Health Campus, Plymouth, MN; Minnesota Children's Museum, St. Paul, MN; Fredrick R. Wiesman Art Museum, Minneapolis, MN; St. Paul High School, St. Paul, MN



# **MICHAUD COOLEY ERICKSON**

333 South Seventh Street,  
Suite 1200  
Minneapolis, MN 55402  
Tel: 612/339-4941  
Fax: 612/339-8354  
Established 1946

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

Firm Personnel by Discipline  
Mechanical Engineers 22  
Electrical Engineers 14  
Other Professional 2  
Technical 42  
Administrative 14  
TOTAL 94

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

IDS Operations Center, Minneapolis, MN; First Bank Place, Tenant Fit-up and Owner Representation, Minneapolis, MN; H. B. Fuller Company, New Research and Development Lab Building, Vadnais Heights, MN; North Memorial Medical Center, Expansion and Renovation, Robbinsdale, MN; Medtronic Corporation, Multiple Projects

# **MIDDLETON ENGINEERING ASSOCIATES**

7336 Willow Lane  
Minneapolis, MN 55444  
Tel: 612/560-8099  
Fax: 612/560-8099  
Established 1993

Leonard R. Middleton PE

Firm Personnel by Discipline  
Structural Engineers 2  
Administrative 1  
TOTAL 3

Construction Consultants. Planning, organization and methodology for difficult projects including high rises, adding levels and reinforcing existing structures, working on congested sites. Developing material handling and heavy rigging methods plus crane layouts. Experience in large-scale steel erection, industrial plant construction, contracting methods for indefinite work scopes and negotiation of project labor agreements.

Liberty Paper Mill, Becker, MN;  
Suspension Bridge, Far East;  
Taconite Plant Modifications,  
Eveleth, MN; Development of  
Construction Methods and Estimates, Investigation and Expert Witnessing on Construction Failures, Injuries and Claims.

# **MSA, CONSULTING ENGINEERS**

1326 Energy Park Drive  
St. Paul, MN 55108  
Tel: 612/644-4389  
Fax: 612/644-4389  
Established 1980  
Other Offices: Minneapolis,  
Waseca, Prior Lake, MN

John Stewart PE  
Terry Malirer PE  
Tom Madigan PE  
Steve Gatlin PE  
Boyd Paulu PE

Firm Personnel by Discipline  
Civil Engineers 25  
Structural Engineers 2  
Mechanical Engineers .5  
Electrical Engineers .5  
Other Professional 15  
Technical 35  
Administrative 6  
TOTAL 84

MSA specializes in site engineering, stormwater management, wetland mitigation, transportation planning and environmental engineering. MSA provides engineering services from project inception to design and through construction. MSA has full structural engineering capabilities and construction management capabilities.

Toys "R" Us Retail Store, St. Cloud, MN; River Valley Clinic, Woodbury, MN; Northland Insurance Corporate Center, Mendota Heights, MN; Daily Printing, Plymouth, MN; Target Center Skyway, Minneapolis, MN

# **ORR-SCHELEN- MAYERON & ASSOCIATES, INC.**

300 Park Place East  
5775 Wayzata Boulevard  
Minneapolis, MN 55416-1228  
Tel: 612/595-5775  
Fax: 612/595-5773  
Established 1922  
Other Offices: Eau Claire, WI

Marlin D. "Butch" Larsen PE  
Jerry A. Turner AIA  
Edward J. DeLaForest PE  
Ernest E. Fenton PE  
D. Edward Ames LS

Firm Personnel by Discipline  
Civil Engineers 15  
Structural Engineers 4  
Mechanical Engineers 12  
Electrical Engineers 10  
Other Engineers 7  
Architects 6  
Other Professional 6  
Technical 76  
Administrative 23  
TOTAL 159

Engineers, Architects, Planners and Surveyors providing services to the medical, educational, industrial, commercial, and governmental sectors. Specific Services include: mechanical, electrical and structural engineering, architecture, municipal, water resources, transportation and environmental engineering, land surveying and landscape architecture. Full Service, Client-oriented Firm, experienced with multidisciplinary projects. Complete project capabilities inhouse.

Facilities Engineering, 3M Corporation, St. Paul, MN; HealthEast Corporate Master Plan, St. Paul, MN; EAW for DAMARK Facility, Brooklyn Park, MN; BFI Hoving & Sons Transfer Station Remodeling and Additions, Chicago, IL; Water Treatment Plant Expansion, Richfield, MN

# **SCHOELL & MADSON, INC.**

10580 Wazata Blvd., Suite #1  
Minnetonka, MN 55305  
Tel: 612/546-7601  
Fax: 612/546-9065  
Established 1956

James Orr PE  
Kenneth Adolf PE  
Theodore Kemna RLS

Firm Personnel by Discipline  
Civil Engineers 8  
Other Professional 9  
Technical 15  
Administrative 3  
TOTAL 35

Complete wetlands identification, classification, and delineation; EAWs, EIS and natural resource services; environmental site assessments, regulatory compliance and permitting; civil engineering system studies, design and construction/contract administration; land surveying, topographic, construction, and as-built surveys; quality control soil testing.

Opus II Business Park, Minnetonka, MN; Norwest Properties, Statewide; Gaming Corporation of America, WI; Laurel Village, Minneapolis, MN; Restoration of Historic Main Street, Minneapolis, MN.

# **SHORT ELLIOTT HENDRICKSON INC.**

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

Donald E. Lund PE  
Gary R. Gray PE  
Richard A. Olsen AIA

Firm Personnel by Discipline  
Civil Engineers 84  
Structural Engineers 4  
Architects 18  
Other Professional 18  
Technical 83  
Administrative 53  
TOTAL 260

SEH is a multidisciplinary A/E consulting firm offering services in Architecture, Civil Engineering, Environmental and Transportation. Specialty services include VRI<sup>(sm)</sup> - Virtual Reality Computer Imaging and Public Involvement Programs.

Becker Community Center, Becker, MN; Brooklyn Center 69th Avenue, Brooklyn Center, MN; Becker Wastewater Treatment Plant, Becker, MN; I-35E University Sewer Separation Project, St. Paul, MN; Stillwater Flood Control Project, Stillwater, MN



# **TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INC.**

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

Duane T. Prew	PE
Darrel Berkowitz	PE
Robert A. Boyer	PE
James E. Voyer	PE
Westly Hendrickson	AIA

Firm Personnel by Discipline	
Civil Engineers	36
Structural Engineers	10
Mechanical Engineers	7
Electrical Engineers	2
Other Engineers	14
Architects	15
Technical	49
Administrative	24
TOTAL	157

TKDA provides civil, electrical, environmental, mechanical, structural, and transportation engineering services to governmental, institutional, and corporate clients. TKDA's electrical, mechanical, and structural engineers provide building systems design in support of TKDA's architectural department. TKDA's civil, environmental and transportation engineers provide design for municipal utilities, highways, bridges, airports and railroads.

Recreation and Fitness Facility, St. Mary's College, Winona, MN; Sports/Recreation Center, College of St. Catherine, St. Paul, MN; Grand Rapids Airport Terminal, City of Grand Rapids, MN; St. Paul Municipal Stadium Expansion, City of St. Paul, MN; Integrated Waste Management Facility, University of Minnesota, Minneapolis, MN

# **WALKER PARKING CONSULTANTS**

5775 Wayzata Blvd., Suite 425  
Minneapolis, MN 55416  
Tel: 612/595-9116  
Fax: 612/595-9518  
Established 1965

Other Offices: Boston, MA; Denver, CO; Elgin, IL; Houston, TX; Indianapolis, IN; Kalamazoo, MI; Newport Beach and San Francisco, CA; Philadelphia, PA

William C. Arons	PE
Richard J. Kenney	PE
Terrence A. Hakkola	PE
James I. Meyer	PE
Stephen D. Disch	PE

Firm Personnel by Discipline	
Structural Engineers	85
Electrical Engineers	1
Restoration, Transportation Engineers	13
Architects	7
Parking Operations & Management	2
Technical	42
Administrative	35
TOTAL	185

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Firm Personnel by Discipline	
Civil Engineers	.5
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Administrative	1
TOTAL	6

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Firm Personnel by Discipline	
Mechanical Engineers	7
Electrical Engineers	5
Architects	36
Technical	5
Administrative	12
TOTAL	65

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Firm Personnel by Discipline	
Civil Engineers	10
Architects	6
Other Professional	9
Technical	30
Administrative	12
TOTAL	67

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### Whittier

*Continued from page 19*

ciation allowances provided the incentive for Bel Mar to build a dozen of these apartments throughout Whittier.

They are instantly recognizable and associated with one another by a similar architectural feature—false Mansard roofs that nod to Disneyland instead of their urban surroundings. However, a handful of midcentury apartment buildings in Whittier are worthy of attention, if not praise. At 601 West 28th St., a prosaic rectangle is made memorable by the brown and beige tile mosaic that envelops the entire structure. Reminiscent of a 1960s shower stall, the design is appropriately biomorphic and singular in the Twin Cities. Across the street, 500 West 28th St., represents another excellent example of modern tile decoration, featuring a diamond motif.

During the late 1960s and 1970s the zenithlike growth of large apartment buildings altered the massing, spacing and façades along Whittier's streets. Developers predicted that their apartment buildings would prompt an urban renaissance. Instead, they have become the bane of the neighborhood. Cheaply constructed, densely populated with transient renters and poorly sited among single-family homes, they further destabilized the area.

Faced with the residue of these problems, the Dayton Hudson Foundation channeled \$1 million into Whittier in 1979, becoming the largest inner-city neighborhood revitalization program undertaken between the private sector and a specific neighborhood. The effort gave birth to the Whittier Alliance, which emerged as a stabilizing force. Its accomplishments include implementing sensitive zoning laws, downsizing large apartment buildings, restoring historic homes, and building new multifamily and single-family dwellings. Today, the Whittier Alliance is committed to increasing home ownership in a neighborhood that is 90 percent renters.

The neighborhood's amalgamation of housing and people makes for both amusing and unsettling juxtapositions. But Whittier's architecture offers contemporary practitioners a simple lesson—great design casts an inspiring spell over generations.

David Anger is a frequent contributor to *Architecture Minnesota*. **AM**

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Of course, only a small glimpse of that tradition can be editorially highlighted in any single issue of *Architecture Minnesota*. Therefore, for this issue of *AM*, we invited all AIA Minnesota firms to share their public architecture expertise with our readers.

The "Civic Architecture Portfolio" on the following pages will introduce you to those AIA Minnesota firms that are actively engaged in the design of civic and municipal facilities. They have chosen to support the publication of this special issue of *AM* on civic architecture.

*Architecture Minnesota* appreciates the support of these firms which has enabled us to broaden our distribution of this special issue to include elected officials, public administrators, and community leaders in order that they may learn more about Minnesota's remarkably fine inventory of public buildings designed by Minnesota architectural firms.

When it comes time to find a firm for your community's building project, be sure to consider these firms, each of which is owned and operated by members of AIA Minnesota, our state's Society of the American Institute of Architects.

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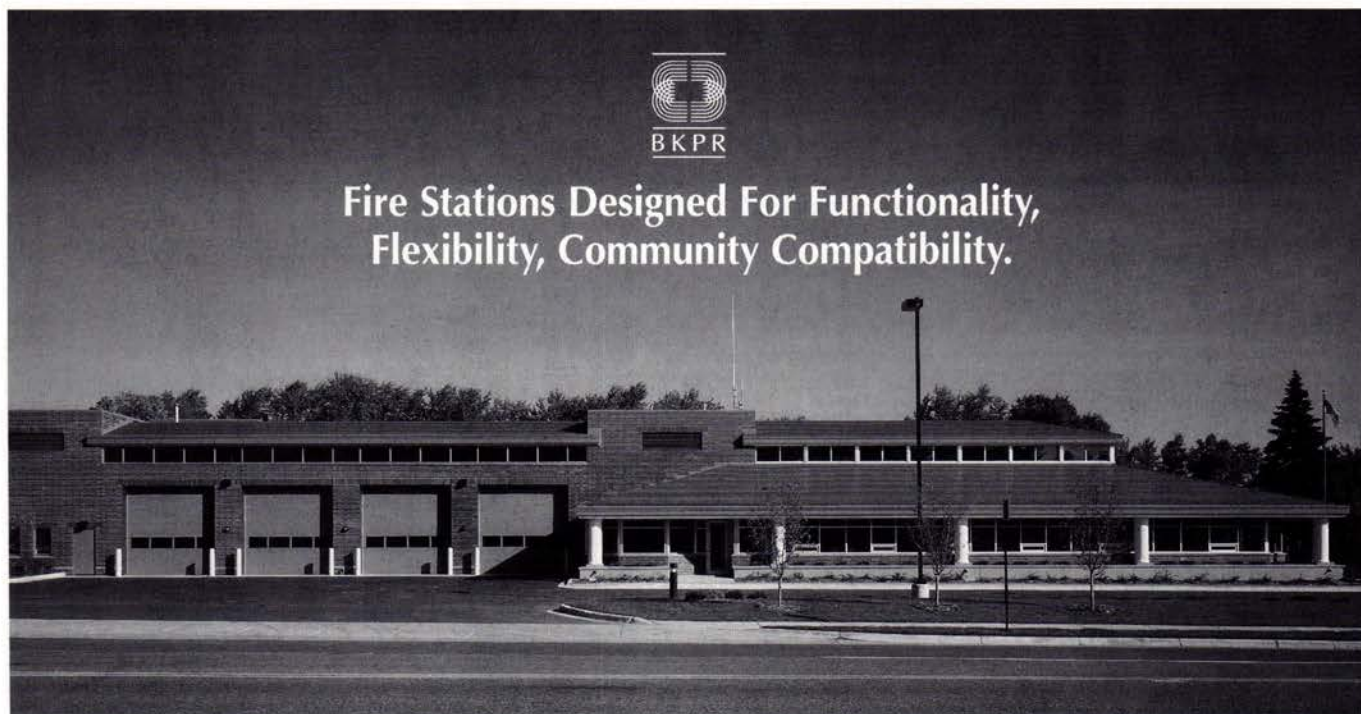
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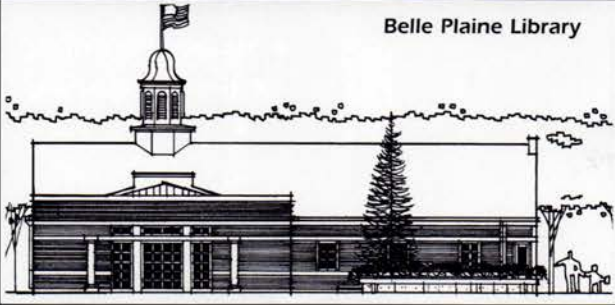
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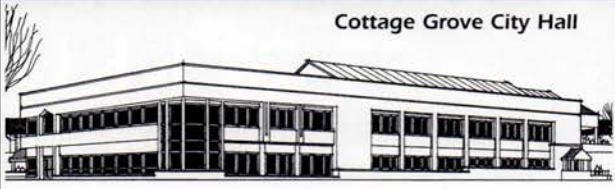
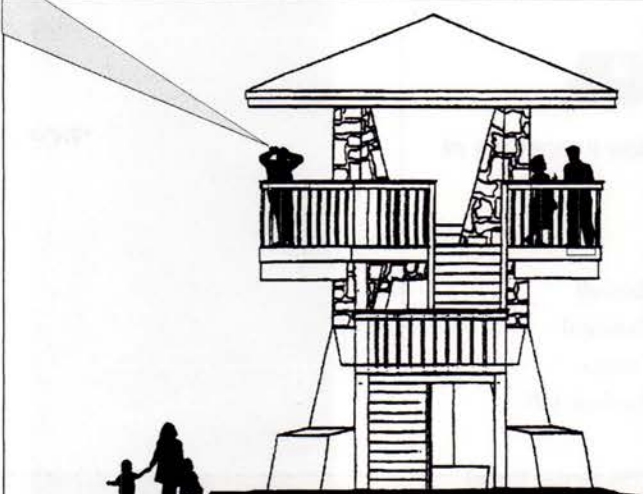
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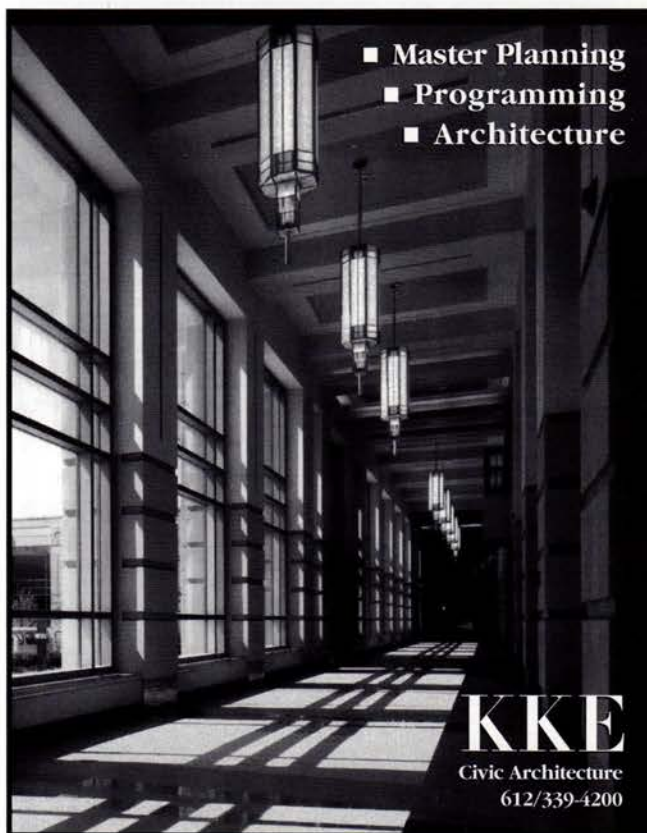
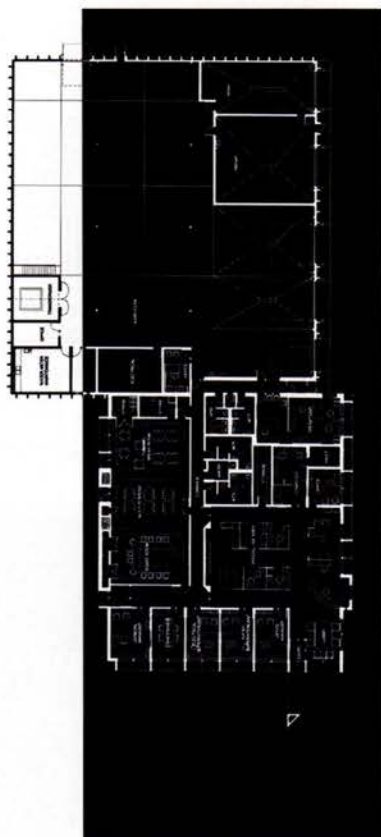
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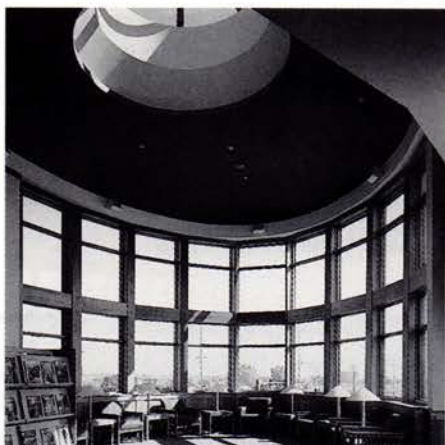
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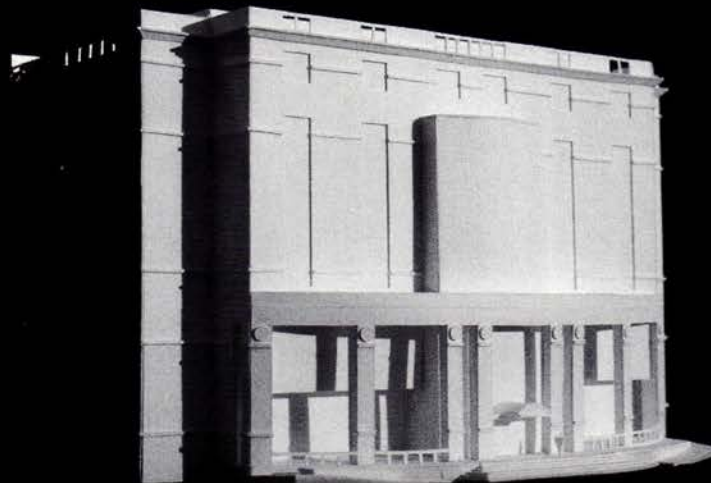
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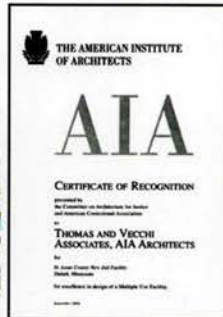




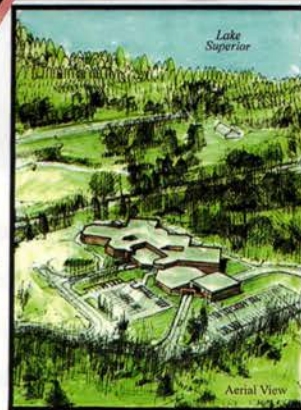
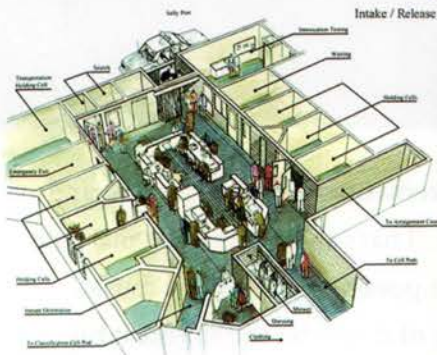
Exterior View - Main Entrance



Recreation / Program



General Population Cell Pod Dayroom  
View From Control Station



General Population Cell Pod Dayroom  
View Towards Passive Recreation

*This facility received recognition for design excellence by the American Institute of Architects and the American Correctional Association.*

## St. Louis County New Jail Facility Duluth, Minnesota

St. Louis County Sheriff:

Gary Waller

Principal Architect:

Thomas A. Vecchi, AIA, NCARB

This County Jail Facility is designed to house pretrial and sentenced inmates based upon direct supervision, minimum movement of inmates, effective staffing, and secure environment.

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### Technical Data:

**Architectural Area:** 101,973 Gross Square Feet

**Architectural Volume:** 1,443,936 Cubic Feet

**Standard Net Assignable Area:** 77,544 Square Feet

**Capacity of Facility:** 212 Inmates

(481 Gross Square Feet Per Bed)



**Completion Date:** July 1995

**Construction Costs:** \$13,550,396

**Site Development Costs:** \$650,900

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## Credits

(We encourage you to support the following architects, consultants and suppliers.)

### Project: Aircraft Rescue and Fire-fighting Training Facility

Location: Duluth  
 Client: Duluth Technical College  
 Architects: the Stanius Johnson architects, inc.  
 Principal-in-charge: Ken Johnson (design), Ron Stanius (contract documents)  
 Rick Stanius (Construction)  
 Project architect: Mark Lundberg  
 Project designer: Ken Johnson (principal-in-charge of design), Mark Lundberg (project architect)  
 Structural engineers: Krezu Ojard  
 Mechanical engineers: Foster Jacobs & Johnson  
 Electrical engineers: Foster Jacobs & Johnson  
 Contractor: Reuben Johnson & Sons  
 Interior design: the Stanius Johnson architects, inc.  
 Simulator consultant: Contraves, USA  
 Photographer: Don F. Wong

### Project: Aurora Community Center

Location: Aurora, Minn.  
 Client: City of Aurora  
 Architects: Damberg, Scott, Peck & Booker (Virginia, Minn.)  
 Principal-in-charge: John Gerzina  
 Project architect: John Gerzina  
 Project team: Mike Thomas, Kathy Caulfield  
 Structural engineers: Krech & Ojard  
 Mechanical engineers: Continental engineering  
 Electrical engineers: Continental engineering  
 Contractor: Oxford Construction  
 Interior design: Damberg, Scott, Peck & Booker  
 Photographer: Peter Kerze

### Project: Aurora Fire Hall

Location: Aurora, Minn.  
 Client: City of Aurora  
 Architects: Architectural Resources Inc.  
 Principal-in-charge: Doug Hildenbrand  
 Project manager: Earl Thedens  
 Project architect: Mark Wirtanen  
 Project designer: Mark Speer  
 Mechanical engineers: Architectural Resources Inc.  
 Electrical engineers: Architectural Resources Inc.  
 Contractor: H.G. Harvey Constructors  
 Photographer: Peter Kerze

### Project: Maplewood Community Center

Location: Maplewood, Minn.  
 Client: City of Maplewood  
 Architects: Ankeny Kell Richter Walsh Architects, P.A.  
 Principal-in-charge project management: Frederick C. Richter  
 Design principal: Duane A. Kell  
 Project architect: Marianne Repp-Obrien  
 Project team: Eric Lagerquist, David Carlson, Michael Eckardt, Anne Bockelman-Nelson  
 Structural engineers: Reigstad Associates  
 Mechanical and Electrical engineers: Gausman & Moore  
 Construction manager: McGough Construction  
 Contractor: Adolphson & Peterson  
 Interior design: AKRW Interiors  
 Landscape architect: AKRW landscape  
 Theater consultant: Schuler & Shook, Inc.  
 Aquatic consultant: Water Technology, Inc.  
 Photographer: Shin and Joel Koyama

### Project: Metropolitan State University

Location: St. Paul  
 Client: State of Minnesota  
 Architects: Frederick Bentz/  
 Milo Thompson/Robert Rietow, Inc.  
 Principal-in-charge: Robert G. Rietow  
 Project architect: R. Bruce Cornwall  
 Project designer: Milo H. Thompson  
 Structural, mechanical, electrical engineers: Dunham Associates  
 Contractor: Witcher Construction Co.  
 Interior design: Bentz/Thompson/Rietow  
 Landscape architects: Sanders Wacker  
 Wehrman Bergly, Inc.  
 Acoustical: Kvernstoen, Kehl & Associates, Inc.  
 Photographer: Karen Melvin

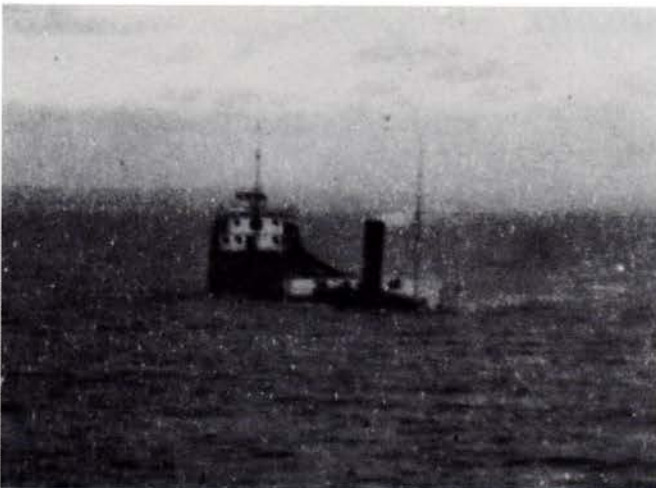
### Project: MTC Transit Center

Location: St. Cloud, Minn.  
 Client: St. Cloud Metropolitan Transit Commission  
 Architects: Grooters Leapaldt Tideman Architects  
 Principal-in-charge: Daniel Tideman  
 Project manager: Daniel Tideman  
 Project architect: Daniel Tideman  
 Project designer: Pat Waddick  
 Project team: Daniel Tideman, Pat Waddick, Stuart Bailey  
 Structural engineers: Duffy Engineering  
 Mechanical engineers: Lindell Engineering  
 Electrical engineers: Lindell Engineering  
 Contractor: Gopher State Contractors  
 Photographer: Dean Nagel @ Nagel Studios, Inc.



## submerged

Continued from page 41



*The Onoko sinking.*

ferent construction techniques in the wreckage, indicating the presence of two ships. The discovery, Anfinson says, demonstrated the value of hiring underwater archaeologists knowledgeable about naval architecture.

The archaeologists who recognized the Spencer were hired as part of the State Historic Preservation Office's four-year study of Lake Superior shipwrecks in Minnesota waters, which was published in 1993. The Minnesota Historical Society began taking an interest in shipwrecks in 1986. That year, the National Park Service published its investigation of Isle Royale shipwrecks and a Preservation Office intern constructed a preliminary inventory of the state's Lake Superior shipwrecks based on Labadie's files.

In 1987, the federal Abandoned Shipwrecks Act stipulated that states were in control of historic resources in their own waters. In 1990, the Historical Society received funding from the Legislative Commission on Minnesota Resources to study Minnesota's Lake Superior shipwrecks. The study, among other things, documents all known shipwrecks in waters to 100 feet. (More than 100 feet requires decompression diving. The Onoko was documented by avocational divers and submersibles.) This year, a new grant allows Anfinson's department to move its shipwreck investigation into

smaller Minnesota lakes, including Lake Minnetonka.

Of course, there's much more to the intrigue surrounding shipwrecks than their place in the annals of naval architecture. Danger, wonder and a sense of the macabre add to the mystery of ships lost at sea. But ships wrecked in Lake Superior?

"What's given shipwrecks in Lake Superior their high profile is, of course, the Edmund Fitzgerald," Anfinson says. "And how big a story would that have been without the Gordon Lightfoot song?" In 1975, the Edmund Fitzgerald sank during a November storm. Resting in more than 530 feet of water, the wreck has been viewed only with submersibles that just this summer discovered new artifacts and human bodies.

"There's an allure to shipwrecks," Anfinson continues, even those in Lake Superior. "It's not only the prospect of treasure or discovery, but shipwrecks are so inaccessible to the public. That's why we like the drawings and underwater photos we have of the Madeira and the Onoko wrecks. Because those drawings give you the sense that below the surface of the lake—where you can't see—there's a whole new world. There's a whole new Minnesota down there."

1. In *Submerged Cultural Resources Study: Isle Royale National Park*, edited by Daniel J. Lenihan and published by the National Park Service.

2. From *Archaeological and Historical Studies of Minnesota's Lake Superior Shipwrecks*, edited by Scott F. Anfinson and published by the Minnesota State Historic Preservation Office, Minnesota Historical Society.

*Camille LeFevre is a contributing editor of Architecture Minnesota.* AM

## MINNESOTA LABOR INTERPRETIVE CENTER

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The Capitol Area Architectural and Planning Board, a state agency, seeks firms experienced in designing buildings for interpretive and interactive activities, with theater and exhibition spaces, to participate in an invited competition for a Labor Interpretive Center in the Capitol Area adjacent to downtown St. Paul, Minnesota.

Estimated project cost of the 50,000 square foot building is \$13,000,000. Affiliation with a Minnesota architectural firm may be required for non-Minnesota firms.

For the Request for Qualifications please call or write the Capitol Area Board at the following address by February 13, 1995:

**Capitol Area Architectural  
and Planning Board**  
204 Administration Building  
50 Sherburne Avenue  
St. Paul, Minnesota 55155

Phone: 612/296-6592

FAX: 612/296-6718



# AM

## *lost minnesota*



*Fair Oaks, Minneapolis, 1883–1924.*

Courtesy Minneapolis Public Library

Next time you admire the rolling hillocks of Washburn-Fair Oaks Park in Minneapolis's Whittier neighborhood near the Minneapolis Institute of Arts, thank Frederick Law Olmsted. The noted landscape designer, creator of New York's Central Park, assembled the physical features of the grand estate that used to occupy the site.

William Drew Washburn, a Maine-born lawyer who came to Minneapolis to make a fortune in lumber and milling, purchased the block bounded by 22nd and 24th streets, and Stevens and Third avenues in 1868. At that time, only Villa Rosa, the residence of Dorilus Morrison, the city's first mayor, stood anywhere nearby. Washburn waited until 1883 to hire Olmsted and the Milwaukee-based architect

E. Townsend Mix (who later designed the now-raised Metropolitan Building) to work on his 10-acre estate.

Two hundred and fifty thousand dollars later, Fair Oaks rose like a jagged, yellow-stone bump on the bare horizon—a collection of Tudor gables, cast-iron ornaments, oriels, bays and grouped chimneys arranged in, as one critic observed, “the closest juxtaposition that the building block would permit.” The lavish interior featured frescoes on the ceilings and walls, marble floors, onyx fireplaces, and a library whose walls nearly sagged with oil paintings and heavy tapestries.

But the grounds drew the most attention. Olmsted designed hills, an artificial lake (now a dry depression) and a pond, with a rustic bridge-spanned

stream connecting the bodies of water. The house itself, facing 22nd Street, sat on a grassy knoll.

Fair Oaks brought Washburn good luck—he ascended to the U.S. Senate in 1889. Renowned New Year's parties and other gatherings made the neighborhood a fashionable area, and other prominent families moved nearby.

When Washburn died in 1912, his widow left Minneapolis. For several years, only a caretaker's family occupied the estate. In 1914, the Minneapolis Park Board took ownership of the property and during World War I ran it as a recreation center for troops. The house was demolished in 1924 to make way for the park, but sections of the cast-iron fence remained standing for years afterward. **Jack El-Hai**